

## ANNEX: Table of comments

The following table consist on the comments received during and after the AHWG1 and relate to the first technical report (TR1.0) and first criteria proposal.

### General

Comments received in AHWG1/written form	JRC Dir. B response
<i>One can only develop criteria that exceed what is legally required.</i>	<b>ACKNOWLEDGED</b>
<i>Several criteria on waste seem to be covered by legislation already. Can an Ecolabel include criteria that are covered already by legislation?</i>	The EU Ecolabel criteria exceed the legal EU requirements. The aim of the EU Ecolabel scheme is to go beyond the legislation and to recognise the best 10-20% products (in terms of environmental performance) available in the market. In addition, considering the unequal implementation of legislation across different countries, the EU Ecolabel Commission Decision, besides the annex of environmental criteria, includes prerequisites to ensure that the products to be awarded complies with the legal requirements of the country or countries in which the product is intended to be placed on the market.
<i>As a prerequisite, the product shall meet all applicable legal requirements of the country or countries in which the product is intended to be placed on the market. The applicant shall declare the product's compliance with this requirement. It is unclear what this adds to the ecolabel. It is an obligation to comply with the current legislation.</i>	
<i>This revision seems to be more clear and structured as the current decision. I agree especially with the new criteria especially n°7-8-9 There is a potential to gain new licence holders who work in the field of vegetable raw materials.</i>	<b>ACKNOWLEDGED</b>
<i>One stakeholder encourages the Commission to take favourable regulatory measures and increase higher consumer awareness to drive the biolubricants market upwards. VGP/EAL in the USA is a successful example.</i>	<b>ACKNOWLEDGED</b> However, the promotion of other regulatory measures is out of the scope of this EU Ecolabel revision.
<i>Do we know the impact of these changes on the LuSC listed materials?</i>	In order to evaluate the impact of the requirements on the number of the current EEL products and on the LuSC list research has been focused on: <ul style="list-style-type: none"> <li>• Compilation of information especially on existing EEL products on specific categories in which companies claimed that they would have difficulties to comply with the new proposal and in order to obtain reliable statistics and reformulation, if applicable, of the limit values proposed. Stakeholders and CBs is asked to provide more data regarding biodegradation and bioaccumulation data. See rationales for second criteria proposal in TR2.0.</li> <li>• Compilation of the Safety Data Sheets (SDS) of the commercial brands of ingredients included in part 2 of the LuSC list. No much feedback has been received with this regard. All the gathered evidence with this regard can be found in Appendix 1 of the TR2.0.</li> </ul>

<p><i>This statement and supporting statistical data provided throughout this Draft are quite opposite to the common opinions expressed by several experts from finished lubricant, base oil and additive suppliers at the AHWG1. No industry representative at that meeting provided any support for, or agreement with, the idea that any existing ecolabelled product would meet the proposed criteria.</i></p>	<p><b>PARTIALLY ACCEPTED</b>  The limits have been revised according to existing EU ecolabelled product values provided by Competent Bodies. All the data obtained has been considered in order to avoid the exclusion of current registered products (finally data from 40% of the total EEL products available on the market had been obtained). However, finally the threshold values for biodegradation potential have been relaxed compared to first proposal since aligning with the second categorization proposal, and according the comments received from the stakeholders (some of them asking for a threshold less restrictive).  In addition, stakeholders will have a transition period (during which either the existing or the revised Commission Decisions could be used) in order to adapt to revised thresholds.</p>
<p><i>The EEB and BEUC consider that the aim of the EU Ecolabel for lubricants should be to differentiate those products with the lowest toxicity and the highest degradability. This is to reduce any impacts on the environment in case of release. Regardless of the origin of the raw materials, all lubricants should comply with strict criteria for aquatic toxicity and biodegradability.</i></p>	<p><b>ACKNOWLEDGED</b>  The revised criteria are focusing on the toxicity, biodegradability and no bioaccumulation requirements.  In addition, the criterion on raw material origin is proposed to be broadened to recognise those base fluids that are biodegradable, non bioaccumulative and less toxic compare to the mineral oils. The criterion requires a minimum percentage of these raw materials (renewable, PAO or PAG).  In addition, to ensure that renewable raw materials used in/for biobased lubricant production are sustainably cultivated with minimal environmental impact, third party certification based on internationally recognized and market implementable voluntary schemes that satisfy criteria available in EU RED Directive and EU Ecolabel Directive are proposed.</p>
<p><i>The current criteria document includes a Table 1 that gives an overview of all the criteria and their mass fractions. Will a similar table be included again?</i></p>	<p><b>ACKNOWLEDGED</b>  A first draft of the legal text is published along with the Technical report 2 (TR2.0) in order to discuss the format and details of the text at the second AHWG to further define its final form. Most of the elements of the existing text in force are proposed to be kept.</p>
<p><i>The current Draft is very long and it is difficult to easily identify the proposed changes. It is suggested that the next Draft should be in two sections:  1. Changes from existing 2011 version in short succinct form.  2. Rationale/ discussion.</i></p>	<p><b>REJECTED</b>  The report follows the same structure for the other product group revisions. However the second revised draft is presented more clearly.</p>
<p><i>Re-refined oils bring environmental advantages. With modern re-refining technologies, CO2 emissions can be reduced by more than 50% as compared to the conventional production of base oil.</i></p>	<p><b>ACCEPTED</b>  It was considered originally to include re-refined oils in the first criteria proposal, as one way of promoting circular economy as well as materials efficiency. It was</p>

<p><i>Is this granted? What is compared here in detail? How is a proper HSE risk assessment done? Most of the re-refined base oils are not registered under REACH or are using a registration of a virgin base oil. IP 346 is not applicable re-refined base oils. Nevertheless re-refined base oils are UVCB substances that have production methods different from those of virgin base oils and therefore should be registered under REACH with separate CAS-Numbers to grant a proper chemical safety assessment.</i></p>	<p>considered as good option for 4T oils, category that was initially proposed to be covered. After feedback from different stakeholders, it is considered that, being true the previous statement, it would also be true that allowing re-refined oil into the EU Ecolabel would lead to accepting, for instance, a mineral oil because of its re-refined condition; the same mineral oil would, however, not be allowed into the EU Ecolabel in its origin. It is not only the fact that the re-refined oil might contain by-products with unknown human or environmental toxicity, but also this re-refined oil might not meet biodegradability requirements.</p>
<p><i>Current text allow to use QSARs to calculate log Kow values for potential bioaccumulation. Is that still possible and must additional data on the composition be submitted? Are the indicated QSARs still available and valid or are better QSARs available?</i></p>	<p>With the aim of clarifying this issue, the text present in the current Decision has been reintroduced in the second revised proposal: <i>the following calculation methods are allowed: CLOGP, LOGKOW, (KOWWIN) and SPARC, for organic substances others than surfactants where no experimental value are available.</i></p>
<p><i>We support the proposed extension of perimeter, with a special focus on the inclusion of total loss lubricants and metalworking fluids given their high market shares and high probability to be in contact with the environment and/or workers (based on our knowledge, 89% of metalworking fluids will eventually be lost during use phase). Given the high toxicity of these products, the toxicity criteria must be adapted accordingly.</i></p>	<p><b>ACCEPTED</b></p>
<p><i>To conclude on the environmental benefits of re-refined and synthetic oils, we must have more LCA information on their impacts. Could you provide additional information on the impact of re-refined and synthetic oils? On this base we could decide to include them in the scope or not.</i></p>	<p><b>ACKNOWLEDGED</b> A research about re-refined oils has been done and the conclusions have been included in the document. However, the approach is to not consider the re-refined oils in this revision, due to their toxicity and bioaccumulation potential. On the other hand, there are currently non-renewable synthetic lubricants presenting good environmental performance: with high biodegradability and low toxicity. See TR2.0 for additional details.</p>
<p><i>One stakeholder backs up the effort to gather more information on LCA of all kind of lubricants.</i></p>	<p>The in depth review of LCA evidence can be found in the preliminary report. Unfortunately, lubricants are not an extensively product assessed with LCA. The confidentiality of the lubricant industry makes difficult the assessment of lubricant products itself. More information is feasible to find about the base fluids, for example. Moreover, the comparison of different LCA studies is usually difficult due to the scope and functional unit are different for each product assessed. However, some additional information have been included in the chapter 1.2.2 (Key environmental aspects and relation with the criteria proposal) of the TR2.0</p>
<p><i>Criteria, standardisation, tools and definition of these parameters are not included in this draft report. No determination can be made as to whether conclusions drawn by these LCA studies or the summed LCA contribution to the "prioritisation method" (page 5) are appropriate or valid. A reference to the summary and conclusion to the LCA analyses in 'preliminary report for revision of EU Ecolabel Criteria' is mentioned, but the draft report notes only that..' most LCAs studied only cover cradle-to-gate scope and for this reason a quantification of the relevance of these last stages are not feasible..' The LCA report should also have a separate and in-depth review, including an evaluation for the potential to use these studies for reliable ranking of different base oils and lubricants in order to' to rank environmental impact and improvement</i></p>	

<p><i>potential'.</i></p> <p><i>Authors report a CRITICAL review of the LCAs but this critical review is only a comparison of the impact categories while not comparing the LCAs to the current practice in biolubricants. In addition it does not consider important aspects. Three points are added here:</i></p> <p><i>10 LCAs ONLY cover a pure vegetable oil in a biolubricant. This is NOT realistic anymore. This will have a high impact on small particle formation at least.</i></p> <p><i>One LCA includes a lifetime of 20000 hrs in the functional unit. That is 3 yrs. If the vegetable oil is from rapeseed within those 3 yrs you have already replenished the vegetable oil a number of times. Therefore the vegetable oil impact factors are actually 3 times too high compared to the mineral oil. Has these impact factors divided by three?</i></p> <p><i>Palm oil is environmentally preferable to rapeseed oil (LCA 9). This seems to be quite contradictive given the discussion on this issue in the EUEB a few years ago.</i></p>	
<p><i>Since the focus is on loss/lost lubricant the environmental impact assessment needs to be separated from the LCA. For a comparison between the two I suggest to use the ECETOC report 127 entitled Freshwater ecotoxicity and the OECD emission scenario document on lubricant and lubricant additive from 2004. From these reports develop the descriptors to be used in the comparison.</i></p>	<p><b>ACKNOWLEDGED</b> The report has been explored and alternatives methods than LCA has been considered to assess the impact of lubricants.</p>
<p><i>Although the preliminary report may indicate that the raw material use is highly important in the use stage, if the LCAs on which this conclusion is based are mainly from the pure vegetable oils and not from the modified vegetable oils this conclusion cannot hold. In addition LCAs follow a different environmental impact assessment than an Environmental risk analysis of the lubricant fraction lost.</i></p>	<p><b>ACKNOWLEDGED</b> Despite there are modified vegetable oils in the market, the pure vegetable oils could be also used in the lubricant manufacture. In any case, the raw material stage includes only the impact related with the vegetable oils, the modifications of the base oils are related with the manufacturing process (since they are made to improve the technical performance of the lubricant).</p>
<p><i>Criteria are used twice. Title should be "Draft proposal for revision of EU Ecolabel criteria".</i></p>	<p><b>ACKNOWLEDGED</b> This has been corrected accordingly.</p>
<p><i>The actual appendix on page 64 only provides "5 APPENDIX 1. EXISTING CRITERIA" and no comparison as is indicated in the appendix title in the Contents in the pdf.</i></p>	<p><b>ACKNOWLEDGED</b> This has been corrected accordingly.</p>
<p><i>The report summarises advantages and disadvantages of the different base fluids. We question whether it is justified to prefer the biobased fluids.</i></p>	<p>Nearly 50% of all lubricants sold globally pollute the environment, through spillage, evaporation, and total loss applications. This issue makes necessary the development of eco-friendly lubricants that have high biodegradability, and low toxicity to plants and animals.</p> <p>Some additional information has been included in the chapter 1.2.2 (Key environmental aspects and relation with the criteria proposal) of the TR2.0 related with the environmental benefits of vegetable oils.</p> <p>Bio based oils are a good choice if total loss application are considered, due to their</p>

capability to biodegrade and the minimal environmental damage they create.

## Comments related to preliminary report

Comments received in AHWG1/written form	JRC Dir. B response
<i>Numbering of chapters, subchapters, tables and figures, tables divided over different pages</i>	<b>ACKNOWLEDGED</b>
<i>The report is too large to read</i>	<b>ACKNOWLEDGED</b> The wide variety of lubricant categories included, as well as the categories yet to be incorporated, make it very challenging to have less than 50 pages of the report.
<i>The EEL refers to renewability. Refer to certain biobased Directives</i>	Renewability refers to ingredients that are totally or partially coming from renewable (as opposite to fossil) sources. The so-called Bio directives do have a slightly different target, as the Commission seeks to clarify the use (or misuse) of the word Bio: whether this word is used in a food product or personal care product, for instance. Clarification of terminology has been included in chapter 1.2.1 Product group name, scope and definitions in TR2.0.
<i>A comparison is important but what is required is a table that indicates what additional is required to comply successfully for an EU ecolabel if the lubricant already meets the criteria of the ecolabel. A MoU between the competent body of the national and EU ecolabel needs to be developed.</i>	<b>ACKNOWLEDGED</b> A comparison has been made in order to align, amend thresholds or add requirements according to the approach followed by other schemes. However, in order to help applicants having national labels to also obtain the EU Ecolabel it would be good to have some guidance in the User Manual. This will be discussed once the criteria revision is finalised and the criteria is definitive.
<i>18 classes is stated but only 17 are seen in Table 3</i>	<b>ACKNOWLEDGED</b>
<i>Table 4 has one column headed by "Not covered under the current scope" referring to the existing Categories. Link between the heading and the categories is unclear.</i>	<b>ACKNOWLEDGED</b>
<i>No change in the categorization structure</i>	The categorization is suggested to be in great manner be maintained, from more to less potential environmental impact, total loss, partial loss, and accidental loss.
<i>For each ISO class of lubricant in a specific category it needs to be stated for the EU what fraction is lost, in what form and where in the life cycle of the lubricant. These statements need to be supported by references.</i>	The lost fraction of a lubricant is difficult to be provided in a scientific way. It is clear in a total loss, for instance a stern tube oil, where slowly and gradually the oil is delivered into the sea water; in this case is a total loss in the end. For other lubricants, where only a partial loss can be stated, it is unrealistic to pretend a precise determination of the lost fraction.
<i>For this reason, it is considered reasonable to extend the scope to other lubricants not currently covered and that presents risk off accidental losses (accidental loss lubricants), and to other risks lubricants which are those lubricants associated to other environmental impacts than those associate to its potential release. This can be done if it is made clear with underlying data what are the different</i>	However if it is considered a grease for the bearing in a railway wheel, where the worker applies a certain amount of grease during a periodic maintenance operation; at the next maintenance, a worker cleans up the bearing and disposes the remnant grease

<p><i>types of losses and what fraction of the total market size is accidentally lost or is lost as other risks into the environment.</i></p>	<p>for recycling, then applies new grease to the bearing. There are simply no data on whether the amount of 'lost grease' between maintenance and maintenance (totally unrealistic that the rail Company would track down the amount of grease applied to each one of hundreds or thousands or rail wheels, then gravimetrically check the same wheel for the lost weight of the grease). This lost grease could be 20%, or 80% depending on railway condition, bearing condition, season of the year, ... What it is known is that part of the grease will unquestionable be lost, and the remnant grease will be collected. For this reason, greases are very often partial loss lubricants.</p>
<p><i>The data are from one source only. The data refer only to future market developments</i></p>	<p><b>ACKNOWLEDGED</b></p> <p>The source used for the market analysis is from a well-recognized international market research specialist. The marked analysis includes information of different sources:</p> <ul style="list-style-type: none"> <li>• Secondary sources include but are not limited to: ICIS, One Source, Hoovers, Oil &amp; Gas Journal, Platts, Machinery Lubrication Magazine, Lubes'n'Greases Magazine, Independent Lubricant Manufacturers Association, United Kingdom Lubricants Association, LubeBase, OATS, UN data</li> <li>• List of primary sources include but are not limited to: Amsoil Inc., Total, British Petroleum, ExxonMobil.</li> </ul> <p>All data regarding 2022 prospects are to be taken with caution, as breakthrough changes are not usually properly assessed (eg. impact of electric car in the market of engine motor oil).</p>
<p><i>In 2014 German FNR published a study about market for renewable raw materials. Pages 451 - 504 deal with bio-lubricants. In 2011 the lubricant market in Germany was about 1.03 million tons. (page 469 of this study). Approx. 9000 tons of it were lubricants based on &gt;50% of renewable resources - EU Ecolabel products - 0.9%. For lack of better data in whole Europe, doing a simple read across here, the market share of actual EU Ecolabel products is approx. 1% of 36.4 million tons. So, we are far away from 16% market share as aim of the Ecolabel named in this draft. First action should be to find the reasons why it's only 1%. Second action would be to find a way to increase it to 16%. And then one might think about a new goal of 50+% market share for Ecolabel lubricants.</i></p>	<p><b>REJECTED</b></p> <p>The statement in the market report means that with the current EEL Lubricants scheme, only 16% of the total lubricant market has the possibility to apply for Ecolabel (mainly hydraulic fluids and greases), as important segments are left aside (4-stroke engine oil, metalworking fluids, ..) This statement does not mean in any case that all the lubricants entitled to apply to EU Ecolabel, in fact they do apply. On the other side, there is no reliable information of the market size of the products that have applied to EU Ecolabel in the 10 EU countries where there are products registered under EU Ecolabel, as the CB do register a product as EU Ecolabel compliant, though no data for that product are available regarding how many tonnes are sold of that EU Ecolabel registered product. The 2011 market data provided for Germany are 9,000 tonnes of bio-based lubricants for a total market of 1 million tonnes, that is 0.9% is rather in line with the global data: 660,000 tonnes of bio-based lubricants for a market of 37 million tonnes, that is 1,7% in 2015. Two additional points to be kept in mind: a) Bio-based lubricants are growing faster than the average lubricant market; b) Under bio-lubricant can be a misleading designation, as occasionally it may include not only the bio-based lubricants but also the</p>

	biodegradable lubricants.
<i>The European biolubricant market is already for more than 25 years around 3%.</i>	The promotion of mandatory regulatory measures is out of the scope of this EU Ecolabel revision.
<i>No reference is made to the cost development of biolubricants compared to mineral oil lubricants.</i>	The mineral oil price is linked to the oil price; the price of renewable based esters is changing, as the renewable fraction will be very different: a renewable base ester has, in general, the fatty acid part coming from a renewable base, whilst the alcohol part may not be from a renewable base. Due to the fact that many different alcohols are used, the renewable fraction will be unsettled. On top of this, many governments do still heavily subsidize the fuel consumption for a number of different reasons; these subsidies foster the oil extraction worldwide, therefore bringing down the mineral oil price.
<i>The use of the term vegetable oil as base fluid is misleading here and also at other places in the documents. It refers to PURE vegetable oils used as base fluid. However in reality a biolubricant hardly uses anymore a pure vegetable oils but only a modified vegetable oil where the glycerol has been substituted by a more stable alcohol.</i>	<b>ACCEPTED</b> Only very exceptionally 'pure' vegetable oil is used in lubrication, mainly due to its low stability to oxidation and hydrolysis. It is common to use synthetic base oils, which are esters derived from fatty acids (from the saponified vegetable oil) esterified with non-renewable alcohols. These final modified esters do bear better stability properties than the original vegetable oil. This will be considered for the final criterion text.
<i>The source of the base fluid in lubricants can be found from the application form. This must be filed in by the applicant.</i>	<b>ACKNOWLEDGED</b>
<i>The RED refers to fuels and not to base fluids although in both cases often virgin material is used.</i>	<b>ACKNOWLEDGED</b>
<i>There is a misunderstanding in the concept of circular economy similar as for biodegradation. (Concerning the proposed actions in packaging: Closing the loop - An EU action plan for the Circular Economy)</i>	The European Commission developed a programme to influence in the waste management, in order to reduce the production of waste and improve the waste management and recycling. The inclusion of secondary raw materials (obtained from recycling or re-using) in the economy promote the circular economy.
<i>It would have helped if the composition of used oils is not only focused on the toxic substances that can be formed but also if it is estimated what is the size of the fraction of metal parts and what metals are most likely be found. The environmental impact of waste oil needs to be compared to all substances found in the waste oil.</i>	<b>ACKNOWLEDGED</b> Waste oils contain a variety of hazardous contaminants, including lead, cadmium, chromium, arsenic, dioxins, benzene and polycyclic aromatics. Since finally the used oils are not included in the scope, the possibility to extend the information about these pollutants will be assessed in future revisions of the Lubricants EU Ecolabel.
<i>It would have been nice if the information is accompanied with some data e.g. about 80% of the MWF are water-base and 20% are neat oils. In addition some more information on the fractions, type of substances and full formulations of MWF would have led to a better understanding if MWF can be incorporated in Category 1 or not.</i>	MWF is a product group with different formulations, ranging from neat oil to water solutions, and having the different emulsion types in between. In the revised scope proposal, MWF are considered Accidental Loss Lubricants (ALL).

<p><i>The respiratory part of MWF refers to occupational health. It is not understood if occupational health is also an aspect that must be included in an ecolabel as well. I can imagine environmental health. In addition, Occupational Health has its own legislation which is quite different from the environmental legislation. More information on the formulations is helpful to get an idea on the relevant issues.</i></p>	<p>EU Ecolabel Regulation focus on environmental aspects, however it allows the inclusion of social aspects where relevant.</p>
<p><i>Impact on human health for workers is an Occupational Health issue. The ecolabel is an environmental label. In addition if linked to waste a proper waste analysis and how this is dealt with is required. I miss such an analysis in both reports.</i></p>	<p>The EU Ecolabel criteria, focused on environmental aspects (e.g limited use of substances harmful to the environment and human health) would somehow impact on the respiratory issues associated to MWF. Therefore human health/social aspects are indirectly addressed.</p>
<p><i>It is unknown what type of human health is considered: Occupational Health of Environmental Health. Ecolabel does not seem to be appropriate for Occupational Health. In addition Occupational Health and Safety has its own legislation.</i></p>	
<p><i>A comparison only does not help any applicant or holder of one of the other recognized labelling scheme.</i></p>	<p><b>ACKNOWLEDGED</b> A comparison has been made in order to align, amend thresholds or add requirements according to the approach followed by other schemes. However, in order to help applicants having national labels to also obtain the EU Ecolabel it would be good to have some guidance in the User Manual. This will be discussed once the criteria revision is finalised and the criteria is definitive.</p>
<p><i>Content of additives may reach from 0.1 to up to 20% depending on the lubricant category in order to achieve supreme performance.</i></p>	<p><b>ACKNOWLEDGED</b> <b>Information on additives that are classified according to the EU Ecolabel hazard statements and that cannot be replaced by safer substances should be given to JRC in order to include the needed derogations. See derogation form in the ANNEX of TR2.0.</b></p>
<p><i>The 50% loss of lubricants into the environment is stated generally without specifying numbers for the various categories of lubricants (e.g. engine oil vs. gear oils vs. hydraulic fluids). This would need further backup with data to treat the lubricant classes individually.</i> <i>Secondly, no comments are made on collection of waste for the lubricant classes manufactured from base oils of different chemistries (e.g. Group I-III vs. Group IV or V oils). The quotation do not address this topic with sufficient depth and currentness. <a href="http://ec.europa.eu/environment/waste/oil_index.htm">http://ec.europa.eu/environment/waste/oil_index.htm</a> <a href="http://d-scholarship.pitt.edu/6829/1/Cuevas-4-7-2010.pdf">http://d-scholarship.pitt.edu/6829/1/Cuevas-4-7-2010.pdf</a> Schneider, M. P. (2006). "Plant-oil-based lubricants and hydraulic fluids." <i>Journal of the Science of Food and Agriculture</i> 86(12): 1769-1780</i></p>	<p><b>ACKNOWLEDGED</b> <b>No information has been found about the relative loss of lubricants by categories. However, the threshold values for aquatic toxicity, biodegradation, and bioaccumulation have been defined according the % of release in the environment; where a major environmental impact is expected, a restrictive value has been defined.</b></p>



## Scope

First criteria proposal (TR1.0)	Comments received in AHWGI/written form	JRC Dir. B response
<b>GENERAL</b>	<i>BASF does not consider other classes of lubricants to be added to the EEL scheme.</i>	<p><b>REJECTED</b></p> <p>During the revision of EEL it has been proven that current scope does only cover a small portion of lubricant categories and uses, therefore, the aim is to allow new categories to be within the new EEL. In order to keep the workload at a reasonable level, the number of new categories will be limited during this revision of the EEL for lubricants.</p>
	<i>For waterbased lubricants the current criteria are not applicable. New criteria need to be developed.</i>	<p><b>ACCEPTED</b></p> <p>From the OECD guidelines: “Biodegradable matter is organic material that a provides nutrient for microorganisms.”; in this respect, the biodegradation criteria do only apply to organic matter. If a MWF fluid contains 60% of water and 40% organic substances (base oil, additives,..) the biodegradation threshold criteria, for instance 90% or ready biodegradability, will only apply to the 40% of the formulation, which corresponds to organic substances; in this respect, it’ll be enough if 90% of this 40% (<math>0,9 \times 40\% = 36\%</math>), complies with the ready biodegradation criteria. In other words, 36% of the total is ready biodegradable (&gt;60% biodegradation within the 28 day test) and this is enough for the product to comply with the biodegradation criteria.</p>
	<i>Keep the current structure in Categories. Adding new categories or including other ISO classes into the same category have less impact on the current number of licences than changing it completely.</i>	<p>The reference to ISO standards has the main objective of providing a general umbrella that will eventually guarantee in the future more precise technical performance standards. The general scope structure has been simplified, with only three groups. ALL, PLL, and TLL; an additional advantage is that new lubricants to be included in forthcoming revisions will fall within one of these proposed groups.</p>
	<i>The impact on current licence holders will not change if the category will be based on the ISO classifications.</i>	<p><b>ACKNOWLEDGED</b></p>
	<i>It is not substantiated with data that Metalworking Fluids (MWF) have more or less the same environmental profile as hydraulic fluids. On the contrary: 80% of is water based while less than 1% of hydraulic fluids. It is unknown if the 50% lubricant loss is the same or different for MWF compared to hydraulic fluids and if the forms it is lost is also the same.</i>	<p>MWF is a product group with different formulations, ranging from neat oil to water solutions, and having the different emulsion types in between. In the new scope proposal, MWF are considered ALL. The two mentioned lubricant products, hydraulic and metalworking fluids, are in the proposed scope within the same group, Accidental loss, ALL.</p>

