

ANNEX

The following table consist on the comments received during and after the AHWG2 and relate to the second criteria proposal.

Scope and definitions

Comments received in AHWG2/written form	JRC Dir. B response
<p><i>This definition does not include "temporary protection against corrosion" (TPC). TPCs are applied on a ONE metal part surface to protect this specific surface against corrosion. TPCs function without being introduced BETWEEN TWO solid surfaces.</i></p>	<p>ACCEPTED The definitions have been modified accordingly.</p>
<p><i>If this definition is retained we would suggest deleting 'This change in viscosity is called shear thinning' because this is not part of a definition. Our experts suggest an alternative description for a grease as follows (based on NLGI definition) A solid to semisolid dispersion of a thickening agent in a liquid lubricant. Additives imparting special properties may be included. Depending on application the grease could be total, accidental or partial loss. They are mostly covered under ISO 6743 family X.</i></p>	
<p><i>Would a better definition be "'Stern tube oil' means the lubricant used in the stern tube of the ship, which is a hollow tube-like bearing in the hull structure at the rear end (aft peak) of the ship, through which the propeller shaft passes and connects the engine and propeller."</i></p>	
<p><i>Yes, the definitions reflect properly the categories, the new categorization is more generic and logical against scientific principles.</i></p>	<p>ACCEPTED</p>
<p><i>Suggest replacing 'emitted' with 'issued'</i></p>	<p>ACCEPTED Definition has been modified: "LoC" or Letter of Compliance means a letter <i>issued</i> by one of the EU Ecolabel competent body indicating the assessment of a substance or brand used in a lubricant. It contains the same information as listed on the LuSC-list.</p>
<p><i>Suggest deleting 'Open gear oils must be specially formulated to keep equipment operating at maximum efficiency' since this does not really define an open gear. It adds nothing to the definition and to be honest is a description that could be assigned to all lubricants</i></p>	<p>PARTIALLY ACCEPTED In the complementary definitions it is specified open gear oils as a type of gears which are exposed to challenging conditions include outdoor environment, extended service operation, dust, silica, water,</p>

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	extreme heat and extreme pressures. Additionally, it is defined a gear oil as a lubricant made specifically for transmissions, transfer cases, and differentials in automobiles, trucks, and other machinery.
<i>With regard to composition, ability to use biobased fluids, additivation etc. the products do differ a lot from other representatives in the market, therefore it is assumed that the criteria might not be suited to represent the main environmental impacts.</i>	PARTIALLY ACCEPTED One of the objectives in the current revision has been to expand the scope, so that more lubricant products find its way into the EEL. 2T oils are already in the EEL and will continue. MWF are included in this revision.
<i>Ref of Madonhire & Mbohwa pp 20 it is indicated that estimation of hydraulic loss can be as high as 70-80%. This is not in line with ALL principle.</i>	PARTIALLY ACCEPTED An ALL means a lubricant product that is used in closed systems. These products can be released to the environment only incidentally. Therefore, during the intended use of hydraulic fluids, it is possible for relevant volumes to escape uncontrolled into the environment due to leakages and other defects.
<i>The explanation on pp 12 that if the product cannot be recycled the answer is NO, it is a TLL is an incorrect question. Each and every lubricant product can in principle be recycled. It is not possible to define the three product categories sufficiently well.</i>	REJECTED A total loss lubricant cannot be recycled, due to the fact it is completely released into the environment during use.
<i>If only a rebrand of a product is requested, the full application process must be checked again if the rebrand falls in another category e.g. from ALL to PLL.</i>	ACCEPTED A lubricant shall be assessed according to the application to which is marketed. Criteria differs depending on the category so different thresholds apply depending on the lubricant falling under TLL, PLL or ALL. Even a lubricant having same composition will have different impact depending on the final application.
<i>The table needs to be a part of the official Annex showing the link to the ISO categories. For the second row it is possible to extend a comment in the criteria document that a request can be made to the EUEB to classify a lubricant in one of the environmental classes.</i>	REJECTED Considering the limitations of the ISO families (i.e. some of the ISO families are not fully developed, do not cover all the lubricants available in the market for a specific lubricant type, or simply do not exist for certain lubricant types (e.g. stern tube oil)) it has been considered to not include them in the scope definition . Only in the complementary definitions , there is a link to the specific definition of certain type of lubricants for which the ISO family is available.

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	However it has been clearly stated that the lubricants within the specific category defined are not limited to those in the ISO referred.
<p><i>The row "out of the scope" includes only ALL lubricants? Are they all ALL lubricants? Can they be included on request?</i></p>	<p>REJECTED They are out of the scope of this revision. These lubricants have not been assessed during this revision as they fall out of the prioritisation methodology (see chapter 1 for more information) of this revision. The only open category is other total loss, so only other TLL that have not been specifically included in the scope might be able to apply under Other total Loss category.</p>
<p><i>Only cradle-to-grave approached are studied. Not cradle-to-cradle which is the real basis of the circular economy.</i></p>	<p>Few available cradle-to-cradle studies has been assessed. Unfortunately due to the complexity of the lubricant sector, most of the available studies were cradle-to-gate.</p>
<p><i>SEMI-Vegetable oils where the glycerol has been substituted by a more stable alcohol are excluded in this list. Vegetable oils only are hardly applied as base fluids in a lubricant because of their oxidation instability.</i></p>	<p>REJECTED Semi-vegetable oils are in fact considered, as they are synthetic esters, included in the synthetic oils section. Synthetic esters consist usually of a fatty acid (from renewable, vegetal, origin) and an alcohol part, which is usually of non-renewable origin, in such a way that the properties of the final ester overcome the barriers of the vegetal ester of glycerol or 1,2,3-propantriol. In addition, it is suggested for third revision to delete criterion on raw materials. Therefore, every alternative able to comply with the criteria set, independently of the raw material, will be candidate for the label.</p>
<p><i>What is described here also counts for semi-vegetable oils. What is described in this section on the lifetime is biased to synthetic oils.</i></p>	
<p><i>LCA compares different types of lubricants. With the main types of additives being equivalent the influence of additives is completely different when a lubricant is released into the environment. When released the effect is absolute and not relative. In addition LCA calculates effects on a global scale while the environmental risk assessment must be performed on the applied system e.g. a forest or a ditch.</i></p>	<p>ACCEPTED Unfortunately, LCA covering all types of lubricants and applications were not available at the time of the LCA review.</p>
<p><i>I suggest where reference is made to this 50%, to use the phrasing directly and indirectly lost into the environment during the use phase. Indirectly lost is for example burnt as in engine oils.</i></p>	<p>PARTIALLY ACCEPTED Corrected to include the direct loss during use and the indirect loss, for instance a lubricant that is burnt in a 2T engine, as the impact is</p>

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	sure not the same (direct loss -> lubricant oil to the water/land; indirect loss by burning -> release of CO2 into the atmosphere after the burning process)
<p><i>We support the inclusion of 2-stroke engine oils and metalworking fluids. Regarding the new lubricant classification, We think it is globally clearer and more understandable However, the question arises when a lubricant formulation differs for different types of uses. For example, is the composition of a lubricant for a closed gear the same as for an open gear? If the formulation is the same, there is no point in differentiating the uses.</i></p>	<p>PARTIALLY ACCEPTED The only purpose to keep in mind the different uses is in order to apply the proper criteria, as the criteria for TLL or for a ALL are not the same.</p>
<p><i>The product group PLL is inconsistant because the environmental impact of 2 stroke oils is higher compared to lubricating greases. Thus we recommend to exclude 2 stroke oils from the EEL concept as done already in the German Blue Angel.</i></p>	<p>PARTIALLY ACCEPTED 2 stroke oils continue to be suggested under the revised EEL scope. 2-stroke oils have an impact in the environment because they are released in the environment mixed with unburnt gasoline. The comparison with lubricating greases, in a general way, is unclear.</p>
<p><i>2-stroke oils are not suitable lubricants for ecolabelling</i></p>	<p>REJECTED 2-Stroke oils are partially released into the environment, whether this is 'intentionally' done or not, may play a relative role, as this is dependent on the 2-stroke engine design, and these engines are designed in such a way that part of the mix gasoline + lubricating oil is released directly into the environment. 2 stroke oils continue to be suggested under the revised EEL scope.</p>
<p><i>We strongly agree to retain 2T oils in the ecolabel criteria. We provided a strong justification why 2T oils should be retained in February and would refer JRC to those comments</i></p>	<p>ACCEPTED 2 stroke oils continue to be suggested under the revised EEL scope as there are still products in the market</p>
<p><i>Stern tube lubricants should be treated the same way as the Hydraulic and enclosed gear oils. They should either all be PLL or TLL, as Hydraulic and gear oils can also be used in the Stern tube. Doing the separation based on the name is wrong, and will have reverse effect</i></p>	<p>REJECTED It is the application that leads to where a lubricant will be classified, in TLL, PLL, or ALL; it is not the formulation. A lubricant marketed as Stern tube lubricant, will be TLL. A lubricant being marketed as hydraulic fluid, will be ALL.</p>
<p><i>Point of clarification. Are the lubricant families shown in Table 5 the only ones that are eligible for the ecolabel or are other lubricants that fit in the product</i></p>	<p>ACCEPTED The EU Ecolabel scope has to be defined as much as possible. In the</p>