<p><i>What counts for MWF (comment 3) also counts for 4-T engine oils. In addition if 4-stroke oils emit 97% less pollution than 2-stroke oils than it is questionable to include 4-Stroke oils in Category 4.</i></p>	<p>The current revision will not include the 4-stroke engine oils in the scope, as it was decided as outcome of the first AHWG meeting.</p>
<p><i>One aspect addressed in the EoL considerations is that DIY users of oil may perform inappropriate disposal operations. This needs to be treated very carefully if 4T-oils will be included in the scope.</i></p>	<p>In fact, it is a challenge to gather information on how many users carry out the oil exchange in the 4T engine by themselves; it is generally assumed that a vast majority of car owners do this operation at the dealer or repair shop. It is not the objective of EEL to go after illegal product disposals. Anyway 4T engine oils are not to be included in the scope proposal, as it was decided in the 1<sup>st</sup> AHWG meeting.</p>
<p><i>Different biodegradation criteria may need to be considered for 4 stroke lubricants which are typically not released to the environment either intentionally or accidentally under conditions of normal use. Additionally, if the goal of the Commission is to address the renewability criterion by allowing a certain % of re-refined base stock to be used to formulate 4 stroke lubricants then these types of base stock are normally inherently biodegradable at best. It is possible that a derogation may be required for 4 stroke oils from the usual requirement for a high amount of ultimately (rapidly) degradable ingredients. This will require a different way of thinking about environmental benefit for these lubricants but it should be possible to achieve as there is a growing body of life cycle data demonstrating that other indicators of environmental performance (such as CO2 footprint, increased fuel economy etc) can be derived. This would be a suitable trade off for allowing a higher amount of inherently degradable ingredients and does not compromise the values of the ecolabel in our opinion by moving away from considering high levels of biodegradation as one of the key indicators of an 'environmentally beneficial' lubricant. The stakeholder understands that this type of approach can be seen as blurring the lines between ecolabel and other sustainability initiatives that the Commission is advancing but we do not see these approaches as being mutually exclusive.</i></p>	<p><b>ACKNOWLEDGED</b>  With regard the 4T oils, it is proposed not to consider 4T engine oils during this revision and to focus on the existing scope and potential inclusion of less controversial lubricants (e.g Metalworking Fluids and/or protection against corrosion) in order to keep the current identity of the existing label and the current revision timeline. However, keeping in mind that there are also benefits for this type of oils to be considered under the EU Ecolabel scheme, it is proposed that if there is interest from industry side on having a label specific for 4T automotive oils it would make sense to consider 4T as a new product group under the EU Ecolabel scheme in the near future.</p>
<p><i>It's always simpler to carry out files when a norm defines the scopes. And I agree to add more products (there would be more opportunities).</i></p>	<p><b>ACKNOWLEDGED.</b></p>
<p><i>Looking to the proposed criteria and evaluating of their relevance for the actual EEL products we have strong concerns that the main task of eco-labels threatens to sink into oblivion: For our understanding, the main task should be the real substitution of environmentally problematic</i></p>	<p><b>PARTIALLY ACCEPTED</b>  It needs to be remembered that the EEL, opposite to US VGP, is not a mandatory law, but rather a scheme that allows the EC to recognize the products that are, voluntarily, performing better from an environmental</p>

<p><i>lubricants by environmentally better ones, and not the creation of the most ambitious eco-label. Having in mind the slow start of the EEL 12 years ago – due to the new approach compared to Blue Angel and other ecolabels – we should avoid any hard disruption by too ambitious criteria. The market of bio-lubricants has not grown as forecasted or hoped in these 12 years, despite the EEL. Hence, our all main target should be searching for better success in the market. By the way: Meanwhile a lot of EEL proposals come from far east – to fulfil the criteria of the US Vessel General Permit Regulation (VGP), and not to market these products in Europe.</i></p>	<p>point of view. On the other hand, it is clear that the VGP, being mandatory, has triggered up the number of registrations, due to the fact that an EEL compliant lubricant is always an EAL (Environmentally Acceptable Lubricants), not the other way round.</p>
<p><i>The EEB and BEUC agree with the alignment between the terminology of the EU Ecolabel and the ISO 6743 standard. However, we question whether all categories of the standard should be included within the scope of the EU Ecolabel. In the rationale we highlight the main reasons based on facts which are also reflected in the JRC report.</i></p>	<p><b>ACCEPTED</b> Not all ISO categories will be included in the scope. The ISO families are used in order to have a reference, mainly for technical performance purposes.</p>
<p><i>The definition of synthetic base oil is too narrow and is incorrect. Need to be clear on defining the difference between synthetic esters and hydrocarbon base oils of low viscosity used formulate HEPR type products. There are many types of synthetic HEPR and HEES base oils. The LCA will be very different for each of these.</i></p>	<p><b>ACCEPTED</b> The definition of synthetic has been clarified.</p>
<p><i>The definition of synthetic base oil is too narrow and is incorrect.</i></p>	<p><b>ACCEPTED</b> Clarification of terminology has been included in TR2.0.</p>
<p><i>We support aligning ecolabel product types with lubricating families as described in ISO 6743</i></p>	<p><b>ACCEPTED</b></p>
<p><i>We support the inclusion of all three new categories. The rationale for including 4 stroke oils makes sense - they are sold directly to consumers, they would increase the market share available to ecolabel awards considerably and a comment was made during the AHWG meeting that there is growing penetration of 4 stroke engines in machines used in environmentally sensitive areas. It also makes sense to include them in category 4 with 2 stroke oils. With regard to 4 stroke oils however we would urge the Commission to think about introducing new criteria in place of criteria such as biodegradability to reflect the growing awareness of the dominant beneficial effect that the in-use phase has on the overall environmental impact of these lubricants. For example, Life Cycle Analysis has convincingly demonstrated that increasing fuel efficiency by a small %</i></p>	<p><b>PARTIALLY ACCEPTED</b> Outcomes from the 1st AHWG meeting for Lubricants: 4-stroke engine oils will be removed from this revision Regarding the MWF, they are included in the scope proposal as Accidental Loss Lubricants (ALL).</p>

can have a dramatic effect on overall environmental impact when measured by LCA, such as in terms of fuel savings. This revision of the ecolabel criteria for lubricants is an opportune moment for the Commission to take a different approach in terms of environmental criteria for the ecolabel by transitioning from criteria exclusively based on eliminating hazardous substance content and a high level of biodegradability to other equally important indicators of environmental performance such as demonstrable improvements in fuel economy, reduced CO2 footprint etc. Additionally, permitting an amount of re-refined oils in this category meets the goals for the circular economy but again will need compromise in terms of criteria such as the amount of ultimately biodegradable ingredients seen by some as a 'sacred cow' for the ecolabel award. Some commentators argue that this type of approach (i.e. introduction of different criteria for ecolabel product categories) should be confined to the sustainability agenda but the stakeholder believes that the two initiatives can co-exist and be complementary. As one of the few petroleum additive manufacturers in EU responsible for developing the chemistry that drives the performance of 4 stroke lubricants in the market, the stakeholder would be willing to be an active member of a sub-team responsible for developing new criteria for this product category under the direction of the Commission if this is considered helpful. In terms of metalworking fluids, there are 4 types; Straight oils are also known as neat oils or cutting fluids and are not diluted with water by the end users. The other three types are all diluted with water by the end user; soluble oils are also known as emulsifiable oils and are 30-80% oil, semi-synthetic metalworking fluids are 5-30% oil and 30-50% water and synthetic metalworking fluids contain no mineral oil. It would be helpful for the Commission to clarify which of these four different types are being considered for the ecolabel. It should be noted that only straight oils are not further modified by the end user (the others are diluted in water) and are therefore the most comparable with all the other product types in the lubricants category. Finally we have commented elsewhere that lubricants providing temporary protection from corrosion should not be included in category 3 since these are typically not intended to be lost to the environment in our experience (we have suggested category 1 is the most appropriate category).

<b>ENGINES</b>	2-T stroke oils and the 4-T stroke oils should be removed completely from	<b>PARTIALLY ACCEPTED</b>
----------------	---	---------------------------

<p><i>the scope. For these products the values for emissions and consumption of the engine are more relevant than the environmental impact of the oils themselves. Neither the emissions nor the consumption of the engine are part of the Lubricants criteria document. The fitness for use should also be tested on the specific engine model the oil is used for, because a test on the sole oil doesn't say if it will work with the engine in question. Furthermore, used engine oils may be classified as possibly "carcinogenic" according to the EU worker's directive.</i></p>	<p>It is clear that the first function of 4T engine oil is to perform; that means to ensure an excellent lubrication, so that the fuel consumption is minimized. Once this condition is given, good performance, any product with better environmental characteristics, is welcome. This is in general for all products the purpose of EU Ecolabel, ensure performance, while improving environmental performance. Perform at the same or higher level and do it with a more environmentally compatible solution, technology or product. With regard to 4T engine oils, there are available bio-based 4T engine oils that would comply with ACEA performance guidelines. The output of 1<sup>st</sup> AHWG is not to include in the current revision the 4T engine oils.</p>
<p><i>Current technology of 4-T engine oils does not meet the requirements of ecolabels with regard to environmental impact and toxicity. They furthermore produce hazardous waste. 4-T engine oils may be covered by an own (eco)label through this fostering innovation in this field.</i></p>	<p><b>PARTIALLY ACCEPTED</b>  In line with the outcome from the 1st AHWG meeting for Lubricants: 4-T stroke engine oils will not be covered in the extended scope of the currently revised criteria. The comment is correct in the sense that the vast majority of today's 4-T engine lubricating oils would not meet the Ecolabel requirements. Among other considerations, the vast majority of such products are formulated with mineral oil, so it is true they would not fit Ecolabel criteria, for instance, regarding toxicity or biodegradability. There exists, however, published information indicating that there are already available bio-based lubricants that pass the 4-T engine oil requirements; in fact, different companies do require opening the EU Ecolabel scope to 4-T engine oils, as they produce lubricants able to comply with the requirements.</p>
<p><i>4-T engine oils should be removed from this scheme.</i></p>	<p><b>ACCEPTED</b>  2 stroke oils continue to be suggested under the revised EEL scope</p>
<p><i>We do not have a position on thresholds for the moment. We support the inclusion of two-stroke engines lubricants in the EE because of their use in sensitive areas.</i></p>	
<p><i>We strongly believe that 2 stroke oils should be retained as part of category 4 and should be joined by 4 stroke oils. We also strongly refute the comment made during the AHWG meeting that 2 stroke engines will be obsolete during the next few years, mainly due to experience in one Member State. The company does not recognize this trend, there is some movement from 2 stroke to 4 stroke but is relatively slow, and in power tools the 2 stroke engine is still the most widely used type. In fact, one of the world's largest power tool manufacturers (Stihl) is based in Germany and continues to manufacture plenty of 2 stroke power tools. Perhaps the Commission should undertake a survey of lubricant manufacturers who supply small 2</i></p>	

*stroke power tools to understand why the take up of the ecolabel for this category is disappointingly low and seek to understand whether this is due to the criteria being too difficult to align with the performance demands of the tool manufacturers/end users or whether other incentives are needed to drive demand in this price competitive market.*

*This paragraph exactly states why it is not feasible to include engine oils in the EU Ecolabel for lubricants. Even the Korean Eco-Label separated the engine oils from the lubricants due to the completely different requirements. The actual EU Ecolabel's reputation is based on the approach - high risk to the environment -> high biodegradability/low toxicity/ lowest possible bioaccumulation. Engine oils - especially when partly based on re-refined material - would not fit with these requirements, but might lead to exemptions/lower limits in the traditional requirements thus resulting in a loss of reputation for the EU Ecolabel for lubricants.*

*One stakeholder supports the inclusion of 4-stroke engine oils (E) and heat transfer fluids (Q) as new categories in Ecolabel.*

*Please find herewith some technical data sheets (TDS) and references on alternative engines based on esters, blends of hydrocarbon with esters and polyalkyleneglycols (PAGs, which meet the bio-no-tox-criteria as well as technical performance requirements of ACEA and OEMs. Such concepts were investigated in the frame of the EC funded projects "Ibiolab" and "Erebio", but also in the German project "BMW 14-02", to which formulators contributed and automotive OEMs were involved, in which the functional profile of different base oil chemistries was explored. The TDS of Castrol Greentec LS and FUCHS Titan GT1 state primary biodegradation acc. to CEC, but later .ppts or tests performed in the frame of EC funded projects "Ibiolab" and "Erebio" confirmed >60% acc. to OECD301x tests including the aquatic criteria.*

*In view of the recent CASTROL Bio-Synthetic launch there are no technical objections to include engine oils in the class of eco-labelled lubricants. The past demonstrators "Ellypse" of Renault and "Model U" of FORD illuminated, as well as the engine oil patents of Renault and Daimler that the automotive industry is open to alternative engine oils, but suffers under a lack of proposals.*

*On the other hand, some formulators repeatedly proposed solutions, which were too expensive, due to the chemistries of alternative base oils. Finally,*

#### **PARTIALLY ACCEPTED**

With regard the 4T oils, it is proposed not to consider 4T engine oils during this revision and to focus on the existing scope and potential inclusion of less controversial lubricants (e.g Metalworking Fluids and/or corrosion protection against corrosion) in order to keep the current identity of the existing label and the current revision timeline. However, keeping in mind that there also benefits for this type of oils to be considered under the EU Ecolabel scheme. It is proposed that if there is interest from industry side on having a label specific for 4T automotive oils it would make sense to consider 4T as a new product group under the EU Ecolabel scheme in the near future.

In order to have an even more systematic approach to clustering the different lubricant groups, it has been proposed to simplify the categories approach in three groups: TLL Total Loss Lubricants; PLL Partial Loss Lubricants, and ALL Accidental Loss Lubricants. Heat transfer fluids, ISO family Q are not included in the proposed scope and 4T engine oils ISO family E will also not be included, as it was decided in the 1<sup>st</sup> AHWG meeting.

*if needed for environmental purposes, the regulator can only close the gap on costs by mandating its use.*

*It has to noted, that extra fuel economy and the impact to exhaust emissions and durability of after-treatment exhaust devices may (likely) overrule the eco- und human-toxicity schemes in place for ecolabelled lubricants. This illuminates the need to deviate for engine oils from the normal eco-tox criteria.*

*The base oil chemistries available are:*

- a. Saturated esters*
- b. Blends of saturated esters with hydrocarbons (includes re-refines and bio-olefins)*
- c. Bio-olefines (e.g.  $\beta$ -farnesene-type backbones or iso-paraffines from hydro-converted triglycerides)*
- d. Polyalkyleneglycols (especially as polypropyleneglycols or polybutyleneglycols in view of miscibility with esters and hydrocarbons).*

*The market, the price situations and availabilities, the functional profiles may later on select between these base oil options.*

*The backbones of "bio-olefines" can be renewable to an extent of 50% to 100%.*

*No PAGs with a content of renewables are in the market. PAGs could be composed of bio-based starter molecules, like bio-n-butanol, which is polymerized with ethylene oxide derived from bio-ethanol (existing capacities) and propylene oxide prepared from glycerine (known process).*

*It is clear, that crude base oils and the subsequent additiviation concepts have difficulties to meet any criteria for eco-labelled engine oils. This is easier to achieve with alternative base oil concepts, where the base oil backbones deliver more intrinsic properties.*

*Alternative engine oils based on esters, blends of esters with hydrocarbons, PAGs, co-basestock of bio-olefines/re-refines/esters&PAGs offers sufficient technical options in order to meet a set of environmentally requirements composed of bio-no-tox, fuel economy and exhaust, which are specific with engine oils.*

*2-stroke oils should be treated in the same way as 4-stroke oils for the very same reason as stated in the second comment: They should be integrated in a separate EU Ecolabel for engine oils.*

*It is questionable whether vehicle lubricants would meet both the technical*

**PARTIALLY ACCEPTED**

2-stroke engine oils are mixed with the fuel (gasoline) and as a mixture they are partially lost into the environment due to the very simple functioning of the 2-cycle engine. For this reason, it makes a lot of sense to allow

<p><i>performance and ecolabel environmental criteria, as lubricant characteristics that define high technical performance (stability, viscosity, etc) are typically properties that may limit the lubricant and/or components at desired treat from achieving the 'proposed' criteria for adding 4T engine oils to 'eco-labels' category 4.</i></p>	<p>companies willing to develop ester-based lubricant oils for 2T engines, to do so and to have a possibility to obtain the Ecolabel recognition. The 4T engine oils are not directly lost into the environment, if properly collected after use. (See comment above for 4T oils decision for this revision)</p>
<p><i>There is no significant release of 4-T stroke engine oils or its combustion residues into the environment. The deficiencies of waste oil collection and its environmental impact will not be addressed by introducing a very small fraction of EU Ecolabel 4-T stroke engine oils on the market. In particular end customers who will buy ecolabelled engine oils are the one most likely to collect used oil via an appropriate circuit for recycling. Careless customers who are not concerned about waste oil being released in the environment will not pay the additional price for Ecolabelled engine oils. There is much more to gain in terms of environmental impact in improving the collection of waste oil.</i></p>	
<p><i>Differentiation should be made between marine and terrestrial 2-stroke and 4-stroke applications. In marine 2-stroke and 4-stroke applications there is a potential for lubricants to enter the marine environment and therefore should be included in the EU Ecolabel. Terrestrial 4-stroke engine lubricants should not be included in the EU Ecolabel.</i></p>	<p><b>PARTIALLY ACCEPTED</b>  2-T and 4-T engine oils have different impacts on the environment. A portion of the 2-stroke engine oil is directly released into the environment, mixed with gasoline at every stroke of the engine, they are considered partial loss. The part of the oil that remains inside the engine is burned together with the gasoline; these 2T engine oils will now be placed in the new scope proposal as Partial loss lubricants, PLL. The 4-T stroke are only accidentally lost into the environment; these 4-stroke engine oils will not be included in the scope in the current revision, as it was decided as outcome of the 1<sup>st</sup> AHWG meeting.</p>
<p><i>4T oils are a very attractive, but complex product group. Our main point against the proposed EEL for 4T oils is the (more or less accepted) priority list of environmental concerns relating to engine oils: Of greatest importance is the influence on fuel consumption, then the influence on the emissions in general (lifetime and functionality of after-treatment systems). Only in the third line we should discuss about biodegradability, ecotoxicity or bio-based content. This view is already mentioned in the "Draft Technical Report" for the EEL: "Four-stroke engine oils: it is to notice that in Europe there are no eco-labels addressing 4T engine oils. Moreover, Korea Eco-Label addresses 4T engine oils but in a Product Category apart from the one of Lubricants. Korea Eco-Label has</i></p>	<p><b>PARTIALLY ACCEPTED</b>  This comment is acknowledged. One item that is however considered arguable is the point assuming there is much more to gain (for energy efficiency) in developing a 4T engine oil that minimizes friction and improves fuel consumption, so that it makes unnecessary to develop a 4T engine oil that does both: minimizes fuel consumption and improves other EEL criteria (percentage of renewable, for instance).  A quick comparison with a detergent for washing machine can be made: the largest benefit for energy efficiency (that is for the environment) is to develop a detergent that washes at low temperature; nonetheless, it does exist an EU Ecolabel for Detergents which focuses also on other aspects,</p>



	<p>three Product Categories for engine oils apart from the one of Lubricants (each one for: 4T engine oils, 2T engine oils, diesel gasoline oils) which criteria are different from those of Lubricants, and are related to emissions of air pollutants and resource consumption." The same view has had an "idea" of the German Umweltbundesamt for a Blue Angel for Fuel Efficient Engine Oil, dated of year 2006. We were involved in these discussions – end of the idea: Stopped, because it could not be agreed on the specific test engine. (In case of your interest we could send you some background information). Unfortunately, I could not find any discussion about this very important point in the revision text. One additional objection: The idea to take for engine oils the same "single component approach" (REACH) as for the other product groups, leads to special problem: The additive packages, which would mean that only few manufacturers of additive packages would have the chance to offer "EEL conform" engine oil formulations, because any "minor improving change" (e.g. by us) would need the knowledge of the single components. Nevertheless, we would support an EEL for 4T oils, see Suggested Actions.</p>	<p>like toxicity, biodegradability, etc. Nevertheless, as mentioned above, the 4-T stroke oils will not be included in this revision.</p>
	<p>Eco-labelled engine oils  In the case of engine (or motor) oil, retained fuel economy over a drain of &gt;20.000 km for passenger cars and the contributions to exhaust emissions and deterioration of exhaust after treatment devices overrules the ecotox criteria. The fuel economy shall be significantly greater than the quoted &gt;3% for ACEA C5, e.g. &gt;4,5% or &gt;5,0%.  In consequence, the criteria could be the following:  Significant and additional contribution to fuel economy meeting an ACEA oil sequence 2016 (C1-to C5, C5 is preferred) relative to RL191.  (One may apply the criteria to used (or aged) oils).  Not labeled with GHS 09 ("symbol N").  Content of &gt;25% of renewables  Low SAPS formulations.</p>	<p><b>ACKNOWLEDGED</b></p>
<p><b>CHAINSAW</b></p>	<p>The chainsaw oil should form a separate category because the limit values should vary compared to the other category 3 lubricants and they have a special fitness for use test. Additionally one may think about to include an audit for the chainsaw oil production facilities, to increase the credibility of the label.</p>	<p><b>REJECTED</b>  As indicated in the rationale, the lubricant is a product group with a large variety of application forms and formulations. The EEL for lubricants has taken the approach of grouping them in categories depending on the potential risk of release to the environment. It would be challenging to</p>

		handle this EU Ecolabel program for lubricants with a separate category for each product type and/or application. Chainsaw oils are a type of chain oils that, due to the application area, will go totally into the environment (forest, garden,...). For this reason, it is recommended to maintain the chainsaw as Total Loss lubricants. The audit of the facilities is out of the scope of EEL.
<b>CONCRETE</b>	<i>As for Category 3, Concrete mould release. We would like to note that referred ISO Family B standard has not been developed yet. Please consider removing the reference to this standard.</i>	<b>ACCEPTED</b> The ISO families are used in order to have a reference, mainly for technical performance purposes.
<b>GREASE</b>	<i>How to handle overlaps? For example greases used in total loss systems.</i>	<b>ACCEPTED</b> When grease goes to multiple applications, it is advisable to take the 'worst' application area; in this sense the total loss will always have the strictest criteria. In the case grease presents both total, partial and accidental loss applications, criteria corresponding to TLL category shall apply.
	<i>As for Category 2, the referred standard ISO Family X was developed in 2003 and does not cover the newest generation of greases, e.g. polyurea greases, bentonite greases etc. The question is: what in the case when applicants would like to certify such new generation grease? Would it be allowed? If yes, to which category it would fall? With respect to this, the scope shall encompass or predict the possibility of certification of the new generation lubricants. Moreover, this scope doesn't include e.g. drilling fluid used in shell-gas extraction, which is very dangerous for environment. It is proposed to give the general note into Scope concerning the possibility of applying for the EU Ecolabel for a lubricant not belonging to one of the above mentioned categories and such lubricant will be assessed as a total loss lubricant.</i>	<b>PARTIALLY ACCEPTED</b> Greases will be dealt in ALL, PLL, or TLL, depending on whether the grease is in a closed system, therefore accidental loss, it is a partial loss, or total loss. They will be dealt depending on the environment release, not depending on the composition of the grease. In this respect, wheel flange railway greases or drilling equipment greases, as total loss lubricants, will be included in the group TLL. All greases will be included in one of the three groups, TLL, PLL, or ALL, irrespective whether the thickener is bentonite, polyurea, or lithium soap type.
<b>INSULATING</b>	<i>Additionally, the ISO family N could be taken into account: Insulating liquids. Due to the increasing numbers of decentralized power stations (windpower and solar plants) the number of middle size transformers in environmentally sensitive areas is growing.</i>	<b>REJECTED</b> The time plan for this revision does not allow expanding the scope 'ad infinitum'. In addition, the EU Ecolabel should represent current best practices and no evidence is available for better environmental alternatives for such specific category at this moment.
<b>MARINE</b>	<i>The categorization of stern tube oils to Cat 3 (total loss) is not seen as appropriate as their incidental loss into marine waters is minimum in contrast to stern tube greases.</i>	<b>REJECTED</b> The stern tube oils (gear lubricants and bearing lubricants) and stern tube greases are both considered total loss, and as such are also considered within the VGP. Taking this category out of TLL (Total Loss Lubricants) would mean that Ecolabel accepted lubricants would not automatically be considered as VGP compliant, as it is now the situation. Additionally,

		available information from literature suggests t that lubricant loss through vessel stern tubes is by far the greatest source of lubricant ingress into the environment of all vessel lubricant applications incidental to their operation. (John V. Sherman, American Chemical Technologies, Inc.).
	<i>Marine gear oils are used in closed systems (Category 5) where the risk to the environment is from accidental spills or leaks. They should not be treated at total loss systems. Open gears are total loss systems and use greases that are covered under Category 3.</i>	<b>REJECTED</b> Gear oil is a very broad category, including closed boxes, open boxes, marine of field application. Marine gear oils used in closed systems are suggested to be considered accidental loss lubricants, ALL.
	<i>Stern tubes should be included under ISO family A - total loss systems, not family T - turbines.</i>	<b>ACCEPTED</b> It has been corrected, as stern tube oils are total loss, ISO family A.
	<i>Marine Gear Oils and Stern Tube Lubricants should NOT be included as Total Loss Lubricants. While there is an oil to water interface between the seal and water. Leakage would on occur if a seal rupture would occur and the amount would not result in a total loss of the system rather sepage into the water as oil passes around the seal.</i>	<b>REJECTED</b> Stern tube oils refer to oils used in the stern tube of a ship, and surroundings; all these oils do have the potential to be released to the ocean waters. Information regarding this point can be found elsewhere. As example, we've taken the article in the sector magazine 'Professional Mariner', published in April 2014, a few months after the VGP entered into force. This article analyses thoroughly the enforcement of VGP. It is stated "The EPA notes that the majority of oceangoing ships operate with oil-lubricated stern tubes and use lubricating oils in on-deck and underwater machinery. Oil leakage from stern tubes, once considered a part of normal 'operational consumption' of oil, results in millions of litres of oil released into the water every year. A typical stern tube system holds 400 gallons to 800 gallons (1,500L to 3,000L) of oil and the average vessel leaks about 1.6 gallons or 6 liters oil per day.". With this information, it is clear we cannot consider stern tube oils neither incidental nor partial loss, but total loss lubricants. A ship with stern tube holding about 600 liters of oil, would have released this oil into the water within a 3-month period. Recommended link: Professional Mariner, April 2014, Gary Wollenhaupt; Vessel operators make the switch to EA. [ <a href="http://www.professionalmariner.com/April-2014/environmentally-acceptable-lubricants/">http://www.professionalmariner.com/April-2014/environmentally-acceptable-lubricants/</a> ] There is a wide range of articles supporting the stern tube oil is Total Loss. One of the well explained ones can be found in the presentation from Thordon Bearings Inc. in 2011. From slides 9 and 10, we take these two sentences: "In order for a seal to work it must leak oil, the internal pressure inside the stern tube must be greater than the outside water pressure and it
	<i>Category 3 fluids have environmental requirements appropriate to total loss fluids. Sterntubes are not total loss systems. The lubricant can leak through wear of the seal or accidental damage but under normal operation, the system is sealed. Some hydraulic and gear EALs (Environmentally Acceptable Lubricants) are marketed for sterntube use. If dedicated sterntube oils are put in Category 3, they would have to meet higher environmental requirements that hydraulic and gear EALs that can be used in the same application. Inclusion of sterntube oils in Category 3 of the June 2011 Ecolabel occurred because dedicated sterntube oils do not meet the technical performance requirements of ISO 15380 (hydraulic) or DIN 51517 (gear). The option to include them in the 2011 Ecolabel as either Category 1 or 5 with 'Fit For Purpose' technical performance was not properly considered due to limited discussion time in the working group meeting. The current revision includes additionally the ISO family, as it provides a more standardized umbrella definition; having said that, we have to remind the EEL lubricants classifies lubricants taking into account the risk of going into the environment, so that the total loss lubricants will be the ones requiring the more stringent environmental criteria.</i>	
	<i>Stern Tube are not consider Total Loss Lubricants by OEM's and should be classified as Hydraulic or Gear Oil and fit for purpose.</i>	

		<p>must maintain oil at the mating surface under must maintain oil at the mating surface, under the seal lips”, and “Wartsila Propulsion, a leading seal manufacturer estimates ...The amount of oil leaked from stern tubes into the marine environment under ideal operating conditions is in excess of 10 million litres (2.6 million US Gal) per year”. The so-called <b>operational oil leakage</b> leads to a continuous leakage of oil into the oceans. (<a href="http://thordonbearings.com/system/documents/documents/167/original/Ship_Stern_Tube_Lubricating_Oil_Discharges_-_Legalities_Consequences_and_Solutions.pdf?1319122512">http://thordonbearings.com/system/documents/documents/167/original/Ship_Stern_Tube_Lubricating_Oil_Discharges_-_Legalities_Consequences_and_Solutions.pdf?1319122512</a>)</p>
<p><b>MWF</b></p>	<p><i>There are two general types of metalworking fluids: the aqueous ones, which cannot fulfil the criteria at all, and the ones used for slicing. Soluble/emulsifiable oils need to be biostable, otherwise lifetime would be very short (waste generation) and my increase risk of dangerous biomass. Non water miscible MWF can either fulfil the environmental criteria or the fitness for use criteria. For that product group complete new additional criteria would be necessary. As reason for the extension of the scope with metalworking fluids it was said, that they might accidentally end up in the environment. Since the metalworking fluids are classified as dangerous waste, everybody who works with those fluids needs to make sure that it does not end up in the environment at all. The extension of the scope would give a wrong impression.</i></p>	<p><b>ACCEPTED</b></p> <p>It is understandable to raise concerns on whether the preservative added to MWF may be an issue with regard to biodegradation. MWF products with water do need a preservative agent in its formulation. Other EU Ecolabel groups, as for instance liquid detergents, do also need a preservative and in that case the biodegradation criterion is met. This issue will be further investigated comparing the most common dosages of preservative in a liquid detergent and in a water-based MWF. A preliminary analysis shows that MWF need a higher dosage of preservative, given that the MWF will be diluted at 5-10% in water during use. On the other side, even this higher dosage, the preservative will slightly fade in solution during the bath life, usually from several weeks to several months.</p>
	<p><i>The content of biocides in aqueous MWF may counteract the criterion for ready biodegradability although biodegradable biocides with minimum aquatic toxicity are available. Selection of sustainable and/or bio-based raw materials for aqueous emulsions are possible. So, aqueous MWF may be considered for scope extension. The waste stage of aqueous MWF is not seen as critical as the risk of accidental loss is not seen as relevant (industrial/professional use). Hence, Category 5 (Industrial gear oils) would be more appropriate.</i></p>	<p><b>ACCEPTED</b></p> <p>The criteria are applied to the final product as it is provided to the market by the producer, no to the final coolant bath.</p> <p>MWF can be split, with regard to their composition, in three sub-groups: a) Neat oil b) Emulsions, c) water solutions. The biodegradability criteria shall be applied to the organic substances, as stated in the report. This clarifies the question and all MWF are treated in a similar manner, whether they are</p>
	<p><i>Metalworking fluids should be distinct. Due to conflicts of targets water-miscible metalworking coolants should be excluded from the EEL scope: Would the criteria be applied to the concentrate or to the final, water-containing coolant? Should the concentrate be water-free, to avoid any antagonism between biodegradability and content of biocides? Which concentration should be taken into account (depending on the metalworking process)? Otherwise, the consideration of not water-miscible metalworking</i></p>	

	<p><i>fluids would be acceptable for us – for these products we see chances for unambiguous criteria. However, also in this case some details have to be discussed, starting with adequate toxicity criteria and more relevant criteria in regard to technical performance.</i></p>	<p>neat oils (all substances are organic, therefore the criteria are applied to the whole product, or when the product is only water or an emulsion of water and oil, then the criteria are applied only the organic substances. The other question is regarding the criteria being applied to the concentrate or to the diluted product in operation in the plant; it is more clear if the criteria are applied to the concentrate, as it is done for the rest of lubricant products. The dilutions can vary a lot depending on the conditions of each production line, type of mechanical operation, or condition of the tool, even depending on the metal type, between 5 and 15% in water.</p>
	<p><i>Water soluble Metalworking fluids should be included in the EcoLabel as well as neat oils. There are four types of metalworking fluids: - Synthetic Metalworking (All ingredients are water soluble) - Semi Synthetic (Oil in water emulsions are microemulsions and translucent. - Soluble Oil (Oil in water emulsions typical 3-5% oil. Emulsions are milky in nature - Neat Oil Metalworking (Neat with additives) All of the above products can be formulated with either Vegetable oil or HEPR type base oils with the appropriate additives.</i></p>	
	<p><i>The stakeholder supports the inclusion of metalworking fluids as new categories in Ecolabel. Metalworking fluids included this category can be either synthetic (water-based), semi-synthetic (water-based), Soluble Oil (water based) and Neat Oils</i></p>	<b>ACKNOWLEDGED</b>
	<p><i>We are pleased with proposal on the scope extension to cover the new lubricants categories. It enables to increase the market share of the potential EU Ecolabel products. It is proposed to consider removing the metalworking fluids from Category 1 and establish the separate category only for them.</i></p>	<p><b>PARTIALLY ACCEPTED</b> The proposed scope simplifies the categories approach and groups the lubricants in three groups: TLL Total Loss Lubricants; PLL Partial Loss Lubricants, and ALL Accidental Loss Lubricants. MWF will be considered in ALL group.</p>
<b>TEMPORARY PROTECTION AGAINST CORROSION</b>	<p><i>We question the rationale for including temporary protection against corrosion lubricants in category 3. These are typically not total loss products in the same way that greases are not total loss lubricants. We suggest that this product type would be better aligned in category 1 along with the other accidental loss fluids, namely hydraulic fluids and metalworking fluids. It is likely that further discussion may be needed to better determine the right product category and stakeholder experts are available to be consulted. In many ways these products are not intended to be emitted or disposed of in the environment, and perhaps this is the source of the misunderstanding about how these products are used in the EU. In fact if they are intentionally removed from the metal surface they are protecting then any environmental risk will come from the solvent that is used to remove such products rather than the temporary protective material.</i></p>	<p><b>PARTIALLY ACCEPTED</b> The intention of temporary protection against corrosion (under ISO family R) lubricants, often greases or oils with some viscosity to adhere to the surface, it is not to be a total loss. Lacking more reliable data, we will recommend placing this group as a partial loss lubricant (PLL).</p>
<b>TURBINES</b>	<p><i>Additionally we recommend the inclusion of the product group "Turbine</i></p>	<b>PARTIALLY ACCEPTED</b>

	<i>Oils".</i>	Turbine oils do comprise bearing oils and gear oils, among other, as the turbine has different parts. In order to keep the workload to an acceptable level for the current revision, it has been decided to only include the stern tube oils.
	<i>Turbine Oils by most OEM's are not considered Total Loss Lubricants and should be treated as Hydraulic or Gear Oils and be fit for purpose.</i>	<b>PARTIALLY ACCEPTED</b> Turbine oils are not within the scope of this revision. During the first revision, Stern tube oils were classified by mistake as ISO Turbine oils; this has now been corrected in TR2.0. Stern Tube oils are within ISO family A, total loss, and Turbine oils are not considered in the current revision of EEL.

DRAFT

## First proposed criterion 1: Excluded and limited substances

Comments received in AHWG1/written form	JRC Dir. B response
<i>The approach concerning restriction at product or substance level should be consistent with the other referentials such as Detergents which involve tests at substance level. The approach concerning specified restricted substances (e.g. biocides, HAP, isothiazolinone compounds) should be consistent with other referentials.</i>	<b>ACCEPTED</b> An approach aligned with the Blue Angel approach is proposed for discussion in the 2 <sup>nd</sup> AHWG meeting. This proposal was made in the 1 <sup>st</sup> meeting and gained certain acceptance of stakeholders. It is stricter than the current requirement in force.
<i>On the LuSC list the grease thickeners are classified harmful, except calcium-12-hydroxy stearate. It means the soap content of lithium and lithium complex greases classified as harmful and for a higher consistency product containing high amount of thickener will be impossible to gain the flower even if it is non soluble in water.</i>	<b>ACKNOWLEDGED</b> The new approach for chemical criterion is aligned to the Blue Angel scheme. After consulting the new proposal, stakeholder are asked to send a filled in derogation form (included in the annex of TR2.0) together with rationale substantiating the derogation for those substances that they consider that need to be exempted..
<i>one may add "above 0,01% <b>intentionally</b> added", since some raw materials are UVCBs and therefore the composition is not 100% known</i>	<b>ACCEPTED</b>
<i>Most of lubricants manufacturer actually don't use biocide in their formulations. Only one manufacturer (release agents) uses a mixed BIT / MIT with mentions H302 315 318 400 317 and the final product is not classified.</i>	<b>ACKNOWLEDGED</b>
<i>FOR DISCUSSION: Substances or mixtures which change their properties upon processing (e.g. become no longer bioavailable, undergo chemical modification) so that the identified hazard no longer applies are exempted from the above requirement. This is an important technical rationale that requires expert review and input, as many environmentally classified 'pure' substances may be chelated, or crystallised, or emulsified within base oils (i.e. grease thickeners) during synthesis and are proven to have a decreased or no bioavailability. Further input from industry is essential.</i>	<b>ACCEPTED</b> This requirement already exists in the current criteria in force. According to CLP Regulation 'bioavailability' or 'biological availability' means the extent to which a substance is taken up by an organism, and distributed to an area within the organism. It is dependent upon physico- chemical properties of the substance, anatomy and physiology of the organism, pharmacokinetics, and route of exposure. Nevertheless, along the criteria application this condition was very often question as it is vaguely formulated and can be interpreted differently. At present the 2 <sup>nd</sup> Hazardous Task Force formed in the frame of the EU Ecolabel schemes works on more precise formulation of this condition. For time being there was agreement that mentioned condition should be used in case of derogations, but not for a normal evaluation of the respective criterion on hazardous substances.
<i>This may not be possible if a mixture (additive) provided by a supplier has a different chemistry from that of the component substances (see grease thickener example). Suggest that test data can be used to qualify as an exemption from literal application of the criterion 1 proposal.</i>	<b>PARTIALLY ACCEPTED</b> See above
<i>QUESTION: Would setting of restrictions at substance level (instead of product level</i>	<b>ACKNOWLEDGED</b>

Comments received in AHWG1/written form	JRC Dir. B response
<p><i>as existing criterion 1 (a) Hazardous substances and mixtures) lead to an ambition level that is not achievable by candidates and therefore to a significant loss of licences?</i></p> <p><i>Or it is still possible to apply a similar approach than detergents product group and restrict all hazardous substances unless those are explicitly derogated during the revision process?</i></p> <p><i>In the case that substance level criteria is finally proposed, it would be crucial that Competent Bodies/industry provide information on the hazardous substances or functional groups of substances which require derogations.</i></p>	<p>Criteria based on substance level was established also for complex product groups such as paints and varnishes, so it is not impossible to apply this approach, but definitely it requires a lot of information. The proposed revised approach for chemical criterion is aligned to the Blue Angel scheme. A number of lubricants are awarded by this scheme, which indicates feasibility of meeting such a criterion.</p> <p>Stakeholders are asked to send the filled derogation form (included in the annex of TR2.0) for those substances that need to be derogated as they cannot be substituted and fulfil the derogation conditions set in the EU Ecolabel Regulation. See additional details in the rationale of criterion 1 in TR2.0.</p>
<p><i>It is not clear, which substances (functional groups etc.) may be added on the derogation list.</i></p>	
<p><i>Based on (EC) 66/2010 Art 6(6) and 6(7) the ecolabels should not be awarded to goods containing SUBSTANCES or preparation/mixtures meeting inter alia the criteria for toxic and hazardous to the environment. This is seen as critical as it would mean loss of additives not fulfilling those harsh conditions. Formulation of environmentally friendly AND sustainable lubricants would be hard to achieve. A majority of existing EEL products would not meet the requirements! The derogation arguments have to be selected properly with regard to hazards allowed!</i></p>	
<p><i>Direct answer: yes</i></p> <p><i>Indeed, if all hazardous substances labelled with e.g. H410 - H413, would be excluded, a broad range of additives used in lubricants would be banned.</i></p> <p><i>Additives for lubricants need to be oil soluble. Oil soluble substances rarely exhibit a log Pow &lt; 4, most often it is &gt; 7. This is combined immediately with a labelling of these substances with H410 - H413. A lot of anti-oxidants, anti-wear additives, corrosion inhibitors etc. exhibit such labelling.</i></p> <p><i>From the existing LuSC list approx. 70% of the additives would be excluded. From our point of view more than 50% of approved products in the EU Ecolabel would lose the approval.</i></p>	
<p><i>There would be no lusclist anymore?</i></p> <p><i>We don't have information about the raw materials because the files have been transmitted before CLP but I think we could have a derogation system such as paints</i></p>	



Comments received in AHWG1/written form	JRC Dir. B response
<p><i>and varnishes especially for additive which have a use of anti-corrosion and anti-viscosity.</i></p>	
<p><i>Applying classification and labelling restrictions at the substance rather than product level will make formulating lubricants that meet the technical criteria extremely challenging. These restrictions should continue to be applied to the final product and not to the individual components.</i></p> <p><i>Consideration should be given to the implications of this change to products and substances on the LuSC list. Many products and substances may need to be removed from the list, potentially significantly reducing the number of products certified to the EU Ecolabel for Lubricants.</i></p>	
<p><i>RSC Bio Solutions strongly objects to the proposal to restrict substances with hazard classifications to be &lt; 0.1% of the lubricant.</i></p> <p><i>Explanation</i></p> <p><i>First and foremost, a lubricant must perform to the demands of the intended application. Lubricants must contain certain substances such as antioxidants, corrosion inhibitors, wear inhibitors, foam inhibitors, demulsifiers, anti-foams, thickeners, dispersants and pour point depressants. Most of the essential components are used at treat rates that are much higher than 0.1% depending on the application, and all of them are used at treat rates that are much higher than 0.01%. Additive packages that contain the required performance components commonly are used at 0.5-5% in industrial lubricants and 5-20% in passenger car engine oils.</i></p> <p><i>Most of these essential components carry hazard statements. It is impossible to formulate high performance lubricants without these additives. It is already very challenging to make high performance lubricants under the guidelines of the Lubricant Substance Classification List. It is very misleading to look to older environmental specifications for guidance here. These specifications are dying because only low performance lubricants based on vegetable oils can meet their restrictions.</i></p> <p><i>Ecolabel can live and thrive as an environmental specification if the various criteria are realistic, robust and attainable. Look to the US EPA Vessel General Permit 2013 as an example. The entire marine industry is converting to EAL because the criteria are realistic, robust and attainable.</i></p> <p><i>RSC Bio Solutions supports the continued maintenance of the LuSC list developed</i></p>	

Comments received in AHWG1/written form	JRC Dir. B response
<p><i>under the current Ecolabel criteria. It is a very valuable tool for formulators, and allows control of the additives allowed in Ecolabel formulations.</i></p>	
<p><i>The de minimis level of 0.010% for SVHCs contained in the current criteria should be adequate without requiring further derogation (see elsewhere for stakeholder's comments about the practical challenges associated with introducing derogations that have to be awarded by competent bodies). This de minimis level is already 10x less than the current SDS declaration limit required by REACH and in many cases significantly less than the classification threshold for mixtures. Other EU legislation such as CLP and REACH and other environmental standards such as Blue Angel accept a lower limit for such substances is sufficiently protective. For practical reasons it would be difficult/impossible for an applicant to certify that the lubricant contains zero SVHCs because no-one in the supply chain will analyse their product for all SVHCs listed on the Candidate list and where analysis is possible there are finite limits of detection.</i></p>	
<p><i>One stakeholder strongly suggests that the criterion for excluded or limited substances that is currently in force should not be changed and is sufficient for the purposes of the ecolabel. In practice this criterion is already extremely challenging to meet for additive manufacturers and lubricant formulators and any further restrictions or conditions would almost certainly result in a much lower number of applications as there are today especially in the absence of any market drivers such as EU regulations mandating the use of ecolabeled lubricants. Furthermore, as was pointed out by several individuals during the meeting, if the proposed changes are adopted the vast majority of products that are already approved are unlikely to be re-approved which discredits the entire scheme as an environmental standard. Other criteria should be looked at if the Commission wants to demonstrate improvements in the environmental credentials of lubricants that are awarded the ecolabel.</i></p>	

Comments received in AHWG1/written form	JRC Dir. B response
<p><i>One stakeholder strongly recommends that the Commission keeps the criteria of the ecolabel as close to the existing requirements in force for product types already in scope if it is serious about increasing the number of applicants. In particular, the derogation in Table 1 of the existing criterion 1a for products not classified as hazardous should be maintained, With respect to what the criteria should apply to this should be maintained for the applied lubricant for criteria 1(a), 6 and 7; to each stated substance intentionally added or formed &gt; 0.010% for criteria 1(b) and 2; to each stated substance intentionally added or formed &gt; 0.10% for criteria 3, 4 and 5 (note that criteria numbers are for existing criteria as extracted from the existing criteria document not for the new criteria as proposed in the draft technical report) As a general comment one stakeholder believes that the Commission needs to be aware that it is already extremely challenging for lubricant formulators to meet the very strict criteria on hazardous ingredient content, low toxicity, amount of ultimately biodegradable ingredients and ingredients from renewable sources whilst producing a lubricant to satisfy the ever-increasing performance requirements in a cost-competitive manner. The development costs of formulating to these very difficult criteria together with the typically higher cost of ingredients from renewable sources means that the lubricants have to be sold at a premium compared with traditional, mineral oil based lubricants. Without any regulatory drivers compelling customers to use lubricants that meet the ecolabel standard (or other environmental standards) customers are reluctant to pay this premium. Making the requirements even more strict will result in formulators no longer seeing the value in having their products associated with the EU ecolabel, and will instead turn to environmental standards that do have a regulatory driver but where the criteria are less difficult to meet. Others have commented that the US EPA Vessel General Permit requirement for Environmentally Acceptable Lubricants has driven a slight increase in demand for lubricants that have the ecolabel award. However, the Commission should be aware that it is also possible for lubricant manufacturers to self-certify for this requirement based on developing the required toxicity and fate data for the lubricant without needing to be approved under the EU ecolabel scheme. We therefore urge the Commission to think very carefully before making it even more difficult for lubricant manufacturers to gain an ecolabel award for their product.</i></p>	
<p><i>Include a list of classified substances that one does not want to see on the application form in the section where the composition must be stated. Proposal for modification:</i></p>	<p><b>PARTIALLY ACCEPTED</b> There are certain substances directly excluded from the EU Ecolabel and in addition</p>

Comments received in AHWG1/written form	JRC Dir. B response
<p><i>Substances classified as CMR Cat 1 (CLP) and sensitizers Cat 1A are not allowed in a fraction above 0.010% including as an impurity. If an official list of PBT and vPvB is also available at the ECHA website one may include substances on this list as well. However the current criteria does not allow to use any PBT or vPvB already above 0.1%.</i></p>	<p>the new proposal of alignment with the approach of the Blue Angel will exclude certain substances as CMRs of category 1A, 1B and 2as well. An exhaustive list cannot be added as CLP classification is a dynamic process and new substances might be added along the criteria validity period.</p>
<p><i>Biocides are only required for products containing water. Oil-based products do not require biocidal protection. One stakeholder believes that further discussion is needed before the Commission adds a criterion for biocidal use. Biocides used in aqueous-based lubricants (such as metalworking fluids) or in lubricants where there is a possibility of oil and water coming into contact (such as some marine lubricants) to protect the other ingredients from microbial degradation have to be approved for PT6 (in can preservation) or PT13 (Working or cutting fluid preservatives) under the BPR or be going through the Biocides Review Programme. Additionally, biocides can only be used in a fluid placed on the market in EU when purchased from a supplier listed under Article 95 of the BPR. This should be one of the criteria associated with biocides. To the best of our knowledge all biocides that have been approved or are seeking approval for PT6 and/or PT13 are hazardous in some way. Furthermore, one class of biocide, the formaldehyde-releasers have been assigned a harmonised classification of a category 1B carcinogen due to their mode of action (release of formaldehyde). However, mixtures may not be classified as hazardous because the EU regulators have assigned a note to the harmonised classification recognising that at the effective dose the biocides do not release &gt; 1000 ppm formaldehyde into the lubricant. For this reason, and because the only alternative for PT13 (i.e. the isothiazolinones) have their own significant hazard concerns for workers at dose levels below the effective dose, the Commission should consider how adequate biocidal protection could be built into the ecolabel scheme without banning an important family of biocide active ingredients..</i></p>	<p><b>PARTIALLY ACCEPTED</b></p> <p>According to the Preliminary report, lubricants preservatives are covered under Product type 6, defined as preservatives for products during storage and Product type 13, working or cutting fluid preservatives. It is worth to note that although all organic-based functional fluids (lubricants) are usually subject to potential microbiological deterioration, only those products that are water-based are usually candidates for biocides use. Therefore, biocides are typically used in water-based metalworking fluids, hydraulic fluids and mould release.</p> <p>Initially, a list of hazard classifications for preservatives added to the final product (water-based metalworking fluids, hydraulic fluids and mould release) was created based on the compilation of hazard profile of all approved active substances that can be used for product type 6 and 13. Moreover, it was added to this table that:</p> <ul style="list-style-type: none"> <li>- Evidence shall be provided that Authorisation conditions under Regulation (EU) No 528/2012 are respected for the product.</li> <li>- Where preservatives that are formaldehyde donors are used then formaldehyde content and emissions from the final product must meet the requirements in substance restriction 1 (a).</li> </ul> <p>However, in the current proposal the approach of Blue Angel is proposed and shall classified preservative need a specific derogation from the currently proposed requirement, industry stakeholders are asked to provide a formal derogation request with justification. JRC can provide interested stakeholders with more details on which information are required (please contact the project team).</p>