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<p><i>categories now to be described as TLL, PLL or ALL eligible for the ecolabel. Additionally, stakeholder suggests adding Turbine Oils to the ALL category and if this is accepted then a suitable performance test standard will need to be added to Table 5</i></p> <p><i>It is not clear whether the lubricant applications listed in Table 1.1 are the only applications that would be eligible for the ecolabel or whether they are examples. It would be helpful for the criteria document to be explicit on this point. Additionally, we suggest that Turbine oils (ISO T) should be included in accidental loss lubricants category. It makes no sense that renewable energy can be generated by wind and wave turbines but there is no provision for applying for an ecolabel award from the lubricant. If this type of lubricant was included in scope as being eligible for ecolabel under ALLs then a definition would need to be included in section 1.2.1 and a minimum technical performance would need to be added for turbine oils in Table 5 (page 73)</i></p>	<p>existing Commission Decision the only category that is open is Other Total Loss Systems which belongs to TLL subgroup in the revised categorisation and present more concerns than the other subgroups (PLL, ALL). In this revision, the scope has been further defined and it is suggested that this open category remains and guidance is included in the UM on how to handled other TLL</p> <p>Unfortunately, there was a lack of information during the revision to assess the suitability of turbine oils to comply with EU Ecolabel requirement. EU Ecolabel represents best available practices. At this stage of the process it is very difficult to add new lubricants in the scope. It is suggested that any new lubricant type to be incorporated in the scope should be left for the next revision.</p>
<p><i>Stern tube lubricants should be included under Partial Loss Lubricants. The United States Environmental Protection Agency publication on Environmentally Acceptable Lubricants, November 2011 states that "An analysis of data on oil consumption performed by a lubricant supplier indicated a range of average daily stern tube lubricant consumption rates for different vessels (Etkin, 2010). The average rate across vessel types was 2.6 liters per day, but ranged from less than 1 liter per day to 20 liters per day."</i></p> <p>https://nepis.epa.gov/Exe/ZyNET.exe/P100DCJI.TXT?ZyActionD=ZyDocument&Client=EPA&Index=2011+Thru+2015&Docs=&Query=&Time=&EndTime=&SearchMethod=1&TocRestrict=n&Toc=&TocEntry=&QField=&QFieldYear=&QFieldMonth=&QFieldDay=&IntQFieldOp=0&ExtQFieldOp=0&XmlQuery=&File=D%3A%5Czyfiles%5CIndex%20Data%5C11thru15%5CTxt%5C00000003%5CP100DCJI.txt&User=ANONYMOUS&Password=anonymous&SortMethod=h%7C-&MaximumDocuments=1&FuzzyDegree=0&ImageQuality=r75g8/r75g8/x150y150g16/i425&Display=hpfr&DefSeekPage=x&SearchBack=ZyActionL&Back=ZyActionS&BackDesc=Results%20page&MaximumPages=1&ZyEntry=1&SeekPage=x&ZyURL</p>	<p>REJECTED</p> <p>Whether the stern tube lubricant is released at 20L/day, or at 1L per day, does not make any difference, in the end the lubricant will be totally released in the ocean waters. No stern tube lubricant is recovered for recycling.</p>

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<p><i>Assuming an average system volume of 2000 litres, this would equate to an average loss of approximately 0.13% of the total system volume per day.</i></p>	
<p><i>A stakeholder agrees with the new classifications of lubricants into Total Loss Lubricants, Partial Loss Lubricants, and Accidental Loss Lubricants. We do not DO NOT agree that stern tube lubricants should be in total loss because only a fraction of the oil in the stern tube is lost to the environment. The stern tube lubricant is usually either a system oil, hydraulic oil or gear oil used for this application and not specifically a stern lubricant. Also, newer stern lube designs are minimizing the loss. While Stern Tubes are designed to leak less than 0.5 to 1.0 litre per day they are NOT Total loss because the reservoir sump size 2000-4000 gallons in size. Also air gap seals don't allow for an oil to water interface and more of these types of seals are being used as added protection. Most STERN TUBE lubricants use Hydraulic Fluid as the lubricant of choice support moving s hence, we support stern tube lubricants to Partial or Accidental Loss Lubricants.</i></p> <p><i>The definitions of the types of lubricants are correct.</i></p> <p><i>We agree to the inclusion of metalworking fluids in the Ecolabel specification. We agree that 4T engine oils should have a separate Ecolabel specification.</i></p>	<p>PARTIALLY ACCEPTED</p> <p>Whether the stern tube lubricant is released at 20L/day, or at 1L per day, does not make any difference, in the end the lubricant will be totally released in the ocean waters. No stern tube lubricant is recovered for recycling. In addition, existing Commission Decision places stern tube oils under Category 3. The thresholds of category 3 (revised according existing licences) are the ones under the TLL sub group. Therefore, the TLL thresholds correspond to those of the existing licences of stern tube oils and other lubricants under category 3.</p>
<p><i>French licence holders agree with this new classification; it is more clear for everyone as before.</i></p> <p><i>Otherwise, maybe we could clearly define in the future decision the case of grease which could be categorise in TLL/PLL or ALL. The risk of not classifying the grease is that licence holder chose the category depending on their results on biodegradability criteria and so on.</i></p> <p><i>A licence holder told us that concerning grease, about soap, the technical feasibility seems difficult to have a grease in TLL</i></p>	<p>PARTIALLY ACCEPTED</p> <p>Values have been relaxed for TLL greases. See TR3.0.</p>
<p><i>Partial Loss Lubricants also include "Other Partial Loss Lubricants" which means other lubricants not specified under the PLL but that are partially lost to the environment during use. This would then include applications such as thruster and horizontal stabiliser lubricants that aren't currently mentioned.</i></p>	<p>REJECTED</p> <p>The EU Ecolabel scope has to be defined as much as possible. In the existing Commission Decision, the only category that is open is Other Total Loss Systems which belongs to TLL subgroup in the revised categorisation and present more concerns than the other subgroups (PLL, ALL). In this revision, the scope has been further</p>

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	defined and it is suggested that this open category remains and guidance is included in the UM on how to handled other TLL
<i>Partial Loss Lubricants should also include thruster and horizontal stabiliser lubricants and stern tube fluids.</i>	REJECTED At this stage of the process it is very difficult to add new lubricants in the scope. It is suggested that any new lubricant type to be incorporated in the scope should be left for the next revision. Thruster and horizontal stabilizer lubricants are not in the current scope. Stern tube lubricants are. In addition other total loss systems remains as an open category to include lubricants that are not specifically mentioned within the scope but that could be categorise as TLL.
<i>Enough time should be allowed between publication of new adopted criteria for Ecolabel and the end of validity of current criteria.</i>	ACCEPTED The transition period for most of the EU Ecolabel products is 1 year.
<i>While vegetable oils have excellent biodegradable characteristics they are NOT ALWAYS most suited for TOTAL LOSS LUBRICANTS. Vegetable oil because of their chemical structure have a weak link that can undergo hydrolysis if water ingress is high for example in marine applications like a stern tube or thruster. HEPR products have excellent biodegradability at 28 days as previous shown by this author. I would strongly recommend that stern tube lubricants be moved to partial loss lubricant or accidentally loss and most ship management companies and OEM's don't recommend the use of vegetable oil based products in Stern Tubes or Thrusters.</i>	REJECTED To ensure the quality, all lubricant candidates would need to comply with the Minimum Technical performance requirements in order to be awarded with the EU Ecolabel.
<i>General remark about CB's >all same interpretation and quality ? Do all competent bodies have the same interpretation of the ECOLABEL criteria? How can we safeguard equal quality among the different Competent Bodies.</i>	User Manuals are designed to serve as guidance to interpret the criteria and to help applicants and CBs during the application process. In addition there are physical and virtual CB forums where CBs discuss different issues in order to equally interpret the different Commission Decisions.
<i>With the current criteria no MWF can fulfill the criteria.</i>	REJECTED MWF can comply with the criteria, when properly formulated. This does not mean that all MWF for all applications can be adjusted within an EEL compliant formulation, but there are applications where a MWF can be formulated using biodegradable esters and additives to comply with the established limits.

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<p><i>MWFs consists of several groups (purely water based, emulsion and neat oils) with different chemistry and therefore different approaches. The current criteria does not seem to be applicable for purely water based and emulsion MWF. However no distinction is made in the scope on MWF.</i></p>	<p>PARTIALLY ACCEPTED The MWF shall be dealt considering the marketed MWF, whether it is a neat oil, or an emulsion. Criteria have been set so that they can be applied to a neat oil as well to a water-containing product (i.e. the biodegradability criterion is applied to the organic part, that is C-skeleton). The EEL scheme is applied to the MWF products as they are sold. For instance, semi-synthetic MWF are emulsions, which are diluted in water during use, with dilution rates varying a lot depending on the type of mechanizing operation.</p>
<p><i>The water based MWF are also diluted to different degrees depending on the application</i></p>	
<p><i>The word "emulsion" is unclear: does it mean the concentrate or the finished fluid (concentrate in water)? Our understanding is that only the concentrate could be assessed. Due to general concerns we recommend to exclude water-miscible MWFs for this revision especially as the final application is not clearly defined and the typically done addition of additive boosters during operation can make the entire EEL concept obsolete.</i></p>	
<p><i>As a major global supplier of Metalworking fluids (including rolling oils), we feel that Criterion 1 will prevent any MW fluid from meeting this criterion. So no need to add MW fluids in the proposed scope under the proposed criteria. The current products in the market today are so far away from meeting this criterion, that is does not even make sense to have in-depth look at it.</i></p>	<p>REJECTED Leaving MWF out of the scope could mean that we 'give up' regarding the purpose of having a more environmentally friendly MWF. Should there be difficult barriers for some MWF to pass a criterion, an exception can be called, after providing the proper information to the EC.</p>
<p><i>A stakeholder agrees with the new classifications of lubricants into Total Loss Lubricants, Partial Loss Lubricants, and Accidental Loss Lubricants. We do not agree that stern tube lubricants should be in total loss because only a fraction of the oil in the stern tube is lost to the environment. Also, newer stern lube designs are minimizing the loss. We support moving stern tube lubricants to Partial Loss Lubricants.</i></p> <p><i>The definitions of the types of lubricants are correct.</i></p> <p><i>We agree to the inclusion of metalworking fluids in the Ecolabel specification. We agree that 4T engine oils should have a separate Ecolabel specification. The stakeholder would be pleased to help develop a new specification for 4T engine oils.</i></p> <p><i>Stern tube oils should classified as Accidental Loss Lubricants (ALL) not Total Loss Lubricants (TTL). They are not fully released to the environment. This is an</i></p>	<p>PARTIALLY ACCEPTED Whether the stern tube lubricant is released at 20L/day, or at 1L per day, does not make any difference, in the end the lubricant will be totally released in the ocean waters. No stern tube lubricant is recovered for recycling. In addition, existing Commission Decision places stern tube oils under Category 3. The thresholds of category 3 (revised according existing licences) are the ones under the TLL sub group. Therefore the TLL thresholds correspond to those of the existing licences of stern tube oils and other lubricants under category 3.</p>