Comments received in AHWG1/written form	JRC Dir. B response
<p><i>Should this criteria relate to the REACH Authorisation List (REACH Annex XIV) rather than the REACH Candidate List of Substances of Very High Concern?</i></p>	<p><b>REJECTED</b></p> <p>Criterion 1(c) relates to the Candidate List of Substances of Very High Concern and therefore consequently also to substances included in Annex XIV (Authorisation List) due to all substances included in Annex XIV of REACH have been initially included in the candidate list. According to the proposal, the final product shall not contain any substances that have been identified in accordance with the procedure described in Article 59(1) of Regulation (EU) No 1907/2006, which establishes the candidate list for substances of very high concern. Sub-criterion (c) is directly linked to the EU Ecolabel Regulation (EC) No 66/2010. The same horizontal approach has been followed in other product categories.</p>
<p><i>This criterion does not apply to ingoing substances covered by Article 2(7)(a) and (b) of Regulation (EC) No 1907/2006 which set out criteria for exempting substances within Annexes IV and V to that Regulation from the registration, downstream user and evaluation requirements. In order to determine whether that exclusion applies, the applicant shall screen any ingredient present at a concentration above 0,010% weight by weight.</i></p> <p><i>The proposal includes an exemption for substances excluded from the scope of parts of REACH.</i></p> <p><i>The proposal is not correct</i></p>	<p><b>REJECTED</b></p> <p><b>Substances covered by Article 2 (7)(a) and (b) of REACH are under the scope of REACH (REACH applies to them).</b> In the specific case mentioned, REACH applies both to substances <u>occurring in nature, as defined by Article 3(39) of REACH, and to their synthetic analogues.</u> However, Annex V of REACH states that the following substances occurring in nature <b>are exempted from registration if they are not chemically modified:</b> minerals, ores, ore concentrates, raw and processed natural gas, crude oil and coal. <u>These substances can only be processed by certain means (e.g. dissolution in water, flotation), which are specified in Article 3(39) of REACH and do not include chemical modification (Article 3(40)).</u></p> <p>Other substances occurring in nature are also exempted from registration if they are not chemically modified, unless:</p> <ul style="list-style-type: none"> <li>they meet the criteria for classification as dangerous according to the CLP Regulation (Regulation 1272/2008), or</li> <li>they are persistent, bioaccumulative and toxic or very persistent and very bioaccumulative in accordance with the criteria set out in Annex XIII, or</li> <li>they were identified in accordance with Article 59(1) at least two years previously as substances giving rise to an equivalent level of concern as set out in Article 57(f).</li> </ul> <p>Further explanations on the different exemptions in Annex V are included in ECHA Guidance - 'Guidance for Annex V - Exemption from the obligation to register': <a href="https://echa.europa.eu/documents/10162/23036412/annex_v_en.pdf/8db56598-f7b7-41ba-91df-c55f9f626545">https://echa.europa.eu/documents/10162/23036412/annex_v_en.pdf/8db56598-f7b7-41ba-91df-c55f9f626545</a>.</p> <p>Since the synthetic analogues of naturally occurring substances do not meet the criteria for substances occurring in nature as defined in Article 3(39) of REACH, any manufacturer or importer of these substances in quantities of one tonne or more per</p>

Comments received in AHWG1/written form	JRC Dir. B response
	<p>year is required to register them. Nevertheless, the main reason to include this exemption was to consider that any substance generated as a result of chemical reaction when the lubricant functions as intended, is exempted from registration, provided it is not itself manufactured, imported or placed on the market. For example: Zinc dithiophosphates (ZDDPs) are substances commonly used in the formulation of lubricating oils for engines. Their mode of action includes the formation of a boundary layer to the surface to be lubricated and is known to require the chemical reaction of the ZDDPs. While the registration provisions apply to the manufacture or import of ZDDPs, the substances formed upon their use as lubricant and which contribute to the lubrication process are exempted from registration as such. So, we consider relevant to include this exemption in the proposal. An horizontal approach has been followed according to other product categories.</p>
<p><i>The final product should not have any of the classifications listed by the JRC. The classification for corrosion and irritation are missing (corrosive to skin and/or Eye and reversible damage to Eye and/or skin – old irritation).</i></p>	<p>EU Ecolabel Hazards statements restricted in the EU Ecolabel Regulation include the hazards statements for eye/skin corrosion/irritation (see the table of hazards of criterion 1a)):</p> <p>H314 Causes severe skin burns and eye damage  H315 Causes skin irritation Serious eye damage/eye irritation  H319 Causes serious eye irritation.</p> <p>Nevertheless, it should be note that there is a restricted hazard statement not currently included in the EU Ecolabel such as: <b>H318</b>: <i>Causes serious eye damage</i> (category 1) that is proposed to be included.</p> <p>H319: <i>Causes serious eye irritation</i> (category 2) is already included in the EU Ecolabel, while the H318 not. Since according to the currently used interpretation of the grouping of hazards<sup>1</sup> according to Regulation (EC) No. 1272/2008 and the Task Force document<sup>2</sup> H318 is classified as Serious eye damage category 1 and H319 Eye irritation category 2 according to table 3.3.5 to CLP Regulation, it is proposed to consider adding <b>H318</b> to the list of restricted hazard statements according to the Table</p>

<sup>1</sup> According to Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006

<sup>2</sup> Findings of the EU Ecolabel Chemicals Horizontal Task Force - Proposed approach to hazardous substance criteria development. 24th February 2014. Available online at: [http://ec.europa.eu/environment/ecolabel/documents/Chemicals%20HTF\\_Approach%20paper.pdf](http://ec.europa.eu/environment/ecolabel/documents/Chemicals%20HTF_Approach%20paper.pdf)

Comments received in AHWG1/written form	JRC Dir. B response
	1 of restricted hazard statements.
<p><i>The EEB and BEUC do not support such a general statement that flexibility for group 3 substances may be applied if the fate of the product is not in the aquatic environment.</i></p>	
<p><i>One stakeholder strongly objects to the proposal to restrict substances with hazard classifications to be &lt; 0.1% of the lubricant.</i></p>	
<p><i>Adequate lubricant performance is critical to the reputation of the Ecolabel. Setting restrictions at substance level would prohibit lubricants meeting the required performance requirements and lead to a very significant loss of licenses. This was clearly expressed by several experts at the AHWG1 meeting.</i></p>	
<p><i>This is a weakening of the current criterion. Currently, with the derogation in place (i.e. Table 1 of the current Commission Decision) finished lubricants cannot be classified as hazardous in any hazard class/category. One stakeholder suggests to retain the current criterion that a finished lubricant cannot be classified as hazardous according to CLP.</i></p>	<p><b>ACCEPTED</b></p> <p>For the moment a general derogation or flexibility is not proposed.</p>
<p><i>One stakeholder supports retaining the current derogation. The proposal to align this criterion with the detergents product category is misguided. Removing the current derogation at the finished product level is unworkable in our opinion. One stakeholder is one of the world's largest lubricant additive suppliers and spends millions of euros annually developing products that are used by the lubricant manufacturers to produce products for many different applications including those covered by the ecolabel. As pointed out during the meeting lubricants are very different from household detergents in that they require a mixture of different chemistry to provide the technical performance demanded by equipment manufacturers and end users. Most of this chemistry needs to be reactive (e.g. it reacts with a metal surface to provide protection), oil-soluble, and resistant to breaking down under the harsh operating conditions of elevated temperature and pressure experienced in most applications. These characteristics are the same characteristics that cause the ingredients to demonstrate toxicity to mammalian species or in the environment. It is impossible to have one without the other. This is why the final product hazard derogation is so critical to lubricant manufacturers who wish to apply for the ecolabel. Formulating products containing no hazardous substances is a laudable goal but completely impractical, and eliminating the derogation at product level will guarantee that the overall aims of the ecolabel would fail as no more products would be capable of meeting this condition regardless of</i></p>	<p>The new proposed approach for chemical criterion is aligned to the Blue Angel scheme. A number of lubricants are awarded by this scheme. Still it is much stricter than the currently applied criterion.</p> <p>Stakeholders are asked to send the filled-in derogation form (included in the annex of TR2.0) for those substances that need to be derogated. See additional details in the rationale of criterion 1 in TR2.0.</p>

Comments received in AHWG1/written form	JRC Dir. B response
<p><i>any other changes that have been proposed.</i></p> <p><i>The current scheme where there is a derogation at product level for products not classified as hazardous under CLP is simple and easy to understand. One stakeholder considers this new proposal to derogate at substance level to be unworkable in practice. There are several barriers to consider; i) the different competent bodies would need to adopt a harmonised approach to agreeing what can be subject to derogation and what cannot, what information is needed, what level of justification against the ability to substitute would be adequate, what an appeal process would look like, who would have the final decision etc ii) this would undoubtedly lead to increased cost for industry and currently the market demand for ecolabel lubricant products is insufficient to justify increased costs in applying for new ecolabel products iii) no additive or lubricant formulator will risk developing a product containing low levels of one or more hazardous substances and then risk investing in the testing required to provide proof of performance and hoping that a derogation is granted at application for the affected ingredients. Costs of new product development e.g. for 4 stroke oils can run into multi-million euros.</i></p>	
<p><i>In addition to other comments on the proposal to require applicants to seek a derogation for substances with a hazard in Table 1, we want to point out the incongruity that this condition actually penalizes substances where their health hazard profile is known due to actual testing, or where suitable read-across has been applied. Some substances included in the ecolabel (e.g. polymers) may not have a full set of mammalian test data and may therefore be out of scope of this criterion due to lack of data. Minimising the content of hazardous ingredients, which formulators already do due to the increasingly common requirement of the lubricants value chain to have non-hazardous products, should be sufficient to meet the aims of the ecolabel in this product category, especially as almost all of these product types are sold to industrial and professional users trained to handle such products and are NEVER sold to consumers.</i></p> <p><i>Most substances are NOT uniformly classified. Even worse many substance do not have any classification because NO data are available. If a substance is classified differently according to the Classification and Labelling Inventory and this results in the fact that one company has no data and the substance can be used while another company has data but this data indicates that the substance must be classified then clearly the company having NO data is (always) in favor of the company that have data on the substance.</i></p>	<p><b>REJECTED</b></p> <p>The incongruity that the lack of data of some type of substances, such as polymers, actually penalizes substances where their hazard profile is known due to actual testing, is not depending on the EU Ecolabel. This issue, is a current well known gap in REACH regulation and consequently in CLP. For example, unless the substance has harmonized classification, different classifications may be notified to the C&amp;L inventory for the same substance. This fact can actually penalize the most restrictive hazard classification.</p> <p>Nevertheless, according to ECHA report on the Operation of REACH and CLP 2016, further consideration should also be given to including polymers within the scope of registration. But, in any case, this issue is out of the scope of the EU Ecolabel.</p>



Comments received in AHWG1/written form	JRC Dir. B response
<i>To request derogations for each substance is not proportional at this moment. It will affect each approved lubricant.</i>	<b>REJECTED</b> See comments above
<i>It is unknown how Nanomaterials must be assessed within the EEL. The examples given indicates that only an extremely low fraction is allowed: for Ag-NP the lowest level is 0.10%/M and it seems M is at least a factor of 1000 and for Boric acid it is less than 0.010% since it is found on the Candidate list. Is Boron acid in the Nanoform used in a fraction less than 0.01%?</i>	<b>ACCEPTED</b> From the point of view of legislative framework, REACH applies to substances. Nanomaterials are covered by the definition of a “substance” under REACH and the same provisions apply to all chemical substances. Therefore, it is proposed that same criterion 1a) applies for all substances including nanoforms.
<i>I would not include to suggest that any derogation is requested for any SVHC BELOW 0.010%. How can this be checked? And does it include impurities??</i>	<b>ACKNOWLEDGED</b> This is a requirement set in the EU Ecolabel Regulation 66/2010.
<i>It is easier to refer to substances that are classified or are found on official lists. The phrase refers only to substances found on the candidate list. There is no derogation allowed for any of these substances on the candidate list above 0.010%. It is not clear why you allow such a procedure in the proposal.</i>	According to article 6(7) of EU Ecolabel Regulation 66/2010, no derogation shall be given concerning substances that meet the criteria of Article 57 of Regulation (EC) No 1907/2006 and that are identified according to the procedure described in Article 59(1) of that Regulation, present in mixtures, in an article or in any homogeneous part of a complex article in concentrations higher than 0,1 % (weight by weight). For the second proposal the horizontal approach continues to be suggested however a compromise is sought and hazardous substances that are needed and cannot be replaced will be proposed for derogation. It is not proposed to include a derogation list including SVHC below 0.010%, as no derogation requests were provided to the project team for evaluation.
<i>in our least "nasty" soluble metalworking product, the biocide is a isothiazolone</i>	<b>ACKNOWLEDGED</b> According to the Preliminary Report EU Ecolabel lubricants <sup>3</sup> only biocidal products containing biocidal active substances approved by European Commission and authorized for use in lubricants are allowed for use. Chloromethylisothiazolinone (CMIT) and methylisothiazolinone (MIT) (CMIT/MIT 3:1) are widely used in lubricants due to their effectiveness within such wide pH range. The dosage of CMIT+MIT added to the products is usually very low and found in a concentration below 15ppm as then classification (Skin Sens 1; H317) is avoided. Stakeholders are asked to provide more information on the typical concentration of preservatives used in lubricants products.

<sup>3</sup> More information available online at: <http://susproc.jrc.ec.europa.eu/Lubricants/docs/Preliminary%20report%20EU%20Ecolabel%20Lubricants.pdf>

Comments received in AHWG1/written form	JRC Dir. B response
<p><i>What is the use to request information on the function and the form of the substance if this information is not used in any of the proposed criteria?</i></p>	<p><b>ACKNOWLEDGED</b> Information on the function of the substance is relevant for the elaboration of the derogation list that has been included in criterion 1a). A horizontal approach followed for EU Ecolabel products has been suggested for criterion 1a), therefore the EU Ecolabel hazards restrictions apply at substance level (instead of at product level as criterion currently in force). The derogation list should include the hazards of specific substances or certain functions that cannot be replaced by safer alternatives.</p>
<p><i>It is unknown what should be done with the information if a substance in the nanoform is included. What information is required? Where do criteria specifically refer to nanomaterials?</i></p>	<p><b>ACKNOWLEDGED</b> Currently, nanomaterials are covered by the definition of a “substance” under REACH, although there is no explicit reference to nanomaterials and the same REACH provisions apply to all chemical substances. Nanomaterials are not intrinsically hazardous per se but there may be a need to take into account specific considerations in their risk assessment. It is only the results of the risk assessment that will determine whether the nanomaterial is hazardous and whether or not further action is justified. Criteria apply to all substances including nanoforms. No need to include specific criteria for nanoforms. But it needs to be kept in mind that substances in nano forms may have different properties from the non-nano ones.</p>
<p><i>I have the impression that now a lubricant can be classified by health as an irritant for example or H304. This makes criterion 1 more lenient while all licence holders have lubricants on the market that do not have classification for health and environment.</i></p>	<p><b>REJECTED</b> According to proposed in the 1<sup>st</sup> AHWG meeting criterion 1a) which reflects the Article 6(6) of Regulation (EC) No 66/2010 on the EU Ecolabel (the final product, including all intentionally added ingredients present at a concentration limit of or above 0,010% weight by weight (in the final product), shall not contain substances or mixtures classified as toxic, hazardous to the environment, respiratory or skin sensitisers, or carcinogenic, mutagenic or toxic for reproduction). This includes substances classified as irritant or H304. Currently this restriction in practice only applies to the final product; therefore the proposed criterion (at substance level) was stricter. For the 2<sup>nd</sup> AHWG meeting a new approach aligned with Blue Angels is proposed for discussion. Still, it also is stricter than the current requirement.</p>
<p><i>It must be made clear that the composition of the final lubricant must be assessed. It means that from any substance or substances which react during the production process of the lubricant the products of the reaction must be assessed.</i></p>	<p><b>ACKNOWLEDGED</b> The final formulation of the lubricant should be assessed, it is however true that this can however be difficult for products which react.</p>

Comments received in AHWG1/written form	JRC Dir. B response
<p><i>It is not clear whether reference is made to the concept of substance and mixture in the context of the EU definition or in the context of a pure chemical substance and a mixture of pure chemical substance. The EU concept of substance allows that large fractions of chemical substances can be present in the substance itself due to the way it is defined. Such a difference may have a large impact especially when no experimental test reports are handed over and QSARs or read-across can be used.</i></p>	<p><b>ACCEPTED</b> CLP definitions regarding substances and mixtures are applied in the criteria document.</p>
<p><i>Since Boric acid is on the candidate list its fraction allowed in a final lubricant according to the EEL is 0.010%. It is unknown from the text whether this fraction is exceeded or not. If not exceeded it is not an issue. If exceeded then it can be an issue.</i></p>	<p><b>ACKNOWLEDGED</b> In the first proposal, it was suggested to align the wording to detergents product group restricting totally the presence of SHVC in the final product. However, if derogation requests are received for SVHC presence in the final product below 0.010% w/w (which is existing limit in force for lubricants), reformulation of the requirement was suggested to be considered. No derogation requests have been received.</p>

## First proposed criterion 2: Aquatic toxicity

Comments received in AHWG1/written form	JRC Dir. B response
<p><i>French licensees use around ten types of different unique formulations. According to data from licensees: Proposed thresholds for chronic hazards category 3 (E) and category 1 (G) are OK; Proposed thresholds for chronic hazards category 2 (F): some current license holders would not be compliant with the criteria. You can rely on the database sent by AFNOR in september.</i></p>	<p>In order to define suitable thresholds, stakeholders and competent bodies were asked to provide information on currently EU ecolabelled products in order to obtain reliable and representative statistics. Based on the outcome of the consultation, it was found that generally the current threshold values are higher than the corresponding values for most of the samples investigated. This supports the proposal for stricter aquatic toxicity limits.</p>
<p><i>Concerning the proposed limit values for criterion 2.2 it seem that they were just divided by 2 but there is no obvious ecotoxicological explanation on the reason behind.</i></p> <p><i>Additionally to that several products especially from category 3 would not comply anymore. In Germany we have 25 Products licenced in that category 3. 5 of them would not fulfil the new limit values for "F" and 5 others would be exactly at the limit value. The values for category 3 should therefore remain as they are now (E ≤ 5% and F ≤ 0.5%).</i></p>	<p>For the second proposal, the threshold values have been adjusted based on new data provided by Competent Bodies on current EEL products. In this second draft criteria, revision data on aquatic toxicity of 143 EU ecolabelled products from 11 different countries was obtained, which represents approximately the 40% of the total EEL products in the market.</p> <p>Consequently, the strictness of the threshold <b>values proposed for criterion 2.2</b> has been adjusted. Main changes are summarized below:</p>
<p><i>The reduction of the cumulative amount of certain hazards will make it harder to formulate durable biolubricants with excellent performance and increase the scope of lubricants.</i></p>	<ul style="list-style-type: none"> <li>○ Threshold values for category ALL have been maintained in comparison with the threshold values presented in the TR1.0. According to the data received (40% of the existing licences) all the assessed licences would be able to comply with the revised thresholds.</li> <li>○ Threshold values on chronic hazard category 2 (F) for category PLL have been relaxed compare to the first proposal from a cumulative mass percentage equal to or less than <math>\leq 0,5\%</math> to <math>\leq 0,6\%</math>. Also in this case, all the assessed licences would be able to comply with the revised thresholds.</li> <li>○ Finally, threshold values on chronic hazard category 2 (F) for category TLL have also been relaxed compare to the first proposal from a cumulative mass percentage equal to or less than <math>\leq 0,3\%</math> to <math>\leq 0,4\%</math>. According to the data received (37 currently EU Ecolabelled products for lubricants category 3) only 2 existing licenses would not be able to comply with the revised thresholds.</li> </ul>
<p><i>French manufacturers tell me that the proposed criterium would be too severe</i></p>	
<p><i>Will tightening the toxicity values prevent new products from being registered under the Ecolabel and remove existing products from registration?</i></p>	
<p><i>Adopting the values proposed in Table 4 will reduce the number of licenses and/or technical performance, and reduce the reputation of the Ecolabel.</i></p>	
<p><i>It was stated in the AHWG1 meeting that the Ecolabel Committee wants to increase adoption of the Ecolabel and raise the environmental requirements. These two goals are contradictory. There are a limited range of performance additives available for Ecolabel lubricants. Tightening the environmental limits at this time will restrict formulation and have a negative effect.</i></p>	
<p><i>Data of 47 ecolabeled products representing 25% of the EU Ecolabel for lubriant (page 33 this draft) had been used to create this table of new limits for toxicity. Beside the point that 25% is not representing the majority of the products this stronger limitation of mass percentages reduces flexibility in formulating products for</i></p>	

Comments received in AHWG1/written form	JRC Dir. B response
<p><i>higher demands in future. Not all the time but most often higher demands on application side ask for more complex formulations and higher concentrations of components. Reducing the mass percentages all the time would block such developments in the EU Ecolabel. We prefer to keep the old thresholds in this category.</i></p>	
<p><i>Test of fully formulated lubricants (Criterion 2.1.) only if not all data for environmental toxicity are available for the constituents. After 2018 (REACH deadline) this may be a rare case.</i></p>	<p><b>ACCEPTED</b></p> <p>Criterion 2.1 does not refer only to the availability of environmental data but also to unknown substances that can be present in some formulations due to UCVB composition. Many types of greases are the result of a direct reaction product. The full composition of the greases is therefore not completely known and a criterion that established the aquatic toxicity based on the testing the product was considered necessary for at least this group of lubricants.</p> <p>Nevertheless, based on some barriers identified, it is proposed to maintain the existing criterion 3.1 requirement for the lubricant and its main components (i.e., criterion 2.1 in the revised document) for all categories because the full set of aquatic data will probably not be available for every ingredient (not only for greases as suggested in the first proposal). Many of the additives used in lubricants only circulate in commerce as integral parts of more complex and highly competitive chemical mixtures and details of the intrinsic chemical identities and proportions of these mixed substances are almost always confidential, protected via formal patents or other Intellectual Property Rights, and this manufacturing paradigm is extremely unlikely to change in the future, due to the very proprietary nature of the lubricants sector in general.</p> <p>Moreover the letter of Access usually restricts the use of “data” (for each stated substances in regard to criterion 2.2) to the REACH registration dossier, not being able to be used for other purposes such as the EU Ecolabel. For this reason, a criterion that established the aquatic toxicity based on the testing on the mixtures and the main components is finally allowed for all types of categories.</p>
<p><i>It is unclear whether the text: "Note for the assessment and verification: it has been discussed at the meeting to keep existing assessment and verification of the existing criteria 3.1 and 3.2 in force, including the exemptions from testing, and to allow the use of results of (Q)SARs" refers to the text of existing criteria 3.1 and 3.2 only, or whether the statement also</i></p>	<p>The text refers only to the assessment and verification text in force. In this second revised draft only minor changes will be presented for the assessment and verification part, nevertheless the strictness of the threshold <b>values proposed for criterion 2.2</b> has been adjusted. Thresholds values on chronic hazard category 2 (F) for categories PLL and TLL have been relaxed compared to the first proposal. All the assessed licences</p>

Comments received in AHWG1/written form	JRC Dir. B response
<i>refers to keeping the existing cumulative mass concentrations (existing Table 1) rather than the values proposed in Table 4 above. Adopting the values proposed above will reduce the number of licenses and/or technical performance and reduce the reputation of the Ecolabel.</i>	would be able to comply with these revised thresholds for category PLL and only 2 existing licenses would not be able to comply according to the data received for EEL products category 3 (37 currently EEL products – category 3).
<i>Tightening the toxicity criteria may prevent many products from being registered under the EU Ecolabel for lubricants. It may also significantly reduce the number of substances and products on the LuSC list. Propose retaining the existing criteria.</i>	<b>REJECTED</b> In the second proposal, threshold values have been refined based on new data provided by Competent Bodies on current EEL products. In this second draft criteria, revision data on aquatic toxicity of 143 EU ecolabelled products from 11 different countries was obtained, which represents approximately the 40% of the total EEL products in the market. It was found that generally the current threshold values are higher than the corresponding values for most of the samples investigated. This supports the proposal for stricter aquatic toxicity limits. The impact of the new requirements on the LuSC list, as well as in the current EEL products is further being investigated with regards to criterion 1 and 2.
<i>Will the requirement to provide chronic fish data increase the need for vertebrate testing?</i>	<b>ACCEPTED</b> In regard to the existing criterion 3.2, the requirement for chronic (NOEC) aquatic toxicity tests is already included according to the table 1 of Annex I of EU Ecolabel for lubricants. Thus, currently both options (acute (short-term) or NOEC (chronic (long-term)) aquatic toxicity values) are possible. In the revision, it has been substituted NOEC by “chronic aquatic toxicity” in criterion 2.2 due to terminology harmonisation as for “acute aquatic toxicity”.
<i>While it is welcomed to use all available data from REACH, animal testing for ecolabelling purposes is questioned. There is uncertainty in the existing criteria, because in principle chronic tests can be waived by acute tests.</i>	
<i>It is unclear whether both acute and chronic tests are required or whether chronic tests can be waived</i>	
<i>As drafted the proposal suggests that acute toxicity data and chronic toxicity data would be needed for finished lubricant and main components under criterion 2.1 and for each individual ingredient under criterion 2.2. This needs clarifying because it is very confusing.</i>	In regard to criterion 2.1, and in order to be consistent with revised criterion 2.2, the possibility to use chronic aquatic toxicity data has also been introduced. According to our proposal, both options will be possible (acute (short-term) <b>OR</b> chronic (long-term) aquatic toxicity data). It should be noted that the chronic toxicity of substances can be based on acute toxicity studies using the assessment factor as indicated in Table 2 (Aquatic toxicity values for both freshly prepared lubricant and for each main component). It is used an acute-to-chronic assessment factor of 10 (this is based on experimental data regarding new and existing chemicals). Therefore, animal testing will not be increased.
<i>Footnote 28: Current criteria suggests three species, but will accept an evaluation of newly developed chronic toxicity results for just daphnia and algae if no data is available. Given the focus on reducing animal testing, the proposed criteria should</i>	<b>ACCEPTED</b> As discussed at the AHWG1, the assessment and verification proposal for revised criterion 2.1 and 2.2 has been almost completely reverted to existing text in force.