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<p><i>assumption based on an invalid calculation of stern tube leakage (see comments on 1.2.1, page 15).</i></p> <p><i>TTL – means a lubricant that is fully released to the environment during use. The examples given are chain saw oil, wire rope lubricants, concrete release oils, open gear lubricants, stern tube oils, total loss lubricating greases (e.g. grease for railway points and wheel flanges) and other total loss lubricants. However, lubricants that are used in sealed systems, including stern tube oils, should not be included.</i></p> <p><i>A distinction is needed in the understanding of stern tube lubrication. Stern tubes sealed with a stuffing box and packing glands, use pressurized grease to lubricate the glands. This is typically found in small craft and inland waterways. By nature of the gland seal design, there is a high probability that the grease will leak out and be fully consumed. On the other hand, the vast majority of coastal and deep sea marine vessels use a more sophisticated lip seal arrangement and lubricating oil. These systems are sealed. Properly maintained, seal leakage for these systems is no worse than land based equipment. Additionally, the oil pressure involved is orders of magnitude lower than that found in hydraulic equipment which can suffer catastrophic leakage in the event of a hose burst. Stern tube lubricating greases should be classed as TTL. Stern tube oils should be classed as ALL.</i></p> <p><i>In addition, 2-stroke lubricants are used by introducing them into the engine during each combustion cycle where they briefly lubricate the engine before being burnt with the fuel. They are entirely consumed during the combustion process, being emitted in the exhaust gases and fully released to the atmospheric environment. If the intention is to only class lubricants as TTL that are used in applications designed to release the lubricant to the land or water, then the definition of TTL should be changed to a lubricant that is intentionally fully released to the land or water. If the intention is to include any lubricant that is fully consumed, then 2-stroke oils meet the TTL definition.</i></p>	
<p><i>PLL – a lubricant that is partially released to the environment during use. The examples given are 2-stroke oils, temporary protection against corrosion and partial loss lubricating greases. This category is currently a misnomer.</i></p> <p><i>2-stroke oils are fully consumed but not intentionally lost to the land or water. Using the current Draft 2 definitions, they are either TTL (if atmospheric pollution is</i></p>	<p>PARTLY ACCEPTED</p> <p>2-Stroke oils are partially released into the environment, whether this is 'intentionally' done or not, may play a relative role, as this is dependent on the 2-stroke engine design, and these engines are designed in such a way that part of the mix gasoline + lubricating oil</p>

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<p><i>included) or they are ALL. Temporary corrosion inhibitors applied to the exterior of metal components may be lost to the environment by rain water or by cleaning. Alternatively during their cleaning, they may be disposed of safely. They are no different to wire rope lubricants which may be washed off or removed intentionally but are regarded in Draft 2 as TTL. Some unification is required in one direction or the other. Partial loss lubricating greases is a vague terminology open to interpretation. A web search returns no such term. Lubricating greases intended for external application, including multi-purpose lubricating greases, wire rope lubricants and open gear oils, are formulated to have low wash-off and dripping tendency. However, any grease, or indeed any lubricant at all, that by application design, is subject to partial loss due to dripping in heat, water wash off etc, is liable to total loss over a long period of time. The commonly accepted definition of a total loss system is one in which the lubricant is fed to the friction point at regular intervals. This includes pressurised feed (e.g. chain saw, some axle lubricating greases, rail/wheel flange grease etc), gravity feed or manual feed (e.g. concrete release agents). It does not include wire rope lubricants, open gear lubricants or stern tube oils. The PLL class should either be abandoned entirely and the example products moved to TTL, or PPL be broadened to include all lubricants that are designed for used in open systems but not by design intended to be lost to the land or sea i.e. move wire rope lubricants and open gear lubricants to PPL.</i></p>	<p>is released directly into the environment. 2 stroke oils continue to be suggested under the revised EEL scope.</p> <p>It is true Greases are in general formulated for external use, where the grease can be washed off to the environment, or formulated for closed systems. Nevertheless, a PLL category is needed because there will be cases where a lubricant oil or a lubricant grease is partly released in the environment, whilst the remnant amount is still recovered for recycling or proper disposal; this would be a PLL, so it makes sense to maintain this group.</p>
<p><i>ALL – means a lubricant that is used in closed systems released to the environment only accidentally. Stern tube oils meet this definition. The following is a summary of oils commonly promoted for use in stern tubes. The biodegradable examples are taken from a European seal maker’s (SKF) list of approved EAL oils dated 28-8-2015, available on the web: Mineral system (or circulating) oil Mineral engine oil – highly additised, not recommended but used by some Biodegradable stern tube oil – 16 dedicated stern tube oils are listed including products from BioBlend, Chevron, ExxonMobil, Gulf, Klüber, MAN, Panolin, Shell, Total and Vickers. Biodegradable hydraulic oil – 5 hydraulic fluids are listed including products from</i></p>	<p>PARTIALLY ACCEPTED Stern tube oils are not totally or partially recovered for recycling, therefore the lubricant is not recovered. The lubricant is fully released in the ocean.</p>

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<p><i>Chevron, Klüber, Total and RSC Bio Solution.</i></p> <p><i>Biodegradable gear oil – 16 gear oils are listed including products from BP/Castrol, Chevron, Fuchs/Lukoil, Klüber, Shell and RSC Bio Solution.</i></p> <p><i>In total, there more biodegradable hydraulic fluids and gear oils listed by SKF (21) than dedicated stern tube oils (16). Hydraulic fluids and gear oils typically require more (or more aggressive) additives to meet their functional requirements. Their leakage rate is not less than a dedicated stern tube oil and yet in Draft 2, stern tubes oil are classed as TTL whereas hydraulic and gear are classed as ALL. In the case of leakage from a stern tube leakage of hydraulic or gear oil, the impact of additives lost to the environment will be higher than for a dedicated stern tube oil leak.</i></p> <p><i>The US VGP has significantly increased the use of EALs and the Ecolabel is one key route to meeting its requirements. Sale of EALs for use in stern tubes has dramatically increased. To classify dedicated stern tube oils differently and unfavourably to gear and hydraulic (TTL vs ALL) gives an illogical incentive to market hydraulic or gear oils.</i></p>	
<p><i>The example of stern tube oil leakage given is totally flawed and unreliable and completely overstates the typical leakage rate.</i></p> <p><i>Professional Mariner – Gary Wollenhaupt is a freelance journalist. He correctly notes the EPA’s observation that the majority of oceangoing ships use oil lubrication in equipment, including stern tubes but the calculation which he presents and which has been misused frequently, of a leakage rate of 6 liters per day, is not from the EPA. It is taken directly from “Etkin, D.S. 2010. Worldwide analysis of in-port vessel operational lubricant discharges and leaks. Proc. 33rd Arctic and Marine Oilspill Program Technical Seminar: p. 529-554.” Etkin says that “the leakage rate for stern tubes has been widely reported as 6 litres per day ... (Thordon, 2004; Carter, 2009; Ahlbom and Duus, 2006; IMO MEPC, 2008)”. The original 2004 use of this figure is by Thordon Bearings Inc., Canada, a manufacturer of water lubricated stern tube systems, who cannot be said to be impartial. The subsequent repetition in 2009 by Carter is again from Thordon: “Elimination of a Ship Source Pollutant, STOP (Stern Tube Oil Pollution by C. D. Carter, MBA, Director of Marketing & Customer Service, Thordon Bearings Inc., Canada.” Carter said “Even at a conservative leakage rate of 6L/day (from LR Class Society Seal Type Approvals), the amount of</i></p>	

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<p><i>stern tube oil pollution is estimated to be over 80 million litres (21m US gal) annually from normal operations. Etkin said "This reported leakage rate has been explained as being based on the maximum allowable leakage for certification in Lloyd's Registry Class Society Seal Type Approvals for vessels of at least 1,000 deadweight tonnage (DWT), though all classification societies mention leak tests and "zero tolerance" for leakage."</i></p> <p><i>We contacted a senior surveyor at Lloyd's with a long career history with the classification society. He was unaware of any such figure and surprised by it. He suggested it may be an historic piece of information as it is unusual for Lloyd's to declare such values these days and suggested it may not be relevant to present-day seal designs. He also commented that using a maximum allowable leakage to calculate annual leakage was flawed and that 6 liters/day was also far too high to use as a conservative basis for the calculation.</i></p> <p><i>Etkin's paper also analysed stern tube oil consumption data sourced from a lubricant supplier. The average across all vessel types according to Etkin was 2.6 litres per day but it is noted that this is heavily skewed by the larger inland water ways vessels such as barge carriers and oil tankers, some of which will use oil lubricated stern tubes and leak unacceptably due to the degree to which they are submerged. The figure will also include operation of ocean going vessels in heavy seas which tends to increase leakage and vessels that have suffered a seal failure and which are therefore in an accidental loss situation, akin to an accidental leak in hydraulic or gear system.</i></p> <p><i>To put these leakage rates into perspective, Etkin attempted to consider the degree to which such discharges may be noticed by port authorities if not by vessel operators. Etkin calculated that 6 litres of oil, as a rainbow sheen with an average thickness of 0.0003 mm, would cover 20 m², which would be noticeable. However the calculation is entirely incorrect (by a factor of 1000). In fact, a leak of only 0.06 litres would produce a 20 m² rainbow sheen 0.0003 mm thick. Six litres of oil would produce a rainbow sheen covering 20,000 m² and 2.6 litres would cover 8,700 m². Clearly, since sheens of this magnitude are rarely seen, the leakage rates of 6 litres or 2.6 litres per day are hugely overstated for the majority of vessels operating under normal circumstances.</i></p>	