Comments received in AHWG1/written form	JRC Dir. B response
<i>remain identical to the current EEL 2011/381/EU criteria.</i>	<p>Initially, according to Annex X (<i>standard information requirements for substances manufactured or imported in quantities of 1000 tonnes or more</i>) to REACH regulation, we proposed that the aquatic toxicity test results were provided for all the three trophic levels assuming the maximum requirements in regard to the major tonnage band and/or more hazardous substances. The standard information requirements are those which are required as a minimum to meet the registration obligations of REACH. They depend on the <b>quantity of the substance</b> that is manufactured or imported into the EU/EEA and are described in Annexes VI to X to REACH.</p> <p>Nevertheless, in the second draft and in order to reduce the number of tests on animals we took the minimum requirements that correspond to present formulation with only two trophic levels according to REACH registration. Therefore, for <b>ACUTE aquatic toxicity</b> for each main component it is proposed to be maintained (<b>as in the current EU Ecolabel</b>) and shall be provided on each of the following two trophic levels: <b>aquatic plants (algae preferred) and crustacean (preferred specie Daphnia)</b>. For <b>CHRONIC</b> aquatic toxicity it is also proposed to be maintained and shall be provided for the following two trophic levels: <b>fish and crustacean (preferred specie Daphnia) (as in the current EU Ecolabel)</b>.</p> <p>In regard to the comment that fish are the least sensitive trophic level (and therefore their inclusion in acute toxicity testing for components was not justified), it should be noted that even in majority cases animal testing could be avoided for the majority of chemical substances since chronic Daphnia and fish toxicity levels are related to each other and fish toxicity can be estimated to a certain degree from chronic Daphnia test results, there are some cases where fish toxicity tests are required. In order to justify the need to carry out long term vertebrate testing, a data evaluation was carried out based on data from the OECD eChemPortal and from the Information System Chemical Safety database (ICS) of the German Federal Environmental Agency. Based on this data evaluation the chronic fish toxicity test was required and justified for about 13 % of the substances for risk estimation and could not be estimated from chronic Daphnia data in a protective manner in these cases. Nevertheless, as stated</p>
<i>As for Acute aquatic toxicity tests results: We propose to consider the possibility of removing the requirement of providing the test results on fish due to the fact that it is extremely difficult to obtain the adequate ministry authorization for animal testing. In regard to sub-criterion 2.2, it also requires tests on animals as an evidence of showing the compliance with this criterion. If it is necessary to provide an assessment against this sub-criterion for each substance, which is above the 0,1%, it will result in numerous tests to be performed (depending on the composition of the product).</i>	
<i>What does the inclusion of algae test report change to the choosing the lowest chronic aquatic toxicity level?</i>	
<i>What are suitable test methodologies?</i>	
<i>The introduction of a third trophic level to Criterion 3.1 and 3.2 is adds unnecessary animal testing. It is well known that fish are the least sensitive trophic level and therefore their inclusion in acute toxicity testing for components is not justified.</i>	
<i>The philosophy behind 3.2 and 3.3 is that the most relevant environmental data are available for all those substances where no data are available from other sources.</i>	
<i>What does the inclusion of fish test report change to the selecting the lowest aquatic toxicity level?</i>	
<i>Fish tests are nowadays often considered as animal tests.</i>	
<i>The addition of a requirement for fish data for each individual ingredient contradicts the Commission's rationale for the proposed criterion text, which is to reduce testing as described on p30. In fact this requirement will significantly increase cost for most lubricant formulators in most cases, and will probably require new vertebrate data to be generated for some/all individual ingredients in products with an existing ecolabel approval to meet this new criteria if adopted. This is because currently <b>only algal and daphnia toxicity data is required under criterion 3.2 in the criteria in force</b>. As commented elsewhere there is a common misunderstanding by the Commission and/or regulators that aquatic toxicity data generated by other registrants as part of REACH registration is available to ecolabel applicants to support their approval. This is almost always NOT the case and in many cases the data holders either refuse to allow the data to be used for non-REACH reasons (since it is their intellectual property) or charge more than the test would cost because compensation for non-REACH reasons is unregulated. As a proposal, criterion 2.1 should not be available where a full set of data already exists for each ingredient, otherwise the Commission's proposal will significantly increase costs for any applicant.</i>	

Comments received in AHWG1/written form	JRC Dir. B response
	above, the assessment and verification has been almost completely reverted to existing text in force.
<p><i>One stakeholder would like to see a new draft of this criteria reflecting the comments and decisions from the 1st AHWG.</i></p>	<p><b>ACCEPTED</b> A second draft has been published (TR2.0) reflecting the comments and decisions from the 1st AHWG and further written consultation. Stakeholder's comments have been considered in order to clarify the revised criterion text.</p>
<p><i>Either there is a contradiction between the first paragraph (starting "The applicant shall demonstrate ") and the following two paragraphs (ending " all the components in the mixture, criterion 2.2 shall be applied") or the wording is not very clear. It was stated in the AHWG1 meeting that most products have met the Ecolabel using Criteria 2.2. However, there are occasions when the possibility to use Criteria 2.1 may be essential for any category (ISO Family) of lubricant. Therefore it seems the current 2011 Ecolabel is working fine and the proposed wording change is unnecessary and confusing.</i></p>	
<p><i>General comment: We propose to maintain the choice, making by applicant, of showing the compliance with one of this sub-criterion for all categories.</i></p>	<p><b>ACCEPTED</b> A second draft has been published (TR2.0) reflecting the comments and decisions from the 1st AHWG and further written consultation.</p> <p>According to the 2<sup>nd</sup> draft, flexibility to choose between criterion 2.1 or 2.2 has been proposed for all categories. Thus, the applicant shall demonstrate compliance by meeting the requirements of either criterion 2.1 or 2.2.</p>
<p><i>Following criticism from several delegates during the AHWG meeting it is regrettable that this entire chapter was not rewritten before the deadline for comments. This is because it is extremely poorly drafted and confusing/contradictory in many parts making the task of the commentator much more difficult. In general, one stakeholder strongly recommends that the Commission considers retaining the existing criteria that is in force, or if changes are considered necessary then go no further than aligning with existing European environmental standards such as the German Blue Angel. Otherwise, existing products may no longer meet the criteria and making the ecolabel even more difficult to attain for lubricant manufacturers will reduce applications even further, when the Commission claim that the aim of the lubricants criteria revision is to increase the number of applications and approved products.</i></p>	<p><b>REJECTED</b> As agreed during the AHWG meeting a revised version of the criteria was published following the meeting and made available for commenting prior to the final date for submission of feedback. Evaluation of the existing products for which data was provided to the JRC does indicate the opposite to what the stakeholder states. As explained already above, revision data on aquatic toxicity of 143 EU ecolabelled products from 11 countries was provided, which represents approximately the 40% of the total EEL products in the market. According to this revision, thresholds values on chronic hazard category 2 (F) for categories PLL and TLL have been relaxed compared to the first proposal. All the assessed licences would be able to comply with these revised thresholds for category PLL and only 2 existing licenses would not be able to comply according to the data received for EEL products category 3 (37 currently EEL products – category 3).</p>



Comments received in AHWG1/written form	JRC Dir. B response
<p><i>One stakeholder strongly requests that the Commission reconsiders its proposal to restrict testing of the finished lubricant and main component to greases. In our opinion it is very important that the existing criterion 3.1 (2.1 in the draft report) should be retained for ALL categories. One stakeholder is aware of at least 3 ecolabel products that currently have to rely on criterion 3.1 to meet the aquatic toxicity criterion because a full set of aquatic data is not available for every ingredient (and never will be available) and it is likely that there could be more products in the same situation. There are several reasons why testing the finished fluid should continue to be allowed if the applicant chooses. Firstly, many in the lubricants value chain believe that since end users handle the finished fluid rather than individual ingredients then aquatic toxicity test data generated on the mixture is the best indicator/predictor of its aquatic hazard if release to the environment occurs. It is also significant that the CLP Regulation also allows aquatic toxicity data generated on mixtures to be used to classify products for aquatic toxicity rather than relying on classification based on the hazard of individual ingredients. This is because it takes into account any synergistic or antagonistic interactions that the calculation method cannot. Testing the finished lubricant also aligns with other regulatory drivers discussed during the AHWG meeting such the German Blue Angel, the Swedish Standard and the recently published ISO standard on biolubricants, both of which currently accept test data for mixtures (in fact the ISO standard requires aquatic toxicity data for the mixture). The main driver for lubricant manufacturers to seek the EU ecolabel recently, i.e. the US VGP, also allows aquatic toxicity testing on mixtures to fulfil the aquatic toxicity criterion. This means that any lubricant manufacturer who wants to meet the US VGP would test the mixture for cost reasons rather than develop data for each individual ingredient. There is a misconception by many that aquatic toxicity data generated for REACH or other notification schemes could also be used for other purposes such as the EU ecolabel. The Commission has to recognise that this is NOT the case for most substances because any Letter of Access that has been purchased usually restricts the use to the REACH registration.</i></p>	<p><b>ACCEPTED</b></p> <p>It is important to note that according to CLP regulation, there exist the following classification methods:</p> <ul style="list-style-type: none"> <li>- Test data on the mixture itself</li> <li>- Strictly defined “Bridging principles” on similar tested mixtures</li> <li>- The “Summation method” – summation of components concentrations based on their classification</li> <li>- “Additivity formula” – summation of components concentrations based on their acute toxicity.</li> </ul> <p><u>However, new test data on the mixture itself is not encouraged and only provided all other means been exhausted.</u> With this aim and in order to reduce tests on animals if sufficient information is available on substances present in mixtures ensuring adequate comparability of results of the classification of such mixtures, we initially proposed to keep criterion 2.1 but only for greases (as the result of a direct reaction product in which the full composition is not completely known) and not for all categories.</p> <p>Nevertheless, based on some barriers identified, it is proposed to maintain the existing criterion 3.1 requirement for the lubricant and its main components (i.e., criterion 2.1 in the revised document) <b>for all categories</b> because the full set of aquatic data will probably not be available for every ingredient (not only for greases as suggested in the first proposal). Many of the additives used in lubricants only circulate in commerce as integral parts of more complex and highly competitive chemical mixtures and details of the intrinsic chemical identities and proportions of these mixed substances are almost always confidential, protected via formal patents or other Intellectual Property Rights, and this manufacturing paradigm is extremely unlikely to change in the future, due to the very proprietary nature of the lubricants sector in general.</p> <p>Moreover the letter of Access usually restricts the use of “data” (for each stated substances in regard to criterion 2.2) to the REACH registration dossier, not being able to be used for other purposes such as the EU Ecolabel. Based on these identified barriers, it is proposed to maintain the current criterion 3.1 for all categories.</p>
<p><i>The derogation for mixtures containing &gt; 5% 'unknown' substances but not allowing applicants to chose to test the mixture in other circumstances makes no sense. The</i></p>	<p><b>ACCEPTED</b></p>

Comments received in AHWG1/written form	JRC Dir. B response
<p><i>Commission should retain the possibility to test the mixture if they chose to do so.</i></p> <p><i>The same values have returned in Table 3. However Table 3 only applies now for Greases.</i></p>	<p>According to the 2<sup>nd</sup> draft, flexibility to choose by industry between criterion 2.1 or 2.2 has been proposed. Thus, the applicant shall demonstrate compliance by meeting the requirements of either 2.1 or 2.2 for all categories.</p> <p>The text in the second revised draft has been clarified. As already suggested in the AHWG1, the values for criterion 2.1 have been reverted to existing values in force, due to the initial published changes were introduced to harmonize the ambition level of 2.1 and 2.2, however this led to less restrict values on 2.1.</p>
<p><i>If QSARs can be used from the toolbox it must be stated exactly what QSARs can be used, for which type of chemicals and what to do if results of different QSARs vary</i></p> <p><i>Commission needs to clarify when QSAR is acceptable and when it is not. For example, if data is not available for only one of the three trophic levels can QSAR be used to fill this data gap rather having to perform the test. What happens if more than one data gap exists for an individual ingredient. Clarification is also required which QSAR models are considered as suitable for aquatic toxicity where data does not exist (for example; three QSARs are currently specified for deriving bioaccumulation potential)</i></p>	<p><b>ACCEPTED</b></p> <p>Practical guide How to use and report (Q)SARs is available on-line at webpage: <a href="https://echa.europa.eu/documents/10162/13655/pg_report_qsars_en.pdf/407dff11-aa4a-4eef-a1ce-9300f8460099">https://echa.europa.eu/documents/10162/13655/pg_report_qsars_en.pdf/407dff11-aa4a-4eef-a1ce-9300f8460099</a> and Chapter R.6: QSARs and grouping of chemicals, available on-line at webpage: <a href="https://echa.europa.eu/documents/10162/13632/information_requirements_r6_en.pdf/77f49f81-b76d-40ab-8513-4f3a533b6ac9">https://echa.europa.eu/documents/10162/13632/information_requirements_r6_en.pdf/77f49f81-b76d-40ab-8513-4f3a533b6ac9</a>.</p> <p>Moreover, it should be noted that QSAR are proposed to be accepted to fill data gap in only one of the three trophic levels rather having to perform the test. In the second revised draft the text related to the use of QSARs has been clarified.</p>
<p><i>I am not sure if all the exceptions stated in the current criteria document when an aquatic toxicity study does NOT need to be conducted are still included. However the technical report does not indicate if each of these exemptions are still valid or needs to be modified due to new scientific developments.</i></p>	<p><b>ACCEPTED</b></p> <p>As said at the AHWG1, the exceptions stated in the current criteria in force are proposed to be kept in the revised criteria</p> <p>According to Annex VII to REACH regulation, column 2 of section 9.1.1, aquatic toxicity study does not need to be conducted if there are mitigating factors indicating that aquatic toxicity is unlikely to occur, for instance if the substance is highly insoluble in water or the substance is unlikely to cross biological membranes. Moreover, according to ECHA Guidance on Information Requirements and Chemical Safety Assessment – Chapter R.11: PBT/vPvB<sup>4</sup> assessment published in June 2017, used within a weight-of-evidence approach a substance may be considered as not bioaccumulative using the following types of evidence:</p> <ol style="list-style-type: none"> <li>1- An average maximum diameter (D<sub>max aver</sub>) of greater than 1.7 nm PLUS a molecular weight of greater than 1100</li> </ol>

<sup>4</sup> Appendix R.11—1: Indicators for limited bioconcentration for PBT assessment. More information available online at: [https://echa.europa.eu/documents/10162/13632/information\\_requirements\\_r11\\_en.pdf](https://echa.europa.eu/documents/10162/13632/information_requirements_r11_en.pdf)

Comments received in AHWG1/written form	JRC Dir. B response
	<p>2- A maximum molecular length (MML) of greater than 4.3 nm  3- Octanol-water partition coefficient as Log<sub>10</sub> (Log K<sub>ow</sub>) &gt; 10  4- Measured octanol solubility (mg/L) &lt; 0.002 mmol/L x MW(g/mol) (without observed toxicity or other indicators of bioaccumulation)</p> <p>In addition, for considering a substance as possibly not being a very bioaccumulative is if it has a <b>Dmax aver of greater than 1.7 nm PLUS a molecular weight of greater than 700</b></p>
<p><i>It is not supported by data that about 25% of the MWF and 4-stroke oils can apply successfully with the threshold values of the fractions stated in Table 12 for Category 1 and Category 4 respectively</i></p>	<p><b>ACCEPTED</b>  MWF are now within the group Accidental Loss. MWF can be formulated to comply with aquatic toxicity requirements for this group. The possibility to formulate MWF which fulfills proposed requirements was discussed and confirmed by technical experts.  Stakeholders are asked to provide data on the applications which cannot fulfill the revised requirement.</p>
<p><i>The NOECS or other equivalent L(E)Cx (e.g. EC10) shall be used. Shall be used for what? And what shall be stated?</i></p>	<p><b>ACCEPTED</b>  The second revised draft has been reformulated and for determining chronic aquatic toxicity data, only chronic toxicity test results in the form of No Observed Effect Concentration (NOEC) data shall be accepted.</p>
<p><i>A QSAR can only be used for a pure chemical substance with only one single type of molecules. Even in the EU substance definition other types of molecules (chemicals) can be present up to 20%. If not assessed it is possible that these substances can possibly be classified as non-biodegradable and bioaccumulative. Those substances are not desired at all in a final lubricant.</i></p>	<p><b>ACCEPTED</b>  According to the ECHA Practical guide How to use and report (Q)SARs available online at webpage: <a href="https://echa.europa.eu/documents/10162/13655/pg_report_qsars_en.pdf/407dff11-aa4a-4eef-a1ce-9300f8460099">https://echa.europa.eu/documents/10162/13655/pg_report_qsars_en.pdf/407dff11-aa4a-4eef-a1ce-9300f8460099</a>, <u>the chemical structure needs to be well defined, following the Guidance on identification and naming of substances under REACH. All individual constituents of multi-constituent substances should be addressed.</u> The composition of the well-defined substances also has to include <u>known impurities (and additives, if any).</u>  For substances of unknown or variable composition, complex reaction products or biological materials (UVCBs), expert judgement is needed to decide whether representative structures for the substance can be identified. Stable transformation products should also be identified. A suitable structural representation for the chemical (SMILES, mol file, etc.) is usually required.  Moreover, it is important to verify that the target substance falls within the applicability domain (AD) of the model, this includes consideration for specific</p>

Comments received in AHWG1/written form	JRC Dir. B response
	<p>substances. As mentioned above, special considerations should be given to UVCBs, multi-constituents, additives, impurities, metabolites and degradation products. Secondly, most of the (Q)SAR models are developed for organic chemicals and do not address the specificity of some types of chemicals such as ionisable substances (e.g. salts, weak acids and bases), large molecular weight substances (e.g. polymers), potentially hydrolysable substances (e.g. esters, carbamates), surfactants (e.g. hydrocarbon chain with hydrophilic head) and isomers (e.g. stereoisomers, tautomers).</p>
<p><i>Is 100% margin necessary for a mixture (considering three trophic levels are tested), AND aquatic toxicity for each main component is needed and should fulfil classification criteria?</i></p> <p><i>Many of the proposed allowances for treat rate for classified substances are reduced either by 50-90%, as an effort to align with CLP classification requirements. However, the rationale that classified components are equally toxic due to direct aquatic exposure versus exposure to the water soluble fraction of an equilibrated lubricant containing the classified substance is incorrect. Further, aquatic toxicity of lubricant products is permitted in other sections of this draft report and also within the CLP regulation to support waiving the environmental classification determined by summation of each classified component in a mixture. Therefore reduction of the treat rate of the less severely classified substances is not appropriate by itself, rather an optional approach would be to permit the current treat rates provided that both aquatic acute and chronic test data prove that no short or long term effects are likely. For determining chronic aquatic toxicity data generated according to the standardised test methods referred to in Article 8(3) of CLP.</i></p>	<p>It is asked that the stakeholder reformulates the comment in order to properly address it by the project team.</p> <p>With regards to standardized test methods, according to the first draft (TR1.0) it was stated that for determining chronic aquatic toxicity data generated according to the methods referred to in Article 8(3) of CLP regulation shall be accepted. Nevertheless, in the second draft we have finally listed these standardised tests one by one in order to be clearer and easy to understand by applicants.</p>

### First proposed criterion 3: Biodegradability and bioaccumulative potential

Comments received in AHWG1/written form	JRC Dir. B response
<p><i>The approach should be consistent with the other referentials such as Detergents which address biodegradation in anaerobic conditions.</i></p>	<p><b>REJECTED</b> Lubricants are not usually spilled or disposed in high-solids anaerobic-digestion environments and anaerobic landfill environments. The consideration of anaerobic biodegradation for the EU Ecolabel supposes the inclusion of a new biodegradability test getting more expensive the application. Moreover, the high requirements of ultimately aerobically biodegradable components for lubricant products restrict the amount of components not degraded in anaerobic environments.</p>
<p><i>Grease thickeners and fillers, such as soaps (except Ca-12-HSA) and inorganic minerals, classified as B or C. Even the current criterion excludes many bio products containing high soap or solid additive volume. These products can be labelled by Swedish Standard, because the soap and fillers are handled separately.</i></p> <p><i>Please note, that the Blue Angel does not take into account all components like the EU Ecolabel does. Thickeners for example are excluded.</i></p>	<p><b>AKNOWLEDGED</b> Inorganic thickeners are excluded from the biodegradation criteria. The criterion only applies to organic ingredients, therefore only organic thickeners are to be counted for the biodegradation limit.</p>
<p><i>Here the licence holders had trouble to understand the limits in category 1, 2 and 3. The content of readily biodegradable substances should be &gt; 95% (&gt; 80% in category 2) but the limit values of B and C are at ≤ 5% (≤ 15% in category 2), which gives 10% (30%) if you add them up. A better description on how the limit values are to be understood is required.</i></p>	<p><b>PARTIALLY ACCEPTED</b> The threshold values have been modified. With the aim of benefiting fully biodegradable lubricants, the inherently aerobically biodegradation has been increased, so that the combination of readily and inherently aerobically biodegradation could sum 100%. In this way, a lubricant inherently aerobically biodegradable has advantage over non-biodegradable lubricants.</p>
<p><i>The revised percentages of the proposal in the table in page 38 do not seem logic.</i></p>	
<p><i>The Table containing the new criteria also is very confusing because the allowed percentages don't add to 100%.</i></p>	
<p><i>When a substance is biodegradable, the bioaccumulation does not need to be established. For clarity, this should be added as the first item in the list of reasons where there is no need to establish Bioaccumulation e.g. "- is biodegradable, or"</i></p>	<p><b>ACCEPTED</b> Changes have been included in the criterion. (See TR2.0)</p>
<p><i>The location of this text makes no sense (condition where biodegradation test does not need to be conducted): a substance is non-biodegradable if it fails the criteria for ultimate and inherent biodegradability</i></p>	<p><b>ACCEPTED</b> The phrase was maintained from the current</p>

	Commission Decision. A modification of the sentence has been included (see TR2.0)
<p><i>It should be clarified whether a report would have to be submitted for the substance that is used as read-across</i></p>	<b>ACCEPTED</b>
<p><i>One stakeholder strongly objects to the proposal to require 95% components &gt;60% biodegradable</i></p> <p><b>Explanation</b></p> <p><i>First and foremost, a lubricant must perform to the demands of the intended application. Lubricants must contain certain substances such as antioxidants, corrosion inhibitors, wear inhibitors, foam inhibitors, demulsifiers, anti-foams, thickeners, dispersants and pour point depressants. Additive packages that contain the required performance components commonly are used at 0.5-5% in industrial lubricants and 5-20% in passenger car engine oils. Almost all of these additives are not biodegradable.</i></p> <p><i>Lubricants are formulated in a range of viscosity grades. Thickeners are commonly used to build viscosity in a cost-effective manner to give high performance lubricants. Almost all thickeners are not biodegradable while also being non-bioaccumulative. It is already very difficult to formulate the high viscosity gear oils needed for ship thrusters and other industrial applications. If the criterion is changed to require 95% biodegradable components, there is no room to add both additives and thickeners. This is unacceptable to every formulator of Ecolabel lubricants.</i></p> <p><i>Some products are now formulated with additives and thickener into commercial industrial lubricants that meet the highest performance specifications established for mineral oil lubricants. Many OEM have not adopted and in some cases, do not allow veg oil and ester EAL because of poor technical performance especially toward seal compatibility (for example Rolls Royce Azimuth thrusters). Other lubricants can finally break through this barrier and allow OEM and lubricant users to enjoy the benefits of both high technical and high environmental performance. Some HEPR lubricants are the key to expanding Ecolabel market penetration. It is a big mistake to change the current criteria and remove this innovative technology from the Ecolabel system.</i></p> <p><i>Note that the BATIS survey asking about biodegradable content of current Ecolabel lubricants did not capture critical information. First of all, there was no way to indicate the viscosity grade of the lubricants listed. Therefore, there was no way to show that higher viscosity lubricants have &lt;95% biodegradable components. Second, the survey was only sent to current stakeholders. There are a growing number of HEPR &amp; other base oil customers who are in the process of submitting new Ecolabel lubricant applications. This is not reflected in the survey results. Third, the survey only captures current technology that in many cases has poor technical performance. It is a mistake to write criteria on the basis of what technology there is now, and not what is coming into the market with new enabling technology. The Ecolabel criteria must be considered as a whole and not just as separate proposals.</i></p>	<p><b>REJECTED</b></p> <p>The biodegradability request applies only to organic part of the formulation. Water, inorganic thickeners, etc, are not counted.</p> <p>Stakeholders are however invited to provide additional information (data) for the innovative products they describe. This data will be evaluated then in the light of the proposed criteria.</p>
<p><i>The current draft criteria proposal requires biodegradability of each product component, regardless of the basis of the components. There is only a special amount of additives and polymers excluded. At this point the blue angel makes a differentiation in this way by excluding some additional substances from this content calculation. From our point, substances such as silicate, bentonite, water or salt should be excluded. They are part of the nature or environmentally friendly but not biodegradable in the sense of OECD tests. And they are not toxic or bioaccumulative.</i></p> <p><i>The bottom comment describes the problem of reducing non-biodegradable substances to 15%. Here I would like to</i></p>	

<p><i>add that in future developments we expect more products with environmentally compatible but not bio-degradable substances. With a reduction of the non-biodegradable components an even stronger discrepancy will arise. For example: a grease with 50 % water will not be suitable for EEL, but water will become an increasing importance for lubricants. This also applies to bentonite, silicate or salt.</i></p> <p><i>I would be very pleased if this point could be considered. An additional passage for taking out the mentioned substances would support the wider spread of the EEL strongly</i></p>	
<p><i>The OECD ultimate biodegradability test is the most appropriate one and it is not requested on fully formulated product. So, even if it is possible to have a formulation with 95% of components which are biodegradable, this would be better to keep 90% or even less and to add that the fully formulated products must reach the 60% level according to OECD 301B biodegradability test; this way, the components with a biostatic or biocide effect will be avoided.</i></p>	
<p><i>The next point is that up to now the limit values for greases (category 2) were 25% for B and C added together. This is not the case anymore. While in theory the allowed amount for B + C increased to 30%, the actual allowed amount is only at 20%. Especially if polymers or inorganic substances (so called bentonite thickeners) are used as thickeners the value of C will increase, since polymers and inorganic substances are considered to be non-biodegradable. Such products might not contain any substances classified with B at all. That will most likely lead to problems with this calculation proposal, since the allowed amount of C is only at 15% and not on 20% or 25% like it was before.</i></p>	
<p><i>Why is the overall fraction of 25% in Category 2 for both Inherent and non-biodegradable separated again? This was also in the first criteria version (15% Inherent and 10% (on-biodegradable). This was combined so that grease manufactures could develop thicker greases that required more non-biodegradable material. The disadvantage is that more solid waste is produced.</i></p>	
<p><i>We believe the Readily biodegradable content for Category 1, Hydraulic fluids etc, should be maintained at &gt;90%.</i></p>	
<p><i>The reduction of inherently and non-biodegradable constituents to only 5% for Category 1 will make it hard to formulate biolubricants with higher viscosities hereby excluding future uses from the ecolabel. For category 1 fluids we propose to stay with the current rule for EEL because it must be in the interest of all stakeholders to increase the market share of biolubricants.</i></p>	<p><b>ACCEPTED</b></p> <p>In the second proposal, the readily (ultimately) limit for the considered category 1 has been modified from 95% (initial proposal) to &gt;90% in order to reflect stakeholder comments. Value has been reverted to existing value in force.</p>
<p><i>The Draft Technical Report states that the existing limit for Inherently Biodegradable components in Category 1, 2 &amp; 3 fluids is 5%. A similar amount of Non-biodegradable, non-bioaccumulative components are allowed (Tables 15, 16 &amp; 17). However, it is understood that in practice at present, up to 10% Inherently Biodegradable components are allowed by combining the Inherent and Non-biodegradable component limits together. The Draft Technical Report proposes to increase the Ultimately (or Readily) biodegradable requirement from 90% to 95% in Category 1 (for example). This halves the allowable content of Inherently biodegradable components. Increasing the Ultimately (or Readily) biodegradable component in Categories 1, 2, 3 places a significant restriction on the formulation, potentially eliminating some lubricants, slowing the addition of new lubricants and limiting performance potential.</i></p>	<p><b>ACCEPTED</b></p> <p>Organic polymers, as polyglycols need to be counted in the overall requirement on biodegradation.</p>
<p><i>Water-based lubricants in terms of hydraulic fluids based on synthetic oils would need a derogation on biodegradability as they usually contain high viscosity polyglycols hardly biodegradable.</i></p>	<p><b>ACCEPTED</b></p> <p>Organic polymers, as polyglycols need to be counted in the overall requirement on biodegradation.</p>

	It is understood that there are water based lubricants able to comply with current criteria in force. If a derogation if needed for this type of polyglycols substantiating rationale needs to be provided by industry for evaluation during this revision process.
<i>How water based lubricants which contain biocide could be biodegradable?</i>	<b>REJECTED</b> This criterion applied to biodegradability of ingredients forming a lubricant. The total mass of non-degradable compounds is set.
<i>Especially for oils with technically required high viscosity (for example chainsaw oils which are manufactured for the use in harvester machines, slideway oils, block train oils and other oils used in sawmills, ...) the limit value of 95% for readily biodegradable substances are a big problem. For harvester machines oils are needed that have a higher viscosity than the oils used in small chain saws. To increase the viscosity polymers are added, which are classified as non-biodegradable. To avoid an exclusion of those products for the Blue Angel we reduced the limit for readily biodegradable substances to 90%. The same applies for concrete release agents. Therefore the limit value of category 3 should remain at &gt; 90% like it is currently. From the currently certified products several cannot fulfil the newly proposed limit values: Category 1: 44 products are currently certified and 2 are not compliant with the new limit value. They fail the limit of A. Category 2: 18 products are currently certified and 3 are not compliant with the new limit value. 2 fail at A and 1 at C. Category 3: 25 products are currently certified and 2 are not compliant with the new limit value. They fail the limit of A. Category 5: No problems</i>	<b>REJECTED</b> Existing category 3 including chainsaw oils and concrete release agents are classified under TLL main category in the second revised proposal. The ultimately limit for the existing category 3 (TLL in the revised proposal) was proposed to be increased to 95% based on the values of existing licences. It is suggested to continue with this proposal in the second draft. TLL are directly disposed in the environment and stricter requirements should be considered for lubricants under this category.
<i>Due to formulation issues (thickeners, pour point deoressants...), the cumulative mass percentages should not exceed the current level for Categories 1, 2 and 3.</i>	<b>AKNOWLEDGED</b> The biodegradability requirement applies only to organic part of the formulation. Grease which contains 50% water mentioned in the comment would pass the requirement because water and inorganic material (silicate, bentonite, salt) is not counted in the biodegradation assessment.



<p><i>The Readily aerobically biodegradable % for Category 1 remain at &gt; 90% and Category 2 &gt; 75% Inherently aerobically biodegradable % Category 2 remain at &lt; or = 25% and Category 4 &lt; or = to 25% Non-biodegradable and non-bioaccumulative % Category 2 remain at &lt; or = to 25% Your proposed changes will eliminate an ENTIRE CATEGORY of fluid type called HEPR. This technology is widely used and accepted by many OEM's as the preferred choice of Environmentally Acceptable Lubricants because it is based on a new renewable hydrocarbon technology that eliminates having to formulate with only synthetic esters. Please DO NOT change the % for the above mentioned categories as this will also impact many of the additives on the LUSC list as well and thereby limit our formulating ability. It's a delicate balance of providing the best performance and environmental characteristics. OEM's have been reluctant to change to environment acceptable lubricants because of the poor performance they provided in the past. This is WHY other European Labeling programs have FAILED to gain wide acceptance because the technology does not perform equivalent to our better than their mineral oil counterparts. A common sense approach need to be applied with lubricant technology and the environmental impact and by going to far with the limits on Environmental restrictions will set back progress and growth.</i></p>	<p><b>PARTIALLY ACCEPTED</b> The threshold values for biodegradability have been modified. See revised criterion 3 for details.</p> <p>Criterion 4 aims to include also a minimum percentage of synthetic base fluid from non renewable sources, in order to enlarge the scope to those lubricants with better environmental performance, for example PAO or PAG, and esters. In fact, the inclusion of this base oils would allow for certifying a larger number of lubricants. Considering that HEPR (Hydraulic Oil Environmental Polyalphaolefine and Related Products) are in fact PAO's (poly-alphaolephins), so they are included as these synthetic lubricants from a non-renewable sources. See revised criterion on raw material for more details.</p>
<p><i>This change of threshold limits will lead to a loss of EU Ecolabel approvals. The change based on only 25% of Ecolabel products does not reflect the majority of products. e.g. table 15, category 1: 25% of Ecolabel products are within the range of 91 - 99%, the average being 97%. Now setting the limit to 95% will for sure exclude already some of the 25% of products these numbers are based on. Moreover, setting up higher limitations for biodegradation in all categories will not automatically lead to more and better products. It is again a loss of flexibility in formulating Ecolabel lubricants. We prefer to keep the old thresholds.</i></p>	<p><b>PARTIALLY ACCEPTED</b> The evolution of the lubricant industry makes possible to formulate lubricants with better environmental performance, allowing increase of threshold values of the EU Ecolabel. In the second proposal limit values of category 1 and 2 have been relaxed (reverted to existing values in force) compared to initial proposal because of unifying with the new categorisation proposal and some comment received from stakeholders about difficulties to comply with proposed thresholds. However thresholds for total loss lubricants continue to be proposed slightly stricter than existing values in force considering their environmental risk. For the second proposal data representing the 40% of licences was obtained. For the specific category of TLL category only 5 out of 38 would not be able to comply with the proposed threshold.</p>
<p><i>Moreover, this restriction will lead to more difficulties in having a large number of ecolabeled products, which is not good for the reduced environmental lubricants market.</i></p>	
<p><i>Tightening the cumulative biodegradation limits may prevent many products from being registered under the EU Ecolabel for lubricants. Propose to leave existing criteria in place.</i></p>	
<p><i>Increase in the required percent of readily and inherently biodegradable components likely will pose difficulties in achieving this criteria: page 42 states " (resulting in) 2-stroke oils and gears (having) a more restricted value in this case will suppose the exclusion of all the current products certified. Is this correct or desired? Suggest NO change to current criteria.</i></p>	
<p><i>Will tightening the biodegradation / bioaccumulation values prevent new products from being registered under the Ecolabel and remove existing products from registration?</i></p>	

<p><i>Many people consider the Blue Angel to be the most environmentally demanding standard. That is not necessarily a good thing. Users value products that perform well. The Ecolabel does not need to match Blue Angel. The success of the Ecolabel is in part because it has always been a pragmatic compilation of the best (not necessarily the toughest) ideas from other European national standards. It should remain an achievable standard that values both environmental and technical performance.</i></p>	<p><b>ACKNOWLEDGED</b> A comparison with the Blue Angel has been presented, in order to evaluate the stringency of the current limits with other eco-labels. However, the threshold values have not been defined only considering the Blue Angel, also according the registered lubricants in EU Ecolabel.</p>
<p><i>I am not sure if the proposed threshold values for Cat 1 and Cat 4 for MWF and 4-stroke oils can be met. There is no discussion on this issue reported.</i></p>	<p><b>ACKNOWLEDGED</b> MWF are now within the group Accidental Loss. MWF can be formulated to comply with biodegradation requirements for this group, bearing in mind that biodegradation applies only to organic substances. The inclusion of 4-stroke engine oils have been finally postponed, so it will not be dealt during the current EEL revision</p>
<p><i>The current criterion for the log KOW (&lt;3 and &gt; 7) is reasonable and realistic. If substances with a log KOW &gt; 7 are not allowed anymore, at least 99% of the current certified lubricants cannot fulfil the criteria anymore.</i></p>	<p><b>PARTIALLY ACCEPTED</b> During the first AWHG meeting it was detected that lubricants cannot comply with the criterion of bioaccumulation if there is no upper limit for logKow. Due to the technical requirements of lubricants a limit has been added again: log Kow &gt;10 (For more information see the rationale of criterion 3 in the TR2.0). The lower limit has been reverted to the level set in the current decision, and is defined as &lt;3.</p>
<p><i>The possibility to read-across data for biodegradability as well as the realistic view on bioaccumulation data with an upper limit (&gt;7) for log kow helps to formulate sustainable biolubricants with proper additivation. The loss of more than 50% of the EEL-certified biolubricants would result in case of tightening the thresholds!</i></p>	
<p><i>The existing log Kow value of &lt;3 or &gt;7 better describes the potential for substances to bioaccumulate. Substances with high log Kow i.e.&gt;7 have been shown not to have the potential to bioaccumulate.</i></p>	
<p><i>Criterion 3b – Bioaccumulation: If substances with a log KOW &gt; 7 are not allowed anymore, most of the current certified lubricants cannot fulfil the criteria anymore.</i></p>	
<p><i>One stakeholder strongly supports the pragmatic approach of the Commission to recognise that substances with a LogKow value of &lt;= 4 and &gt; 7 would not bioaccumulate. We also support the increase in BCF from &lt; 100 L/kg to &lt; 500 L/kg in line with CLP.</i></p>	
<p><i>We assume that this is supposed to indicate that existing ecolabel lubricants contain &lt; 0.1% of non-degradable, bioaccumulating ingredients since many ingredients found in lubricants have a logKow between 4 and 7. The key criterion for ecolabel is that persistent substances are not bioaccumulative and vice-versa. At the meeting the upper limit of 7 returned again.</i></p>	
<p><i>Biodegradation is a key criterion for biolubricants. The term “ultimately biodegradable” should be used. Tests for primary biodegradation (CEC-L-33-A-94 or CEC-L-103...) must not be used in the context of biolubricants. The current scheme allows the selection of a single favorable biodegradation result from a potentially large number of</i></p>	<p><b>PARTIALLY ACCEPTED</b> The main concern of stakeholders is to comply with 10-days windows test. In order to be consistent with</p>

<p><i>performed tests for qualification of substances. This is in particular relevant in the biodegradation range close to the lower limit of 60%, especially for hydrocarbons. Therefore, we propose in the range of <math>60% &lt; x &lt; 70%</math> biodegradability that applicants provide biodegradation test reports from two independent laboratories for (synthetic) hydrocarbons. Biodegradation of substances has to be reconfirmed every 5 years by submitting biodegradation tests from two independent laboratories of samples not older than 6 months to verify that the originally submitted results still reflect the properties of the substance.</i></p>	<p>other EU Ecolabel product groups and with CLP, the terminology proposed in the 1st draft, of readily biodegradable is maintained. The definition of readily degradable (included in the criterion text) includes that for substances identified as UVCB (Unknown or Variable composition, complex reaction products or biological materials) or as a complex, multi- constituent substance with structurally similar constituents an <b>exemption from the 10-day window can be applied.</b></p>
<p><i>Changing the biodegradation criteria from "ultimately biodegradable" to "readily" biodegradable (i.e. the 10-day window would need to be met) will mean that many substances (and therefore products) may no longer meet the requirements of the EU Ecolabel for Lubricants. Propose that the criterion relates to "ultimate biodegradation".</i></p>	
<p><i>One stakeholder strongly opposes the change in terminology from ultimate to readily biodegradable.</i></p>	
<p><i>The proposed revised criteria suggest a shift of the nomenclature from "ultimate biodegradable" to "ready biodegradable" following CLP. During the first AHWG meeting some concern was expressed by industry whether the term "readily biodegradation" implies an obligatory consideration of the 10-day window in the pass level. The terminology of the different terms according to REACH and CLP is described in the attached document.</i></p>	
<p><i>Hopefully the word 'readily' is a typo and should read 'rapidly' since this is the terminology used in CLP to differentiate between substances in terms of biodegradation.</i></p>	
<p><i>Most substances (EU definition) are in reality mixtures and therefore the biodegradation may not be achieved within the 10-days windows. However still when this is the case one may consider this as convincing scientific evidence that DEMONSTRATE that the substance can be degraded in the aquatic environment to a level &gt; 70% within a 28-day period.</i></p>	
<p><i>There is no technical or performance justification for requiring to pass 60% biodegradation in 10 days. The OECD requirement is to pass in 28 days, not 10 days. The 10-day window is an old requirement that only vegetable oils can meet. High performance esters and hydrocarbons biodegrade in a linear fashion over 28 days. A requirement for the 10-day window will make sure that only low-performing vegetable oils and low viscosity esters can be used to formulate Ecolabel products rendering them obsolete in the market. Veg oils that degrade this rapidly are responsible for oxygen depletion if leaked into water. This change is a bad strategy if the goal is to increase the actual use of Ecolabel lubricants. Why even include the 10-day window when it is also stated that multi-component materials can be excluded from this requirement? Keep the definition of biodegradability as ultimate to remove confusion about the 10-day window.</i></p>	<p>The CLP definition of readily includes an exception for UVCB (substances of Unknown or Variable composition, Complex reaction products or Biological materials): where there is sufficient justification, the 10-day window condition may be waived and the pass level applied at 28 days. Main products present in lubricants can be classified as UVCB, so they will be exempt to comply with this test. Consequently, a sentence in the criterion text has been included in order to clarify this issue.</p>
<p><i>Customers are still very sceptical about bio lubricants. There are big concerns about performance. Only products displaying very high performance have chances to be widely spread in the market, which should be the aim of the EU Ecolabel.</i></p>	
<p><i>So the change to readily biodegradable imposes the 10 day window rule. This will limit the choice of fully saturated high quality esters or new hydrocarbon based technologies.</i></p>	
<p><i>Special NOTE: Criterion 3 proposed changes will eliminate our product line FUTERRA from EcoLabel as we have formulated the products to biodegrade &gt;60% in a 28 day period. We have plans to launch other products this year.</i></p>	

<p><i>The 10 day window limitation was designed for vegetable oils which are much lower performing products.</i></p>	
<p><i>If the 10-day window is introduced, a very large percentage of synthetic ester bases oils, especially the higher performing ones (both existing and emerging technologies) will be removed from the Ecolabel. This will severely impact the number of licenses, heading back towards low performance vegetable oils and setting the market back at least 10 years. In addition, the emerging base oil technologies offer significant potential to grow the use of EALs but would not meet the 10-day window criteria. To compensate for a reduction in base oil performance that the 10-day window would bring, lubricants would have to use less environmentally friendly (higher aquatic toxicity) additives. All of these views were expressed very clearly by several industry experts at the AHWG1 meeting. If the proposal is to adopt the 10-day window but allow derogations for synthetic esters as UVCB's, it will create unnecessary confusion (most components above 5% are base oils and many are UVCB's, therefore adding the 10-day window does not serve any real purpose but complicates the standard for most readers). The existing Ultimate Aerobic Biodegradable criterion was chosen for a very good reason.</i></p>	
<p><i>One stakeholder strongly advises the Commission to rethink including the 10-day window for biodegradation. This is usually applied to substances that are 'readily' biodegradable rather than rapidly (or ultimately) biodegradable and is a criterion that very few fluids can achieve. Vegetable oils are typically readily biodegradable but the modern synthetic base stocks made from renewable sources do not meet this definition in our experience, even though they will meet the definition as ultimately or rapidly degradable because they show &gt; 60% degradation in an OECD 301 study. If this criterion is included in the definition of readily, ultimately or rapidly biodegradable (whichever terminology is selected for EEL class= A) then most of the existing ecolabel products would not meet the revised criteria. Another reason why it would be inappropriate to include the 10 day window condition is that various guidance considers the 10-day window to be unsuitable for UVCB-type substances (see below for citation) and many of the components used to formulate modern lubricants are categorised as UVCBs by the European Chemicals Agency as part of their REACH registrations.</i></p> <p><i>OECD 2016- Guidance on Information Requirements and Chemical Safety Assessment Chapter R.7b: Endpoint specific guidance Version 3.0)</i></p> <p><i>“These pass levels have to be reached in a 10-day window within the 28-day period of the test. The 10-day window does not apply to TG 301 C or if the test substance represents a mixture of homologous compounds e.g. technical surfactants</i></p> <p><i>Appendix R.7.9-4 Guidance for Testing of Mixtures (e.g. UVCB Petroleum Substances) for biodegradation “typical logarithmic growth phase (Monod) biodegradation kinetics (which are assumed to occur in ready biodegradation tests) may not be observed with petroleum substances, so that even if individual components are readily biodegraded, the petroleum substance may not achieve the ‘10-day window defined by OECD (Deneer et al., 1988).</i></p>	
<p><i>The 10-day window is only dedicated to pure test substances which follow the theoretical biodegradability curve with a latency phase (until 10%), an exponential phase and a plateau. The additive (most of the time this is a pack with active components in base oils mixture) and main components are not pure substances and therefore the 10-day window has not to be taken into account. Moreover, the OECD guideline considers that if the level of OECD 301 is reached (60%</i></p>	

<i>for OECD 301B) the test substance will degrade better in the environment as the test conditions are favourable.</i>	
<i>One stakeholder agrees with the dropping of the “10 day window” for definition of readily biodegradable.</i>	
<i>OECD 306 (marine biodegradation) is also acceptable under EU Ecolabel.</i>	<b>ACCEPTED</b> A list of the acceptable protocols and GLP are included in the criterion text. Nevertheless, other equivalent test methods different than defined in criterion can be used.
<i>The references to the biodegradation tests standards provided in the assessment and verification part are incomplete. With respect to inherent biodegradability, when referring to OECD 302 B and C it remains unclear whether test results are referred to 7 d or 28 d.</i>	<b>ACKNOWLEDGED</b> The test method used to calculate the biodegradability refers to 28 days (Regulation (EC) No 440/2008). The criterion text has been clarified.

#### First proposed criterion 4: Raw materials

<b>Comments received in AHWG1/written form</b>	<b>JRC Dir. B response</b>
<i>During the entire lifecycle a grease has much smaller impact with itself renewability than the saved energy and CO2 emission during the application. The better lubricity can give more environmental benefit than higher renewability.</i>	Regarding the Life Cycle considerations, the environmental impact generated due to the lubricant lost in the environment cannot be compared. The energy saving and CO2 emission could be reduced with a more efficient technology or the use of renewable energy resources.
<i>From the currently certified products several cannot fulfil the newly proposed limit values:</i> <ul style="list-style-type: none"> <li>• <i>Category 1: 44 products are currently certified and 13 are not compliant with the new limit value.</i></li> <li>• <i>Category 2: 18 products are currently certified and 1 is not compliant with the new limit value.</i></li> <li>• <i>Category 3 and 5: No problem with the limit values.</i></li> </ul>	<b>ACKNOWLEDGED</b> Data from 40% of the total EEL products available on the market had been obtained. If this data are analysed, with the new threshold values proposed: <ul style="list-style-type: none"> <li>• Category 1: 28% of the products certified has less than 60% of renewable raw materials in their formulation.</li> <li>• Category 2: 12% of the products certified has less than 65% of renewable raw materials in their formulation.</li> </ul> However, with the inclusion of non-renewable synthetic oils is expected that those lubricants would comply with the criterion.