Comments received in AHWG2/written form	JRC Dir. B response
<p><i>Our own database of oil consumption for vessels supplied by Vickers, which are typically ocean going vessels e.g. bulkers, tankers, containers etc, suggests that normal daily consumption is less than 0.5 litres per day with more than 50% taking virtually zero regular top up. The minimum fill volume for such vessels ranges from 800 litres to several thousand litres. Even at a leakage rate of 0.5 litres per day, it would take 1600 days to fully consume 800 litres of oil, which is comparable to many other types of hydraulic equipment, especially those used in harsh environments such as agriculture or off-highway.</i></p>	
<p><i>It is unclear how and who will assign the right lubricant product group to a grease.</i></p>	<p>If a specific lubricating grease is used in several applications, this lubricating grease product shall be classified for EEL purposes, following the precautionary principle, as the worst case, that is the highest environmental impact (TLL>PLL>ALL). See the text that has been introduced in the General Assessment and Verification section. The competent body could have a questionnaire or guidance that could be included in the User Manual that will assist to decide into which group lubricating grease shall be classified.</p>
<p><i>Our expert recommends that 'grease(s)' should be corrected to show 'lubricating grease(s)' throughout the document to differentiate between lubricating grease and grease used for cooking</i></p>	<p>ACCEPTED “Greases” has been replaced by “Lubricating greases”</p>
<p><i>As I communicated at the end of 1st AHWG meeting the feedback from our commercial managers on the 2nd draft is that any attempt to make the ecolabel more difficult to qualify for is going to be counter-productive in terms of the Commission's broader aims of increasing the uptake of the ecolabel from lubricants. I'm advised that currently there is little to no demand for ecolabel lubricants in EU (including Blue Angel) despite other environmental standards such as US EPA VGP specifically citing the EU ecolabel. This lack of commercial pull means that it is increasingly difficult for additive companies like ours to justify investing in products suitable for the ecolabel because the return on investment is poor or takes too long to recoup to justify the initial investment in terms of money and resources. If the increased requirements are adopted then we can predict an increasing lack of interest in this environmental standard such that it will become a white elephant. Lubricant manufacturers will</i></p>	<p>ACKNOWLEDGE</p>

Comments received in AHWG2/written form	JRC Dir. B response
<p><i>continue to produce lubricants that its customers request but they will drop their requirement for the EU ecolabel because there it appears there is less and less incentive for EU customers to pay a premium for such products. If the Commission is serious about expanding take up of the ecolabel for lubricants it will find a way to incentivise the EU market to require the use of ecolabel lubricants in certain sensitive areas of the environment, or find a way of upgrading GPP to include ecolabel products as a requirement. However, it is clear that without suitable additive technology being made available and collaboration with additive suppliers lubricant manufacturers will find it very difficult to formulate products that will meet these very strict requirements.</i></p>	

Assessment and verification

Comments received in AHWG2/written form	JRC Dir. B response
<p><i>Prepare a table in the manual where the official EU test is equivalent to the OECD, EPA-OPPTS, ASTM and/or ISO test.</i></p>	<p>PARTIALLY ACCEPTED The revision of the User Manual will take place once the revised criteria is finalised. Nevertheless, in regard to the specific assessment and verification part of criterion 2, the OECD Guidelines for the testing of chemicals (OECD Test Guidelines) and their corresponding standards of the International Organisation for Standardization (ISO) has been updated according to the validated test methods for aquatic toxicity published by EURL ECVAM.</p>
<p><i>What requirements are referred too? By far most SDS of lubricants lack the required data in section 9,10 and 12 according to regulation 2015/830. They cannot pass the criteria and their application must be turned down.</i></p>	<p>REJECTED Effectively, apart from the EU Ecolabel, the supplier must comply with all applicable legal requirements of the country/ies in which the product is placed on the market. It is a legal obligation, Horizontal pre-requisite EU Ecolabel</p>
<p><i>Why to add this, what to do with it? Every supplier – irrespective of ECOLABEL - should fulfill the legal requirements. Making this declaration mandatory, adds up to unnecessary paperwork.</i></p>	<p>It should be noted that even in cases where data in sections 9, 10 and 12 of the SDS is missing and/or not conclusive, it does not mean that supplier does not comply with Regulation 2015/830.</p>
<p><i>If the criteria nowhere reference is made to the function and form present in the final product. Therefore this info is redundant.</i></p>	<p>REJECTED From the point of view of legislative framework, REACH applies to substances and 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 criteria apply for all substances including nanoforms. This is the reason why nanoforms are not specifically mentioned in criteria. Nevertheless, unlike REACH, there exist other pieces of legislation (such as EU Cosmetics Regulation, Food Regulation, etc) that include provisions relating specifically to the use of nanomaterials in products. In these cases, where a product contains nanomaterials, as defined in the regulation itself, a labeling is required in the list of ingredients with the word “nano” in brackets following the name of the substance. The purpose of the label is to inform consumers about the presence of nanomaterials in the product and to provide them with sufficient information to enable them a make a fully informed consumer choice. Moreover, it ensures market transparency e.g. to support an efficient market surveillance and to enable product recalls, in case safety concerns arise after they have been placed on the market. The aim to include this provision in the EU Ecolabel is to enabling traceability of nanomaterials present in products based on a precautionary principle. The same horizontal approach has been followed in other product categories. The definition of a nanomaterial has been included in the assessment and verification part of the TR according to the Commission Recommendation of 18 October 2011 on the definition of nanomaterial (2011/696/EU).</p>

Second proposed Criterion 1: Excluded and limited substances

Comments received in AHWG2/written form	JRC Dir. B response
<i>Footnote 13 in Table 1 should be made to the Annex I of CLP, the generic cut off limits are limit values for the consideration of a substance for classification but not necessarily for classification</i>	<p><u>ACCEPTED</u></p> <p>The concentration limit allowed must be in accordance with the classification criteria for each hazard set in Annex I to Regulation (EC) No 1272/2008. The foot note has been modified accordingly.</p> <p>Additionally, the approach followed in Blue Angel has also been further explored in order to revise the alignment proposed in TR 2.0.</p> <p>Nevertheless, it should be noted that finally the proposed thresholds included in Table 1 have been based on the prioritization based on the grouping of hazards as per the EU Ecolabel Chemicals Task Force¹ and the impact on the LuSC-list and current licenses. (See rationale in TR3.0)</p>
<i>The classification threshold for mixtures for eye irritation category 2 (H319) is 10% and so the maximum concentration allowed in products eligible for Blue Angel (and it follows the EU ecolabel) would be 5% and not 0.5% as shown in Table 3.1.</i>	
<i>The table on page 31 and 32 contains a lot of errors in the concentration limits. E.g. for sensitization H317 or H334 there are TWO limits and not one as is found in the table and the lowest classification limit for H413 for example is 25% and not 1%.</i>	
<i>The proposed limits in this table leaves out more than 80% of the current licenses especially when applying table 3.1 on page 31. Improve the table to proportional concentration limits. This is specifically relevant for the supporting table 3.1. on page 31 and 32.</i>	
<i>The amount of substances classified as acutely toxic category 4 by oral, dermal or inhalation exposure (H302, H312, H332) cannot be defined by a concentration in terms of overall product classification. This is because the final classification of the lubricant is calculated using ATE for each substance, with a modified calculation performed where no acute toxicity data exists for a high proportion of the components for one or more exposure routes. This is in contrast to the 'old' classification rules under DPD where mixtures containing 25% or greater of R20, R21 and R22 substances were classified as hazardous.</i>	
<i>It might help applicants if the permitted amount is included in column (b). For example, a substance classified as H319 causes serious eye irritation would be allowed at up to 5%. Note that the concentrations shown in Table 3.1 for comparison with Blue Angel are incorrect since these are based on the concentration of substances that are taken into consideration for classification purposes rather than the concentration that would lead to the classification of the final product. These are quite different and it is critical to differentiate between the two. The concentration described in the revised Blue Angel clearly relates to the latter (and are typically higher).</i>	

¹ 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

<p><i>The current criteria are not aligned with the blue angel. The blue angel defines 4 hazardous substance categories: 1: < 0.010%; 2:< 1/2 the lowest classification limit; 3: < the classification limit and 4: for impurities. If it is desired to align with the Blue Angel then base the limitation of the hazardous substances on the same 4 categories.</i></p>	
<p><i>What to do with data retrieved from the REACH registration dossier? Additional prove e.g. by chromatograms that what is tested in the dossiers is equivalent to what is applied in the product by the company.</i></p>	<p>Following guidance is proposed to be included in the UM (as for Detergents product group): <i>The applicant shall provide the Competent Body with a signed declaration of compliance together with the following technical information related to the form(s) and physical state(s) of the ingoing substances as present in the product, in order to support the declaration of non-classification for the hazard classification categories.:</i></p> <p><i>(i) <u>For substances that have a harmonised classification or are self-classified:</u> Safety Data Sheets where available. If these are not available or the substance is self-classified then information shall be provided relevant to the substances hazard classification according to Annex II to REACH;</i></p> <p><i>(ii) <u>For substances that have not been registered under REACH and/or which do not yet have a harmonised CLP classification:</u> Information meeting the requirements listed in Annex VII to REACH;</i></p> <p><i>(iii) <u>For substances that have been registered under REACH and which do not meet the requirements for the CLP classification:</u> Information based on the REACH registration dossier confirming the non-classified status of the substance.;</i></p>
<p><i>Nanoform is not defined in the criteria document. If the criteria nowhere reference is made to nanoform present in the final product. Therefore this info is redundant. Remove from text.</i></p>	<p><u>REJECTED</u></p> <p>From the point of view of legislative framework, REACH applies to substances and 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 1 applies for all substances including nanoforms. This is the reason why nanoforms are not specifically mentioned in criterion 1. Nevertheless, unlike REACH, there exist other pieces of legislation (such as EU Cosmetics Regulation, Food Regulation, etc) that include provisions relating specifically to the use of nanomaterials in products. In these cases, where a product contains nanomaterials, as defined in the regulation itself, a labeling is required in the list of ingredients with the word “nano” in brackets following the name of the substance. The purpose of the label is to inform consumers about the presence of</p>

	<p>nanomaterials in the product and to provide them with sufficient information to enable them a make a fully informed consumer choice. Moreover, it ensures market transparency e.g. to support an efficient market surveillance and to enable product recalls, in case safety concerns arise after they have been placed on the market.</p> <p>The aim to include this provision in the EU Ecolabel is to enabling traceability of nanomaterials present in products based on a precautionary principle. The same horizontal approach has been followed in other product categories. The definition of a nanomaterial has been included in the assessment and verification part of the TR according to the Commission Recommendation of 18 October 2011 on the definition of nanomaterial (2011/696/EU).</p>
<p><i>The following statement as drafted doesn't make any sense and is very confusing: "The final product shall not be classified and labelled as being acutely toxic, a specific target organ toxicant, a respiratory or skin sensitiser, carcinogenic, mutagenic or toxic for reproduction, or hazardous to the aquatic environment... ." Propose to substitute by: " the product shall not contain any substances that meet the criteria for classification as hazardous in accordance with Annex 1 to Regulation (EC) No 1272/2008 at a concentration limit as specified in Table 1 columns a) and b) for each hazard category"</i></p>	<p><u>REJECTED</u></p> <p>This is a requirement set in the EU Ecolabel Regulation 66/2010. The same horizontal approach has been followed in other product categories. Nevertheless, according to criterion 1 (a) (i) and in order to avoid confusions the text has been reformulated in a clearer way. (see criteria text)</p>
<p><i>Point of clarification. Does this text mean that lubricants would be still be eligible for ecolabel award if they are classified as hazardous (for example, an aspiration hazard H304 or skin irritant H315 or serious eye irritant H318 etc)? The text as drafted suggests that only lubricants that are classified as acutely toxic, STOT, repistory or skin sensitiser, CMR or hazardous to environment would be excluded. Otherwise why not simply say that the lubricant cannot be classified as hazardous in accordance with Annex 1 Parts 3, 4 and 5 of 1272/2008?</i></p>	<p><u>REJECTED</u></p> <p>The same horizontal approach has been followed in other product categories. Moreover, the existing criterion currently in force does not include them either.</p>
<p><i>The table 3.1 lacks several H-statements. H302, H312 and H332. Include in the table.</i></p>	<p><u>ACCEPTED</u></p> <p>In this case (absolute restriction), the problem would be the limit value of detection of the used techniques to determine the presence of these SVHCs. Nowadays, there are 174 SVHC included in the candidate list, and depending on each substance the technique is different. In a general way, if we consider as an example HPLC (High-performance liquid chromatography), a good resolution could be ppb (one part per billion). This is equivalent to 0,0001%. From an analytical (and chemical) point of</p>
<p><i>It is impractical to set no de minimis limit for SVHCs for practical reasons. For example, suppliers at each stage in the value chain are only obliged to communicate where SVHCs are present at 0.1% or greater in the raw materials used by lubricant producers to formulate their products. Additionally, we are not aware of any company who would routinely analyse for every SVHC on the Candidate List in every product down to the limit of detection of the most appropriate method at the time. For this reason applicants have no way of knowing or therefore certifying that the raw</i></p>	

<p><i>materials they use contain zero molecules of any substance on the most recent SVHC list. It is therefore impractical to ask applicants to certify that their products contain zero molecules of SVHC because they will be unable to do this in good faith. Instead, for practical reasons the current limit of 0.010% (w/w) for intentionally added substances should be reinstated. This is already a very strict criterion that represents 10% of the regulatory limit triggering reporting requirements under EU REACH .</i></p>	<p>view it is very difficult to conclude the absolute “0%”. Usually a limit value is set in order to conclude as negligible the presence of this substance. This is in line with revised criterion (see criteria text)</p>
<p><i>Without a concentration limit this is not possible since you include extremely low concentrations, far below 0.010% that still can be detected analytically these days.</i></p>	
<p><i>Does the limit in table 1 column b refers on each individual substance or is it the sum of substances with a special H phrase? In header of column a it is stated "limit per substance", in the text under (ii) Substances it is stated: concentration limit ... for each hazard class!</i></p>	
<p><i>This footnote indicates that the total amount of substances in a lubricant with a specific hazard (e.g. H317) must be less than 50% of the classification threshold for that end point even where substances with the same hazard are not subject to additivity under CLP. I sought clarification of column (b) during the webinar and was told that this restriction related to the concentration of individual ingredients. This asterisk and footnote suggests otherwise and should be removed because this is confusing and inconsistent with the approach taken in Blue Angel. Additionally, the fact that it appears that a lubricant can now be classified as hazardous (e.g. a skin irritant or a serious eye irritant) according to section 3, point 1(a)(i) and still qualify for the ecolabel award suggests that the concentration in column (b) refers to individual substances rather than a cumulative amount for each hazard end point.</i></p>	<p><u>ACCEPTED</u> For the third proposal, clarification has been made whether the limits in Table 1 refers to substances (e.g. 0.010 % weight by weight per substance in the final product) or the maximum total concentration of all classified substances (e.g. where the classification limit is mentioned) with the specific hazard.</p>
<p><i>Hydraulic fluids typically do not contain water and therefore biocides are not required. For metalworking fluids, the biocide concentration varies depending on the type of biocide concerned. For PT 13 (metalworking fluids) under the Biocidal Products Regulation (BPR) the biocides that are undergoing the BPR review process are predominantly two main types, namely formaldehyde-releasers and isothiazolinones. The former have evident challenges (i.e. they release formaldehyde) and the latter are strong sensitizers usually with a very low Specific Concentration Limit below the effective concentration limit. Further discussion may be needed with metalworking fluid formulators concerning how to develop criteria that will allow the use of biocides in water-containing metalworking fluids whilst staying within the framework of an ecolabel scheme.</i></p>	<p><u>REJECTED</u> According to the Preliminary Report EU Ecolabel lubricants 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; CAS: 55965-84-9)) are widely used in MWFs due to their effectiveness within such wide pH range. Mixture of CMIT+ MIT15 (3:1) has already harmonized classification and labeling in Annex VI of CLP regulation with the following H-statements: Acute Tox.3 H331, Acute Tox.3 H311, Acute Tox.3 H301, Skin Corr. 1B H314, Skin sens.1 H317, Aquatic Acute 1 H400, Aquatic Chronic 1 H410, which would exclude its use from the ecolabelled products above certain concentration. According to the CLP classification, if the concentration of CMIT/MIT (3:1) is equal or above 0,0015% (15 ppm), the final mixture must be classified as Skin Sens 1;</p>
<p><i>Comparing the H-statements with table 3.1 results that only H2O2 can be used till 0.5% as active substance; MBM till 0.05% and all others to 0.010% or lower.</i></p>	

<p><i>Therefore in practice there is no MWF that include a biocide will pass criterion 1. MWFs that include a biocide can never pass criterion 1. However if MWF are removed from the scope this info is redundant. Remove therefore MWF form the scope.</i></p>	<p>H317. Nevertheless, the dosage of CMIT+MIT added to the products is usually very low and found in a concentration below 15ppm (0,0015%) as then classification (Skin Sens 1; H317) is avoided. Therefore the use of this widely used biocide in MWFs is allowed within the framework of the EU Ecolabel scheme since CMIT/MIT is in concentration below 0.01% and it is not classified as hazardous.</p>
<p><i>(i) Final product .As a major global supplier of Metalworking fluids (including rolling oils), we feel that Criterion 1 will prevent any MW fluid from meeting this criterium. So no need to add MW fluids in the proposed scope under the proposed criteria. The current products in the market today are so far away from meeting this criterium, that is does not even make sense to have in-depth look at it.</i></p>	
<p><i>Unfortunately 100% of the current approved licences are rejected with the current information on criterion 1. With the focus on exisiting H-statements it should not be too difficult to formulate maximum fractions that do not affect to a large extent (but to some extent) current approvals.</i></p>	<p><u>REJECTED</u></p> <p>In order to stablish a prioritization among the hazard statements for which a higher degree of flexibility is needed (not compliance with the horizontal 0.01% threshold) the following indicators have been considered:</p> <ul style="list-style-type: none"> ▪ Hazard groups, i.e, prioritization based on the grouping of hazards as per the EU Ecolabel Chemicals Task Force² ▪ Impact on the LuSC-List: % for each hazard statement in assessed substances included in the LuSC-list ▪ Impact on current licenses: % for each hazard statement in EU Ecolabelled licenses <p>Therefore, for the third draft proposal, it has been considered all the above information including the impact on the LuSC list and current licenses and the proposed thresholds have been set consistent with the results of the assessment. Additionally, the approach followed in Blue Angel has also been further explored in order to revise the alignment proposed in TR 2.0. Nevertheless, it should be noted that finally the proposed thresholds included in Table 1 have been based on the prioritization based on the grouping of hazards as per the EU Ecolabel Chemicals Task Force³ and the impact on the LuSC-list and current licenses.</p>
<p><i>If JRC intend to proceed with criterion 1a as drafted in the 2nd technical report then applicants should have the ability to apply for a derogation for any substance that does not meet the concentration restrictions in Table 1 column b) where it is critical to the technical performance of the lubricant and the lubricant is not classified as hazardous due to its presence. Such a derogation was proposed by JRC during the 1st AHWG meeting but appears to have been overlooked/omitted for the 2nd draft. Although we remain opposed to replacing the existing criteria (where there is an automatic derogation for hazardous substances provided the lubricant is non-hazardous) we recognise that JRC appear to want to replace this with criterion 1a as presented in the 2nd technical report. We also recognise that JRC did not receive much information on substance groups/functionality that needed a derogation between the 1st and 2nd AHWG meetings and interpret this to mean that criterion 1a as drafted would not significantly affect existing licences. However, we believe strongly that this is an inaccurate assessment of the potential impact especially as it fails to take into account the ability of the value chain to develop future products under this much stricter hazardous ingredient criterion. For that reason we believe that it is essential that future applicants are able to seek a derogation on a case-by-case basis for any hazardous substance is present in a</i></p>	

² 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

³ 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

lubricant above the concentration limits in Table 1 column b) and this should be re-introduced into the criteria.

We would not support the criterion as stated in the second technical report.

The criteria would provoke the loss of 1 French license for a unique formulation.

We suggest to study Safety Data Sheets of products to identify the additives that would require derogations.

Why is the approach presented in the second technical report not fully consistent with the Blue Angel which uses two different threshold depending on the hazardous class (maximum total concentration that is smaller than the concentration that would lead to classification and maximum of half of the relevant concentration that would lead to classification of the final product).

Are there any additives available to meet the proposed classification for human health or ecotoxicity? if not how long will it take for additives companies to develop and test such products? how will this change affect current Ecolabel approved products.

What portion of the current ECOLABEL products would not pass the new proposed criteria ?