<p><i>The consideration of synthetic oils, in addition to renewables opens the door to more sustainable biolubricants maintaining the criteria for environmental behaviour.</i></p>	<p><b>ACKNOWLEDGED</b></p>
<p><i>It seems to be technically possible because of the many developments on bio-based and synthetic products. On the other side, it is important to understand if the user will accept to pay more for a product with reduced environmental impact, considering that there is no obligation to use it even in sensitive areas. For the stakeholder it is important to have formulations with a reduced environmental impact in comparison with lubricants of the same category, taking into account their life cycle, but firstly it is important to sensitise the market and to achieve to make mandatory the use of these lubricants.</i></p>	<p>The aim of the EU Ecolabel scheme is to recognise the best 10-20% products (in terms of environmental performance) available in the market, for this reason the scope had been extended to these synthetic oils. Nevertheless, the promotion of other regulatory measures is out of the scope of this EU Ecolabel revision.</p>
<p><i>The biggest increase of this criterion is in category 2, based on the currently registered product compositions. This proposal generates difficulties for greases with high content of minerals and for non-renewable, but biodegradable components, good lubricating materials, for example PAG's.</i></p>	
<p><i>One stakeholder strongly objects to the proposal to increase the renewable content of Ecolabel lubricants to &gt;60%. In fact we believe it should be lowered to 25% renewable content to all HEPR type fluids to be used in formulating EAL. This lower amount would also allow for more recycled oil to be used as well.</i></p>	<p><b>REJECTED</b></p>
<p><i>Explanation</i>  <i>What is the practical benefit here to increase from 50% to 60% renewable content for all lubricants? This will restrict technologies like HEPR and our base oils that can be used to formulate high performance lubricants. VGP2013 does not have a renewable content restriction, and it has been a big success in the conversion of marine lubricant to EAL. I think a limit on the amount of re-refined oil in a formulation can be suggested in combination with a renewable resource as long as the overall formulations meets the biodegradability and toxicity requirements as outline above.</i></p>	<p>The aim of this criterion is to include also the synthetic oils from non-renewable sources as base fluid in the scope, in order to enlarge the scope to those lubricants with better environmental performance, for example PAO or PAG, and esters. In fact, the inclusion of this base oils would allow for certifying a larger number of lubricants.</p>
<p><i>Increasing these requirements may reduce the number of licensed lubricants and will certainly restrict the introduction of emerging base oil technologies. These new technologies have the potential to significantly increase the performance, and therefore market acceptance, of EALs.</i></p>	<p>Moreover, in the second revision the threshold values have been adjusted considering the values provided by stakeholders and CB.</p>
<p><i>One stakeholder supports the maintenance of the current Renewability levels for all five Categories and that there should not be an increase, as proposed.</i>  <i>He has been committed, for many years, to the promotion of environmentally friendly lubricants in the European market. In order for these types of products to be more readily accepted and their market share to increase, the Ecolabel should not make it more difficult for new and improved technologies to enter the market.</i></p>	<p>Finally, re-refined oils will be excluded from the criterion.</p>
<p><i>The Commission needs to clarify what is meant by 'synthetic' oils or origin. The stakeholder assumes that any reference to 'synthetic' base stocks means non-vegetable oils that are derived from a renewable source. The existing criterion requires the formulated product to have a carbon content from renewable raw material and this is easily understandable. Including an amount of re-refined oils for certain product categories can be indicated elsewhere in the criteria without using confusing terminology such as 'synthetic'.</i></p>	<p><b>ACCEPTED</b></p>
<p><i>% synthetic oil: The term synthetic is vague, it can be Group III mineral oil, Group IV = PAO and almost everything in Group V (Naphtalene, Alkylbenzene, Esters etc...)</i></p>	<p>Terminology has been clarified in the revised TR2.0.</p>
<p><i>The proposal on allowing re-refined oils is not supported. Reasons: For one the re-re-fined oils are only suitable to be</i></p>	<p>Finally, re-refined oils will be excluded from the</p>

<p><i>used in engine oils, secondly the availability on the market is limited and thirdly derogations for aquatic toxicity and biodegradation are needed. Especially the third point is seen very critical. Indeed, re refined base oils limit the CO<sub>2</sub> footprint of a lubricant. On the other hand, they are not biodegradable. Ecolabel stands for non-toxic and biodegradable lubricants.</i></p>	<p>critterion since: 4-stroke oils have been removed from the scope after the first AHWG meeting. Avoid derogations for the biodegradability of the lubricants, an important consideration when the environmental impact is evaluated. The inclusion of re-refined oils is only suitable when they are substituting a mineral oil. This could cause a reduction of more environmentally friendly base fluids (as renewable or synthetic).</p>
<p><i>The inclusion of re-refined oils in the scope is well-justified by the findings of the JRC technical report with regard to the high environmental benefits of waste oils as well as the waste oil regeneration contribution to CO<sub>2</sub> reductions associated with extracting and processing crude oil. With modern re-refining technologies, CO<sub>2</sub> emissions (kg of CO<sub>2</sub> per ton of base oil) can be reduced by more than 50% as compared to the conventional production of base oil.</i></p>	
<p><i>Measurement of carbon-14 is actually the only method to analyze the content of renewable resources. In case of re-refined oil containing some % of carbon-14 - this will end up on the "good" side, too, although the material as a whole might have some negative impact on biodegradability and toxicity and bioaccumulation. This is not desirable. Beside carbon-14 there is no accurate method to distinct between synthetic - re-refined etc. All consist of carbon - hydrogen - oxygen (probably sulfur and nitrogen) but it is impossible to state whether it is x% synthetic and y% re-refined in a complex mixture.</i></p>	
<p><i>A stakeholder supports the proposed limits for the formulated product to have content from re-refined oils <math>\geq 50</math> % (m/m) for Category 4. Minimum content requirements would provide consumers and businesses with information about the value of recycling and reassurance that they are buying environmentally friendly products. The current EU ecolabel criteria include biodegradability and toxicity requirements for the formulated product. As such, these requirements essentially promote a market for products from biological origin while the EU ecolabel scheme is not meant to be a bio-certification tool. The EU Ecolabel scheme is aimed at promoting the best products from the environmental point of view. Hence, the inclusion of re-refined oils in the scope of the revised criteria is coherent with the goals of the EU ecolabel and with the broader EU objectives on the circular economy, promoting recycling and their implementation at all levels. The major component of lubricating oil is base oil (70 - 99%), which may be a mineral base oil refined from crude oil or a synthetic oil (e.g. polyalphaolefin) produced tailor-made by chemical synthesis. The re-refining process removes the contaminants, the oxidation products and the additives contained in waste oils. As the base oil almost does not change in its properties this process can be repeated indefinitely. However, as the basis of re-refined oils comes from mineral oil or synthetic oil, they are not biodegradable and remain toxic. Therefore, allowing for derogations for toxicity and biodegradability criteria is critical in order to include re-refined oils as an alternative for the categories with less probability to reach the environment in the revised scope of the EU ecolabel criteria for lubricants. Definitions clarification: there is confusion about the definition of 'recycled or regenerated used oil'. The definition used in the JRC technical report describes 'reprocessing to fuels', this is the right term to use. The term 'regeneration' is defined in Article 3.18 of the EU Waste Framework Directive 2008/98/EC, namely: 'regeneration of waste oils means any recycling operation whereby base oils can be produced by refining waste oils, in particular by removing the contaminants, the oxidation products and the additives contained in such oils'. This is the definition that should be</i></p>	

<p>used in the next draft of the JRC documentation. For the production of fuels, 'reprocessing to fuels' is the correct term to be used. Moreover, in the definition of 're-refined oil', hydrotreating process is mentioned; however, there are other processes that can be used. We suggest including the following wording: 'hydrotreating process and/or other processes'.</p> <p>We support the inclusion of re-refined oils in category 4 (engine oils). With regard to the availability, cost and use of methods to measure % of re-refined oil, it is not feasible as the final formulation is a mixture, there are no available methods.</p>	
<p>For us it does not make sense to corrupt the actual EU Ecolabel for lubricants by allowing the use of re-refined base oils. Toxicity, bioaccumulation, biodegradation and aspiration aspects of these oils are tremendously different to all base oils already used it will lead to a lot of exemptions and confusion in the criteria to just add this small segment. Proposal: for a new EU Ecolabel for engine oil re-refined oils might be included but not for lubricants.</p>	
<p>One stakeholder supports the inclusion of re-refined oils in the amount of renewable material for category 4 products only (2 stroke and 4 stroke oils). It is clear that to achieve the aims of increasing the number of fluids awarded the ecolabel for this category there will have to be a derogation on the biodegradation criterion for the fraction of the lubricant based on re-refined oil because this type of base stock will never meet the ultimate/rapidly degradable definition to the best of our knowledge. However, there should be no need for a derogation concerning its aquatic toxicity because impurities are nominally removed during the re-refining process and so the re-refined oil should have an aquatic toxicity profile similar to that of normal mineral oil or other base stocks that have been used to formulate these products.</p>	
<p>Derogations must not be allowed if 50% is lost into the environment. Since a last fraction of this 50% is lost as oil itself there is no difference in the environmental impact of re-refined oil vs virgin mineral oil.</p>	
<p>This is very doubtful if you state that around 50% of lubricants are lost into the environment. What fraction of this is burnt and what is lost directly into the environment?</p>	
<p>There is misunderstanding between the lubricant lifecycle and the circular economy here. Waste oil regeneration increase the LIFETIME of the original (virgin) material only. It does not return the original virgin material to its virgin status again. Only if the CO2 produced by burning and biodegradation is sufficiently fast then the virgin material returns as virgin material again.</p>	
<p>As for Questions to stakeholders concerning the re-refined oils: We propose to allow using the re-refined oils in all categories if they meet the criteria. However the following questions should be raised:</p> <ol style="list-style-type: none"> <li>1. How would look like the verification and assessment against this criterion?</li> <li>2. If the end customer would provide manufacturer information, what happens to the oil after use, there is a risk that he or she will not be interested in the transferring of this information, and he or she will choose the product which does not cause problems.</li> </ol>	
<p>Recycling should be promoted but re-refined oils should not be included in the EEL.</p> <p>One point that was not mentioned at all during the meeting is that the quality and PCA content of re-refined oils vary greatly from one supplier to another.</p>	



<p><i>Re-refined oils could be part of a different labelling scheme in the market.</i></p> <p><i>% re-refined oil: the difference between virgin oil and re-refined oil is impossible to be analytically determined.</i></p> <p><i>The environment impact of re-refined oil in loss/lost lubricants is the same as mineral oil. Since 50% of the lubricant is lost in some form during its life cycle the environmental impact on re-refined oil is much less than what is calculated since this loss is not included in the impact assessment. In addition the renewability takes 200 million years compared to 1 - 10/15 years for the vegetable oils mentioned. It seems to me that re-refined oils cannot be recycled for 200 million years if 50% is lost in each lifecycle period.</i></p> <p><i>There is no environmental advantage if re-refined oils is directly lost into the environment. In addition if around 50% of the lubricant is lost into the environment re-refined oils have very little advantage because after a few re-refined periods nothing is left anymore. All has disappeared into the environment.</i></p>	
<p><i>The EEL is seen as the standard for a biolubricant because of its combination between biodegradation and renewability. It falls within then within the Standards on bio-based materials that are developed within the CEN.</i></p>	<p>The aim of the EU Ecolabel is to award products with the best environmental performance in the market. The evolution of the lubricant industry makes possible the formulation of lubricants with good environmental performance and not necessarily with renewable content.</p> <p>For this reason, it was proposed to include also the non biobased synthetic oils (PAG, PAO and synthetic esters) as base fluid in the scope.</p>
<p><i>The origin of raw materials is important; there are some requirements on this in the criteria document. The criterion focuses on renewable sources, synthetic oil... what about shale oil? It would be interesting to go further on this issue.</i></p>	<p><b>ACKNOWLEDGED</b></p> <p>It is understood that shale oil as a base fluid for lubricants is not extensively used in the lubricant industry. For this reason shale oil has not been studied and included in this revision. If the market trend is to include this oils as common base fluid in the lubricant industry, it is suggested that in future revisions will be assessed this base oil, considering the environmental impact that can cause the extraction of the material and other issues.</p>
<p><i>% C renewable test method: It was not possible to quickly find a laboratory that does C14 measurement in Europe.</i></p> <p><i>As for Assessment and verification: One of our stakeholder did run the test of hydraulic oil according to ASTM D-6866. The cost of such test was 345 EUR (in 2014). The determination of "% renewable C" according to the method described in Commission Decision 2011/381/EU wouldn't be applied because the additives used in oil were in the form of a package and the determination of their structure was impossible. Too complex structure.</i></p> <p><i>We would like to point out that there are equivalent EN standard to ASTM D-6866. Please consider the following standards:</i></p>	<p><b>ACKNOWLEDGED</b></p> <p><b>ACCEPTED</b></p> <p>A new test method to assess the renewable content has been included: ASTM D-6866. This test method is broadly used in other eco-labelling programs.</p> <p>The criteria requirement could be assessed also with other equivalent methods,</p>

<p><i>EN 16640:2017 Bio-based products - Determination of the bio-based carbon content of products using the radiocarbon method.</i></p> <p><i>EN 16785-1:2015 Bio-based products - Bio-based content - Part 1: Determination of the bio-based content using the radiocarbon analysis and elemental analysis.</i></p> <p><i>Draft EN 16785-2 Bio-based products - Bio-based content - Part 2: Determination of the bio-based content using the material balance method.</i></p> <p><i>These standard methods were and are developed by CEN/TC 411. It would be advisable to come into cooperation with proper working group of CEN/TC 411.</i></p>	
<p><i>The best method to determine renewable content is ASTM D6866-16, Standard Test Methods for Determining the Biobased Content of Solid, Liquid, and Gaseous Samples Using Radiocarbon Analysis. It is easily available at three laboratories in the US (Beta Analytical, University of Georgia, University of Arizona). D6866 is the official and only test method allowed by the USDA BioPreferred program. The cost is US \$300-400 with quick turnaround.</i></p>	
<p><i>A stakeholder supports the requirement to measure the amount of renewable material using ASTM D6866 radiolabel method. The method is reasonably inexpensive and aligns with the ISO standard for biolubricants, which also contains this requirement. This is a pragmatic strengthening of the ecolabel renewability criteria without being overly restrictive. It appears to need addressing as the current self-declaration is never verified according to the consultant who works on behalf of the Dutch competent body. Where existing award holders are concerned about having to pay for new testing to requalify against the revised criteria, perhaps this requirement should only apply to applications for new products.</i></p>	
<p><i>One stakeholder supports including a method to measure the amount of renewable carbon present in the product (as a suggestion, this could be deferred for existing ecolabel products and included for new applications received after December 2018). The stakeholder is not aware of a reliable analytical method to quantify the amount of re-refined oil in a lubricant, and we suggest that this would have to be certified through an applicant's self-declaration.</i></p>	
<p><i>The current criteria test is based on counting the renewable Carbon. In the mean time standard test have been developed. In addition in the production of base fluids the alcohol is often not saturated with fatty acid esters. What is the best methodology to be used in these 3 cases because they lead to different renewable results?</i></p>	
<p><i>ASTM D6866 standard: the method is quite burdensome. DIN51637 (liquid scintillation counting) is appropriate for the purpose, according to our experience. It has proven to be as accurate as ASTM D6866 to measure % renewable C from liquid and costs are considerable smaller.</i></p>	
<p><i>One stakeholder welcomes the broader scope of base oils that may be used. Methods to prove the content of synthetic oils in biolubricants formulation have to be defined (self-certification?). Without proper separation of lube oil waste of different origin (mineral oil vs. renewable vs. synthetic) the use of re-refined oil should be based on used engine oil streams only as they are usually more homogeneous from their chemistry.</i></p>	<p><b>ACKNOWLEDGED</b></p>

DRAFT

## First proposed criterion 5: Origin and traceability of vegetable raw materials

Comments received in AHWG1/written form	JRC Dir. B response
<i>We support the position regarding the current non-existence of mature and reliable certifications schemes for the traceability of vegetable raw materials (mainly rapeseed and sunflower). Some other standard must be further investigated (e.g. ISCC Plus, EN 16751-2016, CEN 12214, ISO TC 248).</i>	<p><b>PARTIALLY ACCEPTED</b></p> <p>The current standards have been further investigated in order to discuss the potential application for lubricants and the feasibility of use this certifications as verification evidence for this new criteria.</p> <p>In case that the criterion is not finally introduced in this revision process, the works done by the different Standard Committees should be followed in order to deal with this issue in future revisions.</p>
<i>French lubricant manufacturers use colza oil and sunflower oil but no certification exists. Bio-based standards could be used in the EU revision, maybe it could be possible for the criteria concerning raw materials and packaging?</i>	
<i>Without internationally acknowledged third-party certification of vegetable oils this criterion should be set on hold.</i>	
<i>Need more detail on the types of certification that would be acceptable</i>	
<i>One stakeholder opposes the introduction of this new criterion for the reasons discussed during the AHWG meeting. It appears that there is only one accredited third-party certification scheme for palm oil (mainly for the cosmetics sector) and no certification schemes exist for other vegetable oils. Requiring applicants to introduce a certification scheme for vegetable oils will significantly increase administration and therefore cost to lubricant manufacturers. As explained elsewhere in other comments, any new criterion that adds cost to developing a product for the EU ecolabel in the absence of new regulatory drivers to simulate the market would be very unwelcome and a disincentive for new applicants to apply.</i>	
<i>If traceability (to prevent that certified products are not mixed with uncertified products) cannot be sufficiently stated than the current text in the criteria document should not be changed. The proportionality of the change needs to be documented better.</i>	
<i>It is very difficult to provide third-party certifications regarding the use of vegetable oils originated from sustainably managed plantations. The availability on the market of these products is very small and it would create a barrier to Ecolabel application. Our proposal is to postpone the discussion to future updates of the criteria, waiting for a wider diffusion of the certification schemes of vegetable oil sustainability.</i>	
<i>Do not refer to the Renewable Energy Directive for biolubricants. The use of the renewable material is completely different. The issue arose because the EU wanted to have energy sources from renewable materials. Thus the virgin renewable material was burnt directly. This increased the production of renewable oils and fats very much. The demand is currently much higher than the demand for base fluids. In addition the use of vegetable oils and fats in the production of base oils increases the use and lifetime of the original material.</i>	<p><b>ACCEPTED</b></p> <p>Renewable Energy Directive is mentioned as reference since it includes sustainability criteria regarding the origin of bio-based fuels, covering criteria such as traceability and biodiversity conservation.</p>
<i>It assumes that the environmental impact is ONLY confined to renewable material. This is not the case as many disasters with mineral oil production platforms have been recorded.</i>	<p><b>REJECTED</b></p> <p>Although this new criterion initially proposed only affected to renewable oils fraction, mineral oil is limited in criterion 4 of 1<sup>st</sup> revision (Raw Materials) where a minimum % of renewability is requested. In the technical</p>

	analysis it is stated that according to LCA studies results and scientific evidence mineral oil is the worst option from an environmental point of view, in comparison with vegetable and synthetic oils.
<i>The renewable biofuels legislation, the existing fuel and biofuel schemes have already strict sustainability criteria (RED Regulation (EC) No 28/2009). The same sustainability criteria eg. origin, traceability and greenhouse gas calculations should also be applied to renewable lubricants.</i>	<b>ACCEPTED</b> These criteria have been analysed and they are applicable to renewable lubricants
<i>As for “Assessment and verification”: the following questions should be raised: If the manufacturer buys oil base from his supplier, and his supplier buys components to oil base from his suppliers, for which one the certificate of origin is issued? For this oil base or for the component from which it is produced?</i>	<b>ACCEPTED</b> The traceability should be assessed of all the chain of custody. There is not a specific requirement about who is responsible to certificate the raw material; this will depend on the certification considered to comply with the criterion. However, information about the environmental production of the base oils will be easily available by the supplier of pure vegetable oil.

## First proposed criterion 6: Exhaust emissions

Comments received in AHWG1/written form	JRC Dir. B response
<i>According to the licence holders the JASO tests are not reliable because the emissions depend on the motor that is used. The test results do not correlate with the performance from field tests.</i>	<b>PARTIALLY ACCEPTED</b> First proposed criterion 6, Exhaust emissions (applicable only to two-stroke engine oils) has been suggested to be removed. This requirement is already covered by the relevant standard to JASO is ISO 13738:2011, which is included in the minimum technical performance criterion for 2-stroke engine oils. Therefore, there is no need to have specific criterion on exhaust emissions.
<i>We are strongly against referring to national standards, e.g. ASTM, JASO etc. especially, if we have available EN or ISO equivalent standards. We consider that EN and ISO standard should be treated preferentially in relation to national standards. In case where there is no relevant ISO or EN standard, it would be advisable to come into contact with relevant CEN or ISO Technical Committee responsible for this area.</i>	
<i>As it was already mentioned in general comment to Criterion 4, we are strongly against referring to national standards, e.g. JASO etc. especially, if we have available EN or ISO equivalent standards. The relevant standard to JASO is ISO 13738:2011(en) Lubricants, industrial oils and related products (class L) — Family E (Internal combustion engine oils) — Specifications for two-stroke-cycle gasoline engine oils (categories EGB, EGC and EGD). Particular emphasis shall be given to the fact that, the JASO standards have their own test methods and their own laboratory test equipment. If the reference to JASO is maintained in the future criteria, this will result in necessary of buying JASO standard and laboratory equipment or it will result in difficulties with the ability and feasibility of running such tests.</i> <i>We propose to consider the possibility of removing this criterion, because this criterion relates to the emissions coming from engine and not caused by the lubricant itself which is subject to certification within lubricant product group. Referred test methods (JASO) assess the engine emissions that depend on engine performance and does not on lubricant used.</i>	

<p><i>One stakeholder considers the requirement to add exhaust emissions criteria to 2 stroke lubricants to be unnecessary and redundant. 2 stroke lubricants have to pass performance tests that include a measurement of emissions as a condition of access to the EU market and this criterion is therefore already regulated by EU member states (a list of the relevant Member States bodies for Non-Road Mobile Machinery Emissions can be found at <a href="http://ec.europa.eu/DocsRoom/documents/20865/attachments/1/translations/">http://ec.europa.eu/DocsRoom/documents/20865/attachments/1/translations/</a>). The suggested performance tests for 2 stroke marine and terrestrial lubricants also have an emission component to them and so meeting criterion 8 should be sufficient rather than adding a new criterion that adopts a test method developed for the Japanese market. As commented elsewhere, if ecolabel applications for 2 stroke lubricants are to increase the Commission needs to consider ways of encouraging lubricant manufacturers to submit new applications rather than adding new criteria to this product type, and the addition of a new criterion/test to measure exhaust emissions just increases the cost of developing an ecolabel 2 stroke oil and further disincentivises potential applicants. We are also aware of an initiative by the European Parliament committee which was set-up in response to the VW emissions issue. This committee is considering the creation of a new EU-level agency for on-road vehicles to ensure compliance with emissions standards.</i></p>	
<p><i>It is good to use technical tests that give information on environmental issues e.g. the test for exhaust emission. However, it must be a test that can be performed in certified labs in Europe, must not depend on the mark of the engine and must be proportional in its costs and achievements. If such a test is used then a threshold value should be used that is BETTER than the threshold value stated in the test report itself because one would like to see an improved environmental impact.</i></p>	

## First proposed criterion 7: Packaging Requirements

Comments received in AHWG1/written form	JRC Dir. B response
<p><i>We support the proposition to have a minimum recycled content in plastic packaging for end consumer. Due to the low impact of packaging in the life cycle of lubricants, the criterion should not be impossible to achieve for industrials.</i></p>	<p><b>ACKNOWLEDGED</b></p>
<p><i>The metal packaging is recyclable without obstacles. Good idea to use recycled plastics, but the applicant need to compromise with colour shortages. To recycle grease contaminated plastic packaging can cause more difficulty than benefit in the recycling process.</i></p>	<p><b>ACKNOWLEDGED</b></p>
<p><i>We hope suppliers of these items are brought in the loop either directly or hopefully some lube manufacturers will have the data.</i></p>	<p><b>ACKNOWLEDGED</b></p>
<p><i>Packaging for Environmentally Acceptable Lubricants is mainly business to business we mostly sell our products in steel drum and pails. We also offer plastic pails for some customers.</i></p>	<p><b>ACKNOWLEDGED</b></p>
<p><i>This chapter is only relevant if 4-stroke engine oils are included. There are several issues to be debated here but this needs to be done after it has been decided to keep 4-stroke engine oils in the revision process</i></p>	<p><b>REJECTED</b></p>
<p><i>During the ADWG JRC suggested to launch a specific study on recyclability of packaging.</i></p>	<p>In the lubricant industry the same product could be sold in different formats, for instance a product with the same name could be sold using 5 litres bottles, or 1000 litres containers.</p>

<p><i>Packaging is not a hotspot, so we believe that it could be more relevant to concentrate the work on criterion which focus on hotspot (as substances or raw materials...). Should you still wish to do so, we recommend studying the market opportunities for this recycled plastic. In France many plastics have no market opportunities for the moment. In this case the environmental savings are less important.</i></p>	<p>See more details in TR2.0.</p>
<p><i>Looking at hydraulics, which are the main EEL approved lubricants in terms of licenses or volumes, they are mainly sold in metal drums which are easily recycled</i></p>	<p><b>ACKNOWLEDGED</b></p>
<p><i>Low capacity packages are either fully emptied or partially emptied during top-up or refill operations. In the case where the full package content needs to be used, a dispense closure system does not make sense as the operator would need to manipulate the can many more times to add each time the predefined dosed quantity. Increased manipulation will bring increased risk of dropping the can and hence of spillage. In the case where only part of the can content needs to be used for top-up, to reach the desired added quantity (most of the time unknown), the operator will also need to repeat manipulations and increase risk of spillage. Moreover creating a specific package/cap design for a limited product volume will require specific filling line investments that will increase the cost to the customer and negatively impact the penetration of ecolabel lubricants in the market. Many producers (and even more small ones) will consider twice capital investment in hardware to be able to meet Criterion 7-b, even though all other criterion could met by the nature of their product.</i></p>	<p><b>PARTIALLY ACCEPTED</b> The packaging closure referred in this criterion in any case will not involve a higher manipulation of the product by the user. The intention of the design is principally to avoid accidental spillages, using as example, closure with a lower diameter or extensions allowing dumping the entire product when used. In the second revised proposal the text has been clarified. On the other hand, this requirement is not intended developing new strategies or dispenser closures; it only pretend to ensure that all the certified products have a dispenser to avoid spillage, as prolongation systems or narrow apertures.</p>
<p><i>This criterion is a de-facto exclusion of PVC, which makes no sense because</i>  a) <i>PVC is not used to package lubricants</i>  b) <i>PVC is recyclable and even if it ends up in waste fed to an incinerator, the amount of chlorine in municipal solid waste (originating among others from salted food waste) is more than sufficient for dioxins and furans to be produced at a level where additional chlorine will not affect concentration in the flue gas</i>  c) <i>The stringent EU regulations covering waste incineration mandate a very low level of dioxins (requiring treatment of gaseous effluents) such that there is no risk to human health or the environment</i></p>	<p><b>ACKNOWLEDGED</b> This criterion was already modified before the AHWG1 meeting. The initially proposed requirement on halogenated materials was discarded due to the fact that relevance of halogenated material in lubricant packaging seems to be minor and in addition, the issue of improper incineration is not of concern in EU.</p>
<p><i>The licence holders see a problem with this criterion, especially part c, because the distribution works different than for detergents and cleaning agents. The lubricants are delivered in big tanks to intermediate distributors with trucks and the intermediate distributors refill it themselves in small canisters. For detergents and cleaning agents usually the producer himself delivers the packages in small canisters; he fills them directly. The lubricant producers do not have an influence which materials the intermediate distributors use for the small canisters and it will be hard to convince those to apply completely new for an EU Ecolabel instead of just getting an extension contract like it is at the moment. The proposed</i></p>	