The much more stringent criteria (criterion 1) leads very likely to a situation in which the majority of the current ECOLABEL approved lubricant products will not meet the new criteria. The new criteria will lead to less technical advantaged products and to clearly lower fluid lifetimes in use. As a result fluids needs to be refreshed more frequently and thus creates more waste. With the increasing demands of equipment (higher temperatures, higher pressures and load etc) the demand on the lubricant is increasing. When no ECOLABEL product is passing the OEM requirements, they have no other choice to use other non ECOLABEL products.

Criterion for excluded or limited substances is sufficient and should not be amended from the current Ecolabel

As it stands the current criterion is very challenging for the lubricant formulator to produce environmentally friendly lubricants that are fit for purpose and meet the requirements of the OEMs.

The criterion surrounding the LUSC list should not be made any stricter. Further control and limitation of the material's available to the formulator will have a negative impact upon the number of licenses issued. The proposed changes will mean that many Ecolabelled lubricant will not meet the proposed standard.

Classification and labelling restrictions at the substance level, in particular the concentration limit of or below the half of the relevant concentration that would lead to classification of the final product, is incredibly prohibitive for the formulator, there

<p><i>are many antiwear additives for example that would be limited by this restriction, making it impossible to meet OEM wear requirements. Classification and labelling should continue to follow CLP</i></p>	
<p><i>What is the rationale to go to HALF of the relevant concentration which triggers classification? This would limit the acceptable concentration of additives with H411 and H317 to such an extent that they would technically not function any more.</i></p>	
<p><i>The 0.01% threshold indicated is not consistent with the thresholds provided for in the CLP Regulation and therefore companies should request and find from their suppliers additional information not included in the Safety Data Sheets. This means that, even if only one supplier did not cooperate, the whole procedure would be invalidated. It is therefore necessary to base the analysis on the thresholds provided in the CLP Regulation and to ensure consistency between the various European regulations. In Table 1, the limitations on raw materials (columns 2 and 3) of the 0.01% limit or half of the CLP classification limit should be revised and aligned with the CLP Regulation itself.</i></p>	
<p><i>How shall an applicant guarantee that a SVHC substance is not at all included in his formulation when his supplier(s) can only guarantee a level of below 0.1%??</i></p> <p><i>I suppose to keep the original wording "below 0.01%" as it leaves the option that some ppm might be included due to the uncertainty of suppliers to guarantee less than 0.1% in their products.</i></p>	<p><u>ACCEPTED</u> <u>See modifications in criteria text.</u></p>
<p><i>It is not practical to look down to 0.01% for all added substances. This threshold is way too low and should remain at 0.1% with exception of SVHC. LuSC list already reflects the assessment of all additives to be used in Ecolabel lubricants. Why do we need to start a new derogation list? The LuSC is the derogation list. It is extremely practical and useful for formulators of Ecolabel lubricants. Starting a new list is a waste of resources.</i></p> <p><i>It is extremely important to not put any more restrictions on the additives that can be used in Ecolabel lubricants, and do not cut the amounts allowed! We must use enough of these additives in the lubricants to pass the minimum technical requirements (Criteria 7).</i></p>	
<p><i>How to address differences in classification for the same substance given by different suppliers. It is necessary to remember that NO TEST performed by the supplier means NO classification which is a BIG advantage to a supplier who has performed the test and the result of the test required him to classify the substance. Classification of the substance is based on the harmonised one and/or the one derived in the registration</i></p>	<p>Following guidance is proposed to be included in the UM (as for Detergents product group): <i>The applicant shall provide the Competent Body with a signed declaration of compliance together with the following technical information related to the form(s) and physical state(s) of the ingoing substances as present in the product, in order to</i></p>

dossier whenever applicable. In case differences in classification are observed that allows a higher treat rate than expected a full explanation with supporting evidence must be submitted together with the application form.

support the declaration of non-classification for the hazard classification categories.

(i) For substances that have a harmonised classification or are self-classified: Safety Data Sheets where available. If these are not available or the substance is self-classified then information shall be provided relevant to the substances hazard classification according to Annex II to REACH;

(ii) For substances that have not been registered under REACH and/or which do not yet have a harmonised CLP classification: Information meeting the requirements listed in Annex VII to REACH;

(iii) For substances that have been registered under REACH and which do not meet the requirements for the CLP classification: Information based on the REACH registration dossier confirming the non-classified status of the substance;.

In the tabel 1, the risk classifications related to the irritation (H315, H319) are compared with those related to the damage (H314, H318). This choice appears to be excessive and will have the inevitable consequence of excluding all the emulsifier lubricants used in the metalworking industry (which represent a very significant proportion of the lubricants used) from the Ecolabel, since emulsifiability requires the presence of surfactants, which, by their nature, cause irritability. It is therefore requested to delete the H315 and H319 classifications from the table.

PARTIALLY ACCEPTED

For the third draft proposal, for substances included in Group 3 and also for those considered as “not priority” according to the prioritization based on the grouping of hazards as per the EU Ecolabel Chemicals Task Force⁴, a maximum total concentration that is smaller than the concentration that would lead to classification of the final product has been suggested as in the existing limit currently in force according to the table below:

Hazard categories		Proposal Limit	Prioritization of the hazard classes	Impact on the LuSC-list	Impact on EU Ecolabelled licenses
Skin Corr. 1[A,B,C]	H314	Classification limit final product	-	LOW	LOW
Skin Irrit. 2	H315	Classification limit final product	-	HIGH	HIGH
Eye Dam.1	H318	Classification limit final product	-	HIGH	MEDIUM
Eye Irrit. 2	H319	Classification limit final product	-	HIGH	HIGH

Thus, H315 and H319 have not been deleted from Table 1, but a higher degree of flexibility has been set for these hazard statements.

Our 2-stroke engine oil will lose its Ecolabel certification if such a criterion is applied. Such a product does contain some H411 classified additives, however juvenile fish growth inhibition test carried out on the formulated product was negative - which

PARTIALLY ACCEPTED

For the third draft proposal, for substances included in **Group 2 and medium/high impact on LuSC-list/ current licenses: the relevant concentration that would lead**

⁴ 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

<p>allowed us to remove any classification of the product and be eligible to Ecolabel certification. This toxicity test is expensive (20 000 €), and did show that toxicity of the product to the aquatic environment is not as high as the classification rules may suggest.</p> <p>In addition, our product is the only 2-stroke engine oils worldwide that is NMMA TC-W3 and Ecolabel certified.</p>	<p>to classification of the final product in the specific hazard class is proposed.</p>
<p><i>We object to this exemption, especially with regard to Annex 5. The exemption in the REACH regulation does only exempt the substances from registration. They still have to be classified and are subject to CLP downstream users' requirements.</i></p> <p><i>There are some entries covered in Annex V that might be linked to lubricants</i></p> <p><i>"9. The following substances obtained from natural sources, if they are not chemically modified, unless they meet the criteria for classification as dangerous according to Directive 67/548/EEC with the exception of those only classified as flammable [R10], as a skin irritant [R38] or as an eye irritant [R36] or unless they are persistent, bioaccumulative and toxic or very persistent and very bioaccumulative in accordance with the criteria set out in Annex XIII or unless 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):</i></p> <p><i>Vegetable fats, vegetable oils, vegetable waxes; animal fats, animal oils, animal waxes; fatty acids from C 6 to C 24 and their potassium, sodium, calcium and magnesium salts; glycerol."</i></p> <p><i>The highlighted hazardous properties are included in Table 1 of the JRC proposal therefore the substances exempted here may not be exempted from the application of the criterion .</i></p>	<p><u>REJECTED</u></p> <p>Substances covered by Article 2 (7)(a) and (b) of REACH are under the scope of REACH (REACH applies to them). In the specific case mentioned, REACH applies both to substances occurring in nature, as defined by Article 3(39) of REACH, and to their synthetic analogues. However, Annex V of REACH states that the following substances occurring in nature are exempted from registration if they are not chemically modified: minerals, ores, ore concentrates, raw and processed natural gas, crude oil and coal. 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)).</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"> - they meet the criteria for classification as dangerous according to the CLP Regulation (Regulation 1272/2008), or - they are persistent, bioaccumulative and toxic or very persistent and very bioaccumulative in accordance with the criteria set out in Annex XIII, or - 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). <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': https://echa.europa.eu/documents/10162/23036412/annex_v_en.pdf/8db56598-f7b7-41ba-91df-c55f9f626545.</p> <p>Thus, the highlighted hazardous properties are not covered by Annex V to REACH regulation and therefore, are not exempted from the application of criterion 1 of the EU Ecolabel.</p> <p>It is considered relevant to include this exemption (Annex IV and V of REACH) in the proposal. An horizontal approach has been followed according to other product categories.</p>

<p>When a substance is listed on the LUSC list, this would be sufficient ? No need for each applicant to get declarations from each supplier ?</p>	<p>ACCEPTED According to the general assessment and verification (introductory part of the criteria) data from LuSC list can be used directly in the application process. Thus, no declarations from suppliers are needed.</p>												
<p><i>EUH066 Repeated exposure may cause skin dryness or cracking</i> We strongly suggest that including this EUH in column (a) is a typo and it should be in column (b) like H336. This hazard phrase often applies to hydrocarbon solvents that have a defatting action and is associated with chronic exposure. In this respect it is closely aligned with H315 skin irritation rather than the end points that are included in column (a)</p>	<p>ACCEPTED For the third draft proposal, for substances included in Group 3 and also for those considered as “not priority” according to the prioritization based on the grouping of hazards as per the EU Ecolabel Chemicals Task Force⁵, a maximum total concentration that is smaller than the concentration that would lead to classification of the final product has been suggested as in the existing limit currently in force according to the table below:</p> <table border="1" data-bbox="1137 571 2016 679"> <thead> <tr> <th colspan="2">Hazard categories</th> <th>Proposal Limit</th> <th>Prioritization of the hazard classes</th> <th>Impact on the LuSC-list</th> <th>Impact on EU Ecolabelled licenses</th> </tr> </thead> <tbody> <tr> <td>Repeated exposure may cause skin dryness or cracking</td> <td>EUH066</td> <td>Classification limit final product</td> <td>-</td> <td>LOW</td> <td>LOW</td> </tr> </tbody> </table> <p>Thus, a higher degree of flexibility has been set for EUH066.</p>	Hazard categories		Proposal Limit	Prioritization of the hazard classes	Impact on the LuSC-list	Impact on EU Ecolabelled licenses	Repeated exposure may cause skin dryness or cracking	EUH066	Classification limit final product	-	LOW	LOW
Hazard categories		Proposal Limit	Prioritization of the hazard classes	Impact on the LuSC-list	Impact on EU Ecolabelled licenses								
Repeated exposure may cause skin dryness or cracking	EUH066	Classification limit final product	-	LOW	LOW								
<p>We strongly request that JRC reinstates the condition that the concentration limits for assessment and verification relates to intentionally added substances in line with the current criteria document which confirms that 'all constituent substances that are present above 0.010% (w/w) and which are intentionally added and/or formed intentionally.</p>													
<p>We reiterate the dilemma faced by lubricant formulators that many of the ingredients that provide the required specific functionality contain low levels of unreacted raw materials as impurities that are significantly more hazardous than the substances intentionally added. It is therefore more useful for the ecolabel criteria to set limits on intentionally added/formed substances as in the existing criteria and JRC should seriously consider re-assigning this condition to criteria 1a, 1b and 1c</p>	<p>ACCEPTED See general assessment and verification and criteria text.</p>												
<p>We strongly recommend that the scope of criterion 1a should be limited to intentionally added or intentionally formed substances as in the current criteria document.</p>													

⁵ 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

Second proposed Criterion 2: Aquatic toxicity

Comments received in AHWG2/written form	JRC Dir. B response
<i>The concentration refer to both EC50 and NOEC. Proposal for modification: Suggestion to add the unit of the concentrations (EC50 for acute aquatic toxicity, but NOEC for chronic toxicity)</i>	PARTIALLY ACCEPTED Concentration can be expressed in mass per volume units or moles per volume, nevertheless the molecular weight will allow converting from moles to mass. However, clarification could be included in the UM.
<i>Normally you need the results from acute tests when designing the chronic ones. Thus, the statement: “In case acute aquatic toxicity data for each main component/the lubricant is missing, existing chronic aquatic toxicity tests shall be accepted for each of the following two trophic levels: crustacean (preferred species Daphnia) and fish” seems somewhat arbitrary. Vertebrate tests with fish should be avoided in general for classification purposes and voluntary ecolabel schemes. Why not accept chronic algae (NOEC) data?. Proposal for modification: Refer to NOEC Algae as chronic test and delete the reference to chronic fish test. Add comment “No animal tests with vertebrates (fish) should be performed for the purpose of ecolabelling. Thus only available existing fish toxicity data should be used.”</i>	ACCEPTED The aquatic plant growth inhibition tests (ErC 50) are normally considered as chronic tests but the EC 50 s are treated as acute values for classification purposes. With the aim to not perform animal tests with vertebrates (fish) for the purpose of ecolabelling different options have been included: The inclusion of fish embryo toxicity (FET) when fish acute aquatic toxicity data need to be generated for the applied lubricant for acute aquatic toxicity data. Only tests with vertebrates (fish) shall only be accepted for available data on acute aquatic toxicity for the applied lubricant. For each main component and intentionally added or formed substances at or above 0,10%, in case data on chronic and acute aquatic toxicity is missing, only acute aquatic toxicity test shall be accepted for each of the following two trophic levels: crustacean (daphnia preferred) and aquatic plants (algae preferred) since there is no option of non-animal alternative as in the case for the acute aquatic toxicity.
<i>Suggest that the requirement for criterion 2.1 should be for existing chronic test data preferentially. Existing acute data should be accepted in the absence of chronic data for each of the trophic levels</i>	In addition, as different organisms have different sensitivity to the toxics, it should be necessary to evaluate the most appropriate organism in order to establish the maximum permissible concentrations in aquatic ecosystems (lowest toxic value) ⁶ . Nevertheless this proposal assumed the minimum information requirements that correspond to present data for the same trophic levels according to REACH annexes VII to IX and is line with existing EU Ecolabel.
<i>The marine algal growth inhibition test ISO</i>	ACCEPTED

⁶ Acute toxicity of anionic and non-ionic surfactants to aquatic organisms. Lechuga M, Fernández-Serrano M, Jurado E, Núñez-Olea J, Ríos F.

Comments received in AHWG2/written form	JRC Dir. B response
<p><i>10253 has been adopted, the algae test according to ISO 8692, which is equivalent to OECD 201, has not been mentioned.</i></p>	<p>According to the OECD Environment, Health and Safety Publications, Series on Testing and Assessment No.99 “Comparison between OECD Test Guidelines and ISO standards in the areas of ecotoxicology and health effects” the Alga, Growth Inhibition Test OECD TG201 is equivalent to the ISO 8692. Therefore, the text in the verification and assessment part has been updated accordingly according to the comment.</p>
<p><i>The daphnia test has been adopted as ISO 6341</i></p>	<p>ACCEPTED According to the OECD Environment, Health and Safety Publications, Series on Testing and Assessment No.99 “Comparison between OECD Test Guidelines and ISO standards in the areas of ecotoxicology and health effects” the Daphnia sp. Acute Immobilisation Test OECD TG202, is equivalent to the ISO 6341. The current "ISO TC 147/SC5/WG2" corresponds to the working group-technical committee that developed the ISO 6341. Therefore, the text in the verification and assessment part has been updated accordingly according to the comment.</p>
<p><i>Proposal to add also the fish embryo toxicity (FET) test according to OECD 236 or part C.49 of the Annex to Regulation (EC) No 440/2008. This test is considered as a non-animal alternative to the acute fish toxicity test and will be considered for the Blue Angel RAL-UZ 178.</i></p>	<p>ACCEPTED Therefore, the text in the verification and assessment part has been updated accordingly according to the comment in order to not perform animal tests with vertebrates (fish) for the ecolabelling when fish acute aquatic toxicity data need to be generated.</p>
<p><i>Proposal to add also algae (same methods but endpoint NOEC for chronic toxicity): ISO 10253 or ISO 8692 or OECD Test Guideline 201 or Part C.3 of the Annex to Council Regulation (EC) No 440/2008 for algae,</i></p>	<p>PARTIALLY ACCEPTED The aquatic plant growth inhibition tests (ErC 50) are normally considered as chronic tests but the EC 50 s are treated as acute values for classification purposes. fish embryo toxicity (FET) has been included when fish acute aquatic toxicity data need to be generated for acute aquatic toxicity data.</p>
<p><i>The logic behind this testing strategy is not fully understood. For the acute tests only daphnia and algae are required for the main components, but fish data are demanded for the lubricant. Further on for chronic toxicity the fish animal tests are considered. The algae assay OECD 201 is both being considered as an acute test (EC50) and as a chronic test (NOEC). Proposal: Suggestion to limit fish toxicity requirements or to shift to the non-animal FET test. Fish data should only be demanded when these have been submitted under other regulatory schemes (REACH). This will also be considered in the Blue Angel RAL-UZ 178.</i></p>	

Comments received in AHWG2/written form	JRC Dir. B response
<i>The algae test should also be accepted as a chronic test when the NOEC is applied.</i>	
<p><i>Proposal to add also the following fish tests being equivalent to the OECD 215:</i></p> <p><i>Part C.47 of the Annex to Regulation (EC) No 440/2008 or OECD 210 (Fish Early Life Stage = FELS test).</i></p> <p><i>Part C.15 of the Annex to Regulation (EC) No 440/2008 or OECD 212 (Fish Embryo and Sac-Fry Stages test).</i></p> <p><i>These tests and will be considered for the Blue Angel RAL-UZ 178.</i></p>	<p>ACCEPTED</p> <p>The List of ISO/ EU/OECD test guidelines has been updated in the revised criterion according to your comments and validated test methods for aquatic toxicity published by EURL ECVAM. More information available on line at: https://eurl-ecvam.jrc.ec.europa.eu/validation-regulatory-acceptance/environmental-toxicity-fate/Env-Aquatic-Toxicity.</p> <p>The list of ISO/ EU/OECD test guidelines has been updated in the revised criterion according to your comments and validated test methods for aquatic toxicity published by EURL ECVAM.</p>
<p><i>The ECETOC Technical Report No 20 (1986), Annex III to OECD 301 (1992), OECD 310 and ISO 10634 refer to the addition of poorly soluble substances to <u>biodegradation tests</u>, but <u>not to the preparation of WAFs for ecotoxicity testing</u>.</i></p> <p><i>Proposal to delete these references respective to shift them to criterion 3 (biodegradability). The relevant standards and guidelines for the WAF preparation should be adopted.</i></p>	<p>ACCEPTED</p> <p>The recommended guidelines for the preparation of a water-accommodated fraction have been updated accordingly for ecotoxicity testing in the verification and assessment.</p>
<p><i>Agree to keep the same toxicity values and the verification based on the two most sensitive trophic levels</i></p>	<p>REJECTED</p> <p>Different organisms have different sensitivity to the toxics, it should be necessary to evaluate the most appropriate organism in order to establish the maximum permissible concentrations in aquatic ecosystems (lowest toxic value)⁷. That's the reason why initially (TR1.0) we proposed that the aquatic toxicity test results were provided for all the three trophic levels and then select the lowest toxic value based on the more sensitive organism.</p> <p>Nevertheless this proposal was rejected and in the second draft and according to the stakeholder's comments. For the second proposal it was finally assumed the minimum information requirements that correspond to present data for the same trophic levels according to REACH annexes VII to IX and as in the current EU Ecolabel.</p>

⁷ Acute toxicity of anionic and non-ionic surfactants to aquatic organisms. Lechuga M, Fernández-Serrano M, Jurado E, Núñez-Olea J, Ríos F.