*criteria should not be binding already but a "should" criterion.*

DRAFT



## First proposed criterion 8: Minimum technical performance

Comments received in AHWG1/written form	JRC Dir. B response
<p>The KWF-Test got revised together with the RAL-UZ 48 basic award criteria document, which is now called RAL-UZ 178. The new KWF-Test document from June 2016 was sent to the commission to upload on the EEL homepage but was obviously forgotten. Please consider the new test description in the ongoing re-vision.</p> <p>It is not clear if the KWF AND the AFNOR test needs to be performed or if someone can choose between KWF OR AFNOR. The KWF test should be mandatory for all.</p>	<p><b>ACCEPTED</b></p> <p>The new KWF-Test document from June 2016 (in RAL-UZ 178) replaces the proposed requirement the minimum technical performance for chainsaw lubricants.</p>
<p>Regard to Chainsaw: As it was previously highlighted on several occasions, the RAL UZ 48 does not exist anymore! It was replaced by RAL UZ 178 and new performance requirements.</p> <p>We propose to change this wording into: "chain saw lubricants shall meet technical requirements of ISO/TS 19858:2015 Forestry machines — Portable chain-saws — Test method for evaluating saw chain oil lubricity or requirements of the country in which the product will be placed on".</p>	
<p>RAL UZ 48 was cancelled and replaced by RAL UZ 178. This is a German Standard not a Swedish Standard</p>	
<p>Wire Rope Oils. The test methods listed are incomplete; this is more or less a "fit for purpose" test.</p>	<p><b>PARTIALLY ACCEPTED</b></p> <p>Wire rope lubricants (type of TLL) minimum technical performance would be modified to "at least one relevant OEM approval" due to the wide range of applications.</p>
<p>The minimum technical performance requirement for wire ropes should remain as "fit for purpose".</p>	<p><b>ACCEPTED</b></p> <p>The minimum technical performance for gear oils is proposed to be changed for:</p> <p>Enclosed gear oil: DIN 51517</p> <p>Open gear oils: At least one relevant OEM approval</p>
<p>A distinction should be made between enclosed gears (meeting DIN 51517 and ISO 12925) and open gears (fit for purpose) as defined in ISO6743.</p>	<p><b>PARTIALLY ACCEPTED</b></p> <p>The minimum technical performance for gear oils is proposed to be changed for:</p> <p>Enclosed gear oil: DIN 51517</p> <p>Open gear oils: At least one relevant OEM approval</p> <p>Under 'stern tube oils' different oils with different requirements are considered, from bearings, to hydraulic. The minimum technical performance for Stern tubes would be replaced by "at least one relevant OEM approval".</p>
<p>I strongly suggest that for Hydraulic/Stern tubes and gear oils/thrusters that 'Fit for Purpose" be required for these categories and let the OEM's decide the products that meet their equipment demands. The requirements currently listed would not suffice for any OEM application or approval and by putting a specification on the category allows products to claim meets the technical specification of EcoLabel and is misleading to the consumer. If you can't define an all encompassing specification, then leaving it as "fit for purpose" is better. Modern day formulations are designed to meet the most stringent OEM requirements and it would be a given they would meet your specifications.</p>	<p><b>ACCEPTED</b></p> <p>Outcomes from the 1st AHWG meeting for Lubricants: 4-stroke</p>
<p>Should be removed completely. For technical reasons, products meeting actual requirements of the automotive industry are highly unlikely. No intentional release of lubricants into the environment. Used</p>	

<p><i>engine oils may be classified as dangerous.</i></p>	<p>engine oils will be removed from this revision.</p>
<p><i>Shall be ISO 137382:2011</i></p>	<p><b>ACCEPTED</b> There was a mistake. Shall be ISO 13738:2011 and it has been corrected.</p>
<p><i>The fire resistance test should be removed. Hydraulic fluids falling in this category are either water based systems or petrochemical based systems. Both cannot be labelled with the proposed criteria. The fire resistance test should not be mandatory for all Hydraulic fluids because not all fall in this category where fire resistance needs to be proven. They have to meet the 8. Luxemburg Standard</i></p>	
<p><i>In our view the technical criteria for all hydraulic fluids should be based on ISO 15380 alone. What is the ECO benefit of having additional requirements for fire-resistant hydraulic fluids? Globally the Factory Mutual Approval Standard 6930 is well accepted. Many end-users require the Factory Mutual approval. Other insurance companies tend to follow Factory Mutual. ISO 12922 consists of a bundle of fire resistance tests Wick test: ISO 14395. Results should be reported, but no criteria set Hot Manifold test: ISO 20832 AIT &gt; 400 °C (HF DU) Flame propagation: 'report' results, but no criteria set. Spray ignition (minimum: 1 spray test result): ISO 15029-1 - Rarely used. Only available at HSE (Buxton, UK). Proposal in ISO review: change from full ISO to Technical Specification. Declined because of lack of alternative. ISO 15029-2 - No statistical data can be collected: only a few laboratories can execute this test. Technical Specification: proposal to change to full ISO was declined in ISO review (see previous remark) Requirements: based on agreement end user/supplier (no criteria)</i></p>	<p><b>PARTIALLY ACCEPTED</b> The technical criteria for hydraulic fluids are based in the standard ISO 15380, Table 2 to 5. Nevertheless, only fire-resistant hydraulic fluids are suggested to meet some additional requirements and pass several fire resistance tests. As a result, the applicant shall provide a declaration of compliance with the Factory Mutual Approval Standard 6930 or a perform the criteria of ISO 12922, Table 1 to 3. Following ISO 12922, there are different limit values according to categories for: Wick test ISO 14395. Mean flame persistence Hot Manifold test ISO 20832. Ignition temperature Spray ignition (minimum: 1 spray test result): ISO 15029-1 or ISO 15029-2. Can be excluded from the minimum technical performance.</p>
<p><i>This is correct in our view: ISO 12922 should not be mentioned as it not the right criteria for the minimum technical performance for a fire resistant hydraulic fluid. This is contrast to Page 60.</i></p>	
<p><i>For ISO H (Hydraulic systems) in addition to ISO 15380, DIN 51524 and ISO 11158 should be considered to cover synthetic oils</i></p>	<p><b>PATIALY ACCEPTED</b> ISO 15380 covers environmentally acceptable hydraulic fluids based on triglycerides, polyglycols, synthetic ester, PAO. While ISO 11158 and DIN 51524 cover mainly, mineral oils products and related hydrocarbons.</p>
<p><i>EN 16807: 2016 refers to ISO TS 12927 for metalworking fluids</i></p>	<p><b>PARTIALLY ACCEPTED</b> EN 16807:2016 refers to ISO TS 12927, however the fluids requirements can be quite different depending on the functions in metalworking process.</p>

<p>ISO T (Turbines): ISO 8068:2006 may be wrongly associated with stern tube as its scope is turbines in general. Vickers Oil may comment.</p>	<p><b>ACCEPTED</b> Under 'stern tube oils' different oils with different requirements are considered, from bearings, to hydraulic. The minimum technical performance for Stern tubes would be replaced by "at least one relevant OEM approval".</p>
<p>Proposed minimum technical performance ISO 6068:2006 is not relevant for this type of application. It should remain "fit for purpose".</p>	
<p>ISO 8068:2206 is not suitable for stern tube lubricants. The technical specification for stern tube lubricants should be "fit for purpose".</p>	
<p>A stern tube is a niche application that has no singular definition of appropriate lubricant. Ship owners use a variety of lubricants in the stern tube including circulating oil, hydraulic oil, gear oil, crankcase engine oil and trunk piston engine oil. The problem with assigning stern tube lubricants to ISO 6743 Family 'T' is that the performance requirements of turbines are not necessarily appropriate to stern tubes. IF there is an absolute requirement for the 2018 Ecolabel, to harmonise to the nomenclature with ISO 6743, then Family 'T' should only be used providing it does not lead to the requirement to meet ISO 8068 since many oils use in stern tubes, including some mineral oils, do not meet ISO 8068. This standard has never been requested by a ship owner, ship yard or stern tube OEM. The primary performance requirement used today when selecting a lubricant for stern tube use is approval of the stern tube seal OEM. Therefore for the 2018 Ecolabel, it is suggested that 'Fit For Purpose' be used.</p>	<p><b>REJECTED</b> Although there are no minimum values established, it is suggested that the manufacturer shall inform about the product specifications</p>
<p>ISO Family R (ISO 6743-99): ISO/TS 12928:1999 is in no aspect a minimum technical performance requirement so it is not relevant.</p>	<p><b>ACCEPTED</b> Greases minimum technical performance are suggested to be "at least one relevant OEM approval". Only greases with the following purposes, are suggested to meet additional requirements: Greases for closed gear boxes: DIN 51826 Greases for temporary protection against corrosion: ISO/TS 12928:1999 E.g. if a multipurpose grease is suitable for wire and corrosion, shall perform ISO/TS 12928:1999. E.g. if a multipurpose grease is suitable for gears, shall perform DIN 51826. If it does not perform the test, could mean that is not suitable for the application.</p>
<p>How to handle overlaps, for example multipurpose greases suitable for wires, gears, bearings, corrosion prevention etc?</p>	<p><b>ACCEPTED</b> Greases minimum technical performance are suggested to be "at least one relevant OEM approval". Only greases with the following purposes, are suggested to meet additional requirements: Greases for closed gear boxes: DIN 51826 Greases for temporary protection against corrosion: ISO/TS 12928:1999 E.g. if a multipurpose grease is suitable for wire and corrosion, shall perform ISO/TS 12928:1999. E.g. if a multipurpose grease is suitable for gears, shall perform DIN 51826. If it does not perform the test, could mean that is not suitable for the application.</p>
<p>DIN 51517 does not pertain to greases, but (gear) oils only. It is therefore not relevant as a minimum performance criterion. We propose instead: Greases for closed gear boxes : DIN 51826 Greases for roller bearings, plain bearings and sliding surfaces : DIN 51825 Other applications (such as open gear greases) : fit for purpose</p>	<p><b>REJECTED</b> Although there are no minimum values established, it is suggested that the manufacturer shall inform about the product specifications.</p>
<p>ISO Family X (ISO 6743-99): ISO/TS 12928:1999 is in no aspect a minimum technical performance requirement so it is not relevant.</p>	<p><b>ACCEPTED</b> See proposal at TR2.0</p>
<p>It needs to be clarified that this new requirement can be met by self-certification from a manufacturer's own laboratory rather than a third party laboratory/testing facility. This is needed because most additive manufacturers and lubricant producers conduct performance tests in house rather than sub-contracting</p>	<p><b>ACCEPTED</b> See proposal at TR2.0</p>

<p>them to external laboratories.</p>	
<p>The minimum stability requirements are not defined. It should therefore be called "fit for purpose" like it used to be.</p>	
<p>One stakeholder questions the purpose or usefulness of including Minimum Stability Requirements for those product types that do not appear to have at least one technical performance standard associated with that application (e.g. concrete release agents and other total loss lubricants and metalworking fluids. The proposed criteria did not define 'minimum stability' and so this needs to be clarified by the Commission in order for us to comment whether it would be suitable for the product types affected. All products placed on the market have to guarantee a certain period of stability (or shelf life) and so this condition appears to be redundant. Better to replace with "fit for purpose" which we note has been retained for greases. We would also support comments made during the AHWG meeting that minimum technical performance criteria could be replaced with relevant OEM accreditations for certain product types since these are better indicators of a product's performance (e.g. marine lubricants)</p>	<p><b>ACCEPTED</b> As minimum stability requirements could be ambiguous, it is replaced by "at least one relevant OEM approval"</p>
<p>Suggestions for minimal technical performance for each category are detailed in table below from ISO 6743. Part: Category Applications Code Internal or external use. Performance requirements Environmental Risk.</p> <p>- Family A (Total loss systems): Rough applications, axles, railway points, etc. /External/ Fit for purpose/ Direct egress to the external environment. Lightly loaded parts (rolling bearings, gears), plain bearings in. Hydrodynamic regime /External or Internal/ Fit for purpose/Direct egress to the external environment Open gears, wire ropes, mechanical chains./ External or Internal/ Fit for purpose/ Direct egress to the external environment Chains of chain saws/ External/ Fit for purpose/Direct egress to the external environment</p> <p>- Family B (Mould release)Concrete release agents/ Spec. not currently available/ External/ Fit for purpose/Direct egress to the external environment</p> <p>- Family F (Spindle bearings, bearings and associated clutches): Pressure, bath and oil mist (aerosol) lubrication of plain or rolling bearings and associated clutches/ Internal/ Fit for purpose/ Enclosed systems/ Oil mist in exhaust of aerosol lubrication. Risk of accidental spills or leaks. Pressure, bath and oil mist (aerosol) lubrication of plain or rolling bearings/ Internal/ Fit for purpose/ Enclosed systems/ Oil mist in exhaust of aerosol lubrication. Risk of accidental spills or leaks.</p> <p>- Family D (Compressors) Positive displacement air compressors with oil lubricated compression chambers. DAA, DAB, DAG, DAH, DAJ/ Internal/ DIN 51506/ Enclosed systems. Risk of accidental spills or leaks. Lubricants may pass down air stream to point of use of air.</p>	<p><b>PARTIALLY ACCEPTED</b> These ISO families are classified within the new categories:</p> <p><b>TLL</b> - Total loss systems: It is replaced by "at least one relevant OEM approval". Only chainsaw fluids shall meet the new KWF-Test document from June 2016 (in RAL-UZ 178) - Stern tubes are included in the scope: "at least one relevant OEM approval" - Pneumatic tools: included in the scope as other total loss and therefore, shall comply with "at least one relevant OEM approval"</p> <p><b>PLL</b> - Internal combustion engine oils: Outcomes from the 1st AHWG meeting for Lubricants: 4-stroke engine oils will be removed from this revision.</p> <p><b>ALL</b> - Spindle bearings, bearings and associated clutches: Not included in the scope. Only greases, specified in Family X. - Compressors: Not included in the scope. - Hydraulic systems: Mineral hydraulic fluids (HH, HL, HM, HV). ISO 11158 are in</p>

<p>- Family H (Hydraulic systems):</p> <p><i>Mineral hydraulic fluids, HH, HL, HM, HV, HG/ Internal/ ISO 11158/ Enclosed systems. Risk of accidental spills or leaks.</i></p> <p><i>Environmental hydraulic fluid, Triglyceride/ HETG/ External/ ISO 15380/ Enclosed systems. Risk of accidental spills or leaks.</i></p> <p><i>Environmental hydraulic fluid, Polyglycol/ HEPG/ External/ ISO 15380/ Enclosed systems. Risk of accidental spills or leaks.</i></p> <p><i>Environmental hydraulic fluid, Synthetic ester/ HEES/ External/ ISO 15380/ Enclosed systems. Risk of accidental spills or leaks.</i></p> <p><i>Environmental hydraulic fluid, PAO or other synthetic/ HEPR/ External/ ISO 15380/ Enclosed systems. Risk of accidental spills or leaks.</i></p> <p><i>Fire-resistant hydraulic fluid, oil in water emulsion/ HFAE/ Internal or External/ ISO 7745/ Enclosed systems. Risk of accidental spills or leaks.</i></p> <p><i>Fire-resistant hydraulic fluid, chemical solution in water/ HFAS/ Internal or External/ ISO 7745/ Enclosed systems. Risk of accidental spills or leaks.</i></p> <p><i>Fire-resistant hydraulic fluid, water in oil emulsion/ HFB/ Internal or External/ ISO 7745/ Enclosed systems. Risk of accidental spills or leaks.</i></p> <p><i>Fire-resistant hydraulic fluid, water polymer solution. May be used in sensitive applications as is readily dispersed in water/ HFC/ Internal or External/ ISO 7745/ Enclosed systems. Risk of accidental spills or leaks.</i></p> <p><i>Fire-resistant hydraulic fluid, synthetic, phosphate ester/ HFDR/ Internal or External/ ISO 7745 BS 61211, ISO 100050/ Enclosed systems. Risk of accidental spills or leaks.</i></p> <p><i>Fire-resistant hydraulic fluid, synthetic, other. Some fluids in this category claim enhanced environmental properties as ester based/ HFDU/ Internal or External/ ISO 7745/ Enclosed systems. Risk of accidental spills or leaks.</i></p> <p>- Family T (Turbines)</p> <p><i>Water, steam &amp; gas turbines, mineral oil/ TSA, TSE, TGA, TGB, TGE, TGF, THA, THE, TGSE, TGSB/ Internal/ BS 489, ISO 8068/ Enclosed systems. Risk of accidental spills or leaks.</i></p> <p><i>Steam &amp; gas turbines, PAO synthetic/ TGCH/ Internal/ ISO 8068/ Enclosed systems. Risk of accidental spills or leaks.</i></p> <p><i>Steam &amp; gas turbines, fire-resistant, phosphate ester/ TSD, TGD, TCD/ Internal/ ISO 8068/ Enclosed systems. Risk of accidental spills or leaks.</i></p> <p><i>Gas turbines, synthetic ester. "These fluids may also exhibit some environmental acceptability character"/ TGCE/ Internal or External/ ISO 8068, ISO 15380/ Enclosed systems. Risk of accidental spills or leaks.</i></p> <p><i>Water turbines "when low water toxicity and environmental protection properties are needed", PAO</i></p>	<p>practice out of the scope as they would not be able to comply with criteria.</p> <p>Environmental hydraulic fluid (HETG, HEPG, HEES, HEPR). ISO 15380</p> <p>Fire-resistant hydraulic fluid (HFA, HFB, HFC, HFD). It is proposed ISO 12922. ISO 7745 refers to the requirements and guidelines for use, but it is not related to any specific fire test.</p> <p>- Family M (Metalworking): It is replaced by "at least one relevant OEM approval"</p> <p>-</p> <p>- Slideways: Not included in the scope. Only slideways greases, specified in Family X.</p>
---	---

*synthetic/ THCH/ Internal or External/ ISO 8068, ISO 15830/ Enclosed systems. Risk of accidental spills or leaks.*

*Water turbines “when low water toxicity and environmental protection properties are needed”, synthetic ester/ THCE/ Internal or External/ ISO 8068, ISO 15380/ Enclosed systems. Risk of accidental spills or leaks.*

*- Family C (Gears)*

*Enclosed gears; mineral oil, synthetic oil or grease lubricated/ CKB, CKC, CKD, CKE, CKS, CKT, CKG/ Internal or External/ ISO 12925, DIN 51517/ Enclosed systems. Risk of accidental spills or leaks.*

*Open gears; intermittent, dip or mechanical lubrication. Grease, paste or bituminous type lubricants/ CKH, CKJ, CKL, CKMI/ Internal or External/ Fit for purpose/ Open systems. Risk of spills and leaks, dependent upon degree of containment.*

*- Family M (Metalworking)*

*Operations primarily needing lubrication (neat oils)/ MHA, MHB, MHC, MHD, MHE, MHF, MHG, MHH/ Internal/ Fit for purpose/ Enclosed systems. Risk of accidental spills or leaks. Operator exposure to skin contact and oil mist.*

*Operations primarily needing cooling (soluble oils)/ MAA, MAB, MAC, MAD, MAE, MAF, MAG, MAH, MAI/ Internal/ Fit for purpose/ Enclosed systems. Risk of accidental spills or leaks.*

*Operator exposure to skin contact and oil mist. Ease of disposal, of both oil and water phase.*

*- Family P (Pneumatic tools) Airline lubricants, which are discharged with the exhausted air from tools/ Spec not currently available/ Internal or External/ Fit for purpose/ Direct egress to the external environment.*

*- Family G (Slideways) Machine tool lubricants/ Spec not currently available/ Internal/ Fit for purpose/ Enclosed systems. Risk of accidental spills or leaks. Operator exposure to skin contact and oil mist. Ease of disposal, of both oil and water phase (after contamination with soluble cutting oils).*

*- Family E (Internal combustion engine oils)*

*Internal combustion, two-stroke engines/ EGB, EGC, EGD/ External/ Fit for purpose/ Lubricant is burned with fuel. Residues are discharged with exhaust.*

*Internal combustion, four-stroke engines (may also be used for starter, transmission, drive train)/ EMA, EMA1, EMA2/ External/ Fit for purpose/ Enclosed systems. Risk of accidental spills or leaks.*

*Internal combustion, four-stroke engines (may also be used for starter, transmission, drive train). With friction modifiers to reduce friction/ EMB/ External/ Fit for purpose/ Enclosed systems. Risk of accidental spills or leaks.*

*“Fit for purpose” may also mean that equipment manufacturer sets performance level (or approves lubricants).*

*General comment: As it was already mentioned in general comment to Criterion 4 and 5, we are strongly against referring to national standards, e.g. ASTM, JASO etc. especially, if we have available*

**PARTIALLY ACCEPTED**

<p><i>EN or ISO equivalent standards.</i></p> <p><i>Setting the performance requirements should be done according to existing EN or ISO standards. In case where there is no relevant ISO or EN standard, it would be advisable to come into contact with relevant CEN or ISO Technical Committee responsible for this area. Please note, that most of lubricant families ISO 6743 have already their relevant ISO specification requirements. So, there is no need to recall standards other than ISO or EN standards. Where there is no available the appropriate EN or ISO standards we propose to use the following text: "Fit for purpose" and remove all references to national standards from this document and future criteria.</i></p> <p><i>Please find in an attachment the table with referred standard in technical report and their equivalent or quasi-equivalent standards to be considered:</i></p>	<p>JASO and ASTM standards have been replaced. However there are some well-known standards like OECD 301 that shall not be replaced.</p>
<p><i>Much more work is needed here to get the right performance claims with the right product. We need to see how the categories are going to be reorganized before commenting further on this.</i></p>	<p><b>ACCEPTED</b> See TR2.0 for details</p>

DRAFT

## First proposed criterion 9: Consumer information regarding use and disposal

Comments received in AHWG1/written form	JRC Dir. B response
<p>We support the addition of a message on labelled products for end-consumers to raise awareness on end-of-life of the product. However we propose two other formulations, changes compared to JRC proposal are underlined:            Preferably : “Despite having a limited content of hazardous substances, lubricating oil remain potentially harmful to health and environment, it must not be deposited in water systems and it must be managed for an authorized waste manager.”            Or : “<b>Lubricating oil may contain harmful substances to health and environment, it must not be deposited in water systems and it must be managed for an authorized waste manager.</b>”</p>	<p><b>ACCEPTED</b>            A reformulation of the sentence has been done in order to avoid the confusion caused.</p>
<p>This is contradictory to the aim of the EU Ecolabel to provide industry and consumers with products of lowest possible impact on health and environment.            If such information is needed, one should e.g. state: This lubricating oil is formulated to show lowest possible impact on health and environment. However, <b>it must not be depolluted into water systems ....etc.</b></p>	
<p>The Commission should consider alternative language for the consumer label if this new criterion is adopted because we consider the current proposal will send mixed messages to the consumer. Alternative label might indicate that the <b>"Lubricating oil must not be disposed of in water systems such as sewers, or to landfill. It must be disposed of responsibly, preferably using an authorised local or national waste disposal scheme "</b></p>	
<p>Due to the number of languages used on the labels (&gt; 20) it is not possible to add a sentence like that in all required languages. Therefore it is suggested to use pictograms instead.            Additionally the proposed sentence is misleading, since total loss lubricants do end up in the environment and no one can prevent that (example chainsaw oils).            It would be better to state (pictograms for those sentences are available):            "Do not allow unused quantities of the product to reach the sewerage system, watercourses or soil"            "Product residue is to be disposed of in municipal collection points for harmful substances"</p>	<p><b>PARTIALLY ACCEPTED</b>            The use of pictograms has not been considered appropriate according the harmonization with the last revisions of similar EU Ecolabel product groups. Regarding the total loss lubricants, the proposed sentence has been modified taking into account this consideration.</p>
<p>The EEB and BEUC consider that criterion should be more specific on the concrete recommendations provided to the consumers on what they should do or not with the product during its use and at the end of its life.</p>	<p><b>REJECTED</b>            Sentence proposed includes the recommendations to the consumer and waste management procedure. The sentence has been modified to make it clear and concise.</p>
<p>It might be confusing to have on the same label the sentences from Criterion 9 next to the sentences from Criterion 10. Maybe a more general sentence could be used?</p>	

## First proposed criterion 10: Information appearing on the EU Ecolabel

Comments received in AHWG1/written form	JRC Dir. B response
---	---------------------



<p><i>The tests proposed for certain applications are not exhaustive. e.g. for metalworking fluids there are no approved performance tests. "Tested for lubricating performance" may suggest a more reliable level of tests than those proposed in criterion 8.</i></p>	<p><b>ACCEPTED</b></p>
<p><i>As for an optional text box: We suggest to consider to remove text: "Tested for lubricating performance", because not all of lubricants have established performance requirements e.g. for Greases the requirement is 'fit for purpose'. We propose to rewrite this sentence, e.g.: "Contain renewable raw material at...%".</i></p>	<p>In order to align the requirements of Criterion 10 with the performance tests defined in Criterion 8, the sentence "Tested for lubricating performance" has been removed. See details of the proposal in TR2.0</p>
<p><i>The three sentences should be replaced by the two from the current document and the second one from the new proposal: Restricted amount of hazardous substances. Reduced harm for water and soil during use. Contain a large fraction of bio based material.</i></p>	<p><b>REJECTED</b></p>
<p><i>The link between biodegradation and renewability is crucial for a biolubricant. This needs to be kept since the EEL is seen as the best standard for a biolubricant.</i></p>	<p>The sentence about the biobased material is excluded from the Criterion, since not only biolubricants can be ecolabelled. Some biodegradable synthetic fluids can also comply with the requirements.</p>
<p><i>One stakeholder suggests that the current option for voluntary labelling should be retained. We see no need to change this, except perhaps to align with other EU environmental standards such as Swedish standard or German Blue Angel. We suggest that the applicant should have the option of referring to the fact that the product contains a large amount of biobased material where appropriate (and supported by verification according to ASTM D6866 method?).</i></p>	
<p><i>The claims on the ecolabel certificate / label should not omit that environmental friendliness was and is prime for biolubricants! So, "restricted amounts of hazardous substances" points in the wrong direction and should be deleted.</i></p>	<p><b>REJECTED</b></p>
<p><i>A stakeholder believes that the comment about restricted amount of hazardous material is superfluous as is the text stating that the product has been tested for lubricating performance.</i></p>	<p>The sentence will be modified in order to align it with the Criterion 1: Limited amount of hazardous substances. The EU certification only guarantees the exclusion and restriction of the substances described in the Criterion 1, and the aim of this sentence is to reflect the composition limitation of the lubricants with EU ecolabel.</p>
<p><i>The EEB and BEUC agree with the proposal to delete the reference "contains a large fraction of biobased materials".</i></p>	<p><b>ACCEPTED</b></p>