Comments received in AHWG2/written form	JRC Dir. B response
<p><i>Surfactants are applied in large quantities in MWFs. For surfactants the most sensitive trophic specie is fish. The current assessment underestimates therefore the environmental impact of surfactants. However given the fact that no MWF can apply successfully already to the criteria the impact will not be high.</i></p>	<p>REJECTED</p> <p>The toxicity of the most common classes of surfactants to various organisms is well documented. In a study⁸ of anionic sodium dodecyl sulphate (SDS) toxicity including different species of algae, crustaceans and fish, the algae proved to be the most sensitive (EC50 mgL-1 36,58; 41,04 and 40,15 respectively). The same occurred for the anionic linear alkylbenzene sulphononic acid (LAS) (EC50 mgL-1 3,5; 5,96 and 5,1 respectively), alkyl ethoxysulphate (AES) (EC50 mgL-1 2,18-3,5; 23,92 and 10,84 respectively) and the nonionic alcohol ethoxylate (AE) (EC50 mgL-1 0,101-0,140; 0,39 and 4,35 respectively) where the algae was the most sensitive species. For the cationic quaternary ammonium compound (QAC) the crustaceans (<i>Daphnia Magna</i>) proved to be the most sensitive species (EC50 mgL-1 0,79; 0,38 and 1,21 respectively). Studies indicate that the toxicity of a single surfactant is highly specific, not only for the type and class of surfactant, but also for the organism tested. Any generalization or application to similar organisms is highly speculative.</p>
<p><i>From an environmental point of view one cannot have a higher allowed fraction for PLL of 20% in the second row than for ALL.</i></p>	<p>REJECTED</p> <p>The current valid in force EU Ecolabel criterion 2 also follows the same pattern in which a higher fraction for categories 2 and 4 of $\leq 25\%$ is allowed than for categories 1 and 5 ($\leq 20\%$). Moreover, it should be noted that the revised thresholds for aquatic toxicity for sub-criterion 2.2 have been based on data on existing EU Ecolabel products provided by stakeholders and Competent Bodies.</p>
<p><i>A licence holder find this proposal more severe on accidental loss than on partial loss, it is unfair.</i></p>	
<p><i>It is not consistent to see more demanding criteria on ALL group than on PLL group</i></p>	
<p><i>The proposed threshold would provoke the loss of 2 French licenses that represent around 5-6 products.</i></p>	<p>REJECTED</p> <p>No data is provided supporting this claim.</p> <p>Data provided on aquatic toxicity of 143 EU ecolabelled products from 11 countries was provided by Competent Bodies, which represents approximately the 40% of the total EEL products in the market. All the assessed licences would be able to comply with these revised thresholds for category PLL and only 3 existing licenses would not be able to comply for EEL products category ALL and also 3 more for category TLL.</p> <p>In the specific case of greases, it should be noted that according to Table 3.3 of page 39 of the TR2.0, the range of cumulative mass percentage (% w/w) of harmful (E) substances present within the lubricant, based on the provided data on existing EEL products, is between: 0-18,49 (average=7,51; 50th percentile= 5,05 and 75th percentile= 13,02).</p> <p>According to the evaluation of the existing products for which data was provided to the JRC, all the assessed licences would be able to comply with the revised thresholds for category PLL.</p> <p>Moreover, data provided by competent bodies and stakeholders has been revised again, with special attention to the concerns of stakeholders due to the categorization of greases under TLL and the loss of licenses. Data from 25 greases certified (or aiming to apply) was received during the process revision, 20% of them have a threshold value $\leq 2\%$</p>
<p><i>It seems the proposal was not accepted and the harmful limit in greases was lowered to 20% from 25%. Contradicting the text the levels were not changed back.</i></p>	
<p><i>Do not restrict the amount of additives in PLL and TLL. You will lose performance.</i></p>	
<p><i>Our certified grease will lose Ecolabel certification if such criteria are applied on ALL and TLL product group</i></p>	
<p><i>Generally speaking, most greases will not pass the ALL and TLL product group criteria</i></p>	

⁸ Surfactants in the environment. Tomislav Ivankovic and Jasna Hrenovic. Division of Biology, Faculty of Science, University of Zagreb, Zagreb, Croatia. January 2009.

Comments received in AHWG2/written form	JRC Dir. B response
<p><i>If we shrink the limit down to 2% in case of total loss greases, we exclude the most common soaps like lithium and lithium complex. These soaps classified as harmful on the LuSC list. 2% of soap makes a low consistent product. If the allowed harmful soap used there will be no place for functional additives. It will be a disadvantage compared to other loss lubricants. The benefits of the thickener, for example, fewer relubricating periods and smaller amounts, compared to oils, due to a higher consistency and better remaining lubricant became the disadvantage in the labeling process.</i></p> <p><i>The exemplified cotton picker spindle greases are lithium products such as drilling head greases. These applications need higher upper-temperature soap than the only, not toxic calcium.</i></p>	<p>(chronic aquatic hazard category 3), 92% of them have a threshold value $\leq 0,4\%$ (chronic aquatic hazard category 2) and 100% have a threshold value $\leq 0,1/M \%$ (acute/chronic aquatic hazard category 1) according to the table below. No extra specific data about distribution of greases depending on the environmental release has been received, thus we don't exactly know which % of this 25 greases certified are currently TLL or TLL. Therefore, according the precautionary approach and considering that there are currently certified greases able to comply with TLL these aquatic toxicity values, it has been proposed to maintain the limits defined in the second draft.</p>
<p><i>For toxicity and biodegradability criteria, can you confirm that accredited laboratory according to ISO17025 with the tests included in their scope of application must be valid to conduct the biodegradability as well as toxicity tests (like in the previous Ecolabel on lubricants).</i></p> <p><i>Laboratories that can demonstrate compliance with ISO 17025 have demonstrated they are technically competent to perform specific tests for which they hold accreditation.</i></p> <p><i>So I suggest « Testing according to acceptable protocols in a ISO 17025 accredited laboratory OR under GLP ».</i></p> <p><i>Moreover, they are a very little number of Lab which are GLP FOR INDUSTRIAL CHEMICALS.</i></p>	<p>ACCEPTED</p> <p>General text for assessment and verification of this Commission Decision has been amended accordingly.</p>
<p><i>Most current certified lubricants will be OK except for two hydraulic fluid which are below 110 (and not 100) : manufacturers will have to</i></p>	<p>ACKNOWLEDGED</p> <p>Criterion 2.1 thresholds were reverted to the existing values in force after the first criteria publication, before the 1st AHWG. Thus, the acute aquatic toxicity for each main component shall be at least 100 mg/L, it means 100 mg/L or</p>

Comments received in AHWG2/written form	JRC Dir. B response
<p><i>make efforts</i> <i>For the main components: no problem for the current manufacturers, so logically feasible.</i></p>	<p>more (substance classified as not hazardous to the aquatic environment according to CLP). Consequently, both hydraulic fluids would be able to comply with the same requirements.</p>
<p><i>Suggest revising definition as follows: ‘Critical concentration for the aquatic toxicity’ means the concentration of a substance at and above which it has an adverse effect on an aquatic organism.</i></p>	<p>REJECTED This definition is currently included in the existing User Manual. The definition of "Critical concentration for the aquatic toxicity" is based on CLP Regulation definitions and general considerations included in part 4 - Environmental Hazards (4.1 Hazardous to the aquatic environment). Therefore, this definition is aligned with CLP Regulation. However, it should be noted that it is important to remark that without exposure, there is no risk and no adverse effect. Thus, it is considered relevant to include the exposure part in the definition.</p>
<p><i>Suggest revising definition as follows: ‘Acute aquatic toxicity’ means the intrinsic property of a substance having an adverse effect on an aquatic organism following short-term aquatic exposure to that substance.</i></p>	<p>be noted that it is important to remark that without exposure, there is no risk and no adverse effect. Thus, it is considered relevant to include the exposure part in the definition.</p>
<p><i>Is this row/condition now redundant due to criterion 1a, or does it need looking at again? Criterion 1a appears to mandate that any product eligible for ecolabel cannot contain H400 or H410 at 0.010% or greater regardless of whether M factor = 1 or not.</i></p>	<p>The criterion 1 has been revised. The limit for substances presenting H400 classification is half of the concentration leading to the product classification for H400. According to table 4.1.1 of CLP, the maximum concentration would be 25/M %. Thus, it depends on the M-factor, but if the M-factor is 1, the maximum concentration would be 25%. Then 12.5% would be allowed according to the EU Ecolabel.</p> <p>For chronic toxicity statements, H410, H411, H412 and H413 criterion 1 (a) (ii) refers to the maximum limit of total concentration leading to product classification for H413. CLP additivity for final product classification is considered, therefore the total concentration of substances presenting the chronic toxicity categories 1 to 4 is considered for the products classification.</p> <p>Criterion 2.2 goes beyond criterion 1, as a safety net, limiting the maximum mass concentration of the substances exhibiting the specific hazard statement individually (CLP additivity for final product classification is not considered in this case). For instance, the maximum cumulative mass concentration of substances classified as H400 or H410 allowed is $\leq 0,1/M$ % (w/w in the final product). If M=1, a 0,1% cumulative mass will be allowed.</p>
<p><i>A stakeholder welcomes the retention of both options for aquatic toxicity criterion</i></p>	<p>ACKNOWLEDGED</p>
<p><i>The first column indicates that the substance should be classified. Firstly this is not correct. It counts for EACH stated substance above 0.1% and secondly the CLP relates the chronic toxicity to biodegradation. See table 4.1.0 of the CLP.</i></p>	<p>The sentence: “Substance classified as not hazardous...” has been changed by “Substance not classified as hazardous to the aquatic environment according to CLP”. In addition, the considerations summarised in Table 4.1.0 of CLP Regulation also are applied here.</p>
<p><i>The only thing that is necessary in the assessment and verification is how to assess the relevant data</i></p>	<p>It is suggested to include guidance in the User Manual. There is a practical guide available from the ECHA that provides details on how to report robust study summaries. The document is available online at:</p>

<p>Comments received in AHWG2/written form in the REACH registration dossier.</p>	<p>JRC Dir. B response https://echa.europa.eu/documents/10162/13643/pg_report_robust_study_summaries_en.pdf/1e8302c3-98b7-4a50-aa22-f6f02ca54352. The text in the general assessment and verification has been updated accordingly.</p>
<p><i>When introducing QSARs from e.g. the toolbox it must be stated what models must be used (consensus, clustering, single model, group contribution, FDA method, nearest neighbours) and what error is allowed in the prediction when applying the test and training set and how high the similarity coefficient must be. Alternatively one can define 3 QSARs that must be used and the most toxic value must be considered.</i></p>	<p>According to the stakeholder's comment, it should be noted that in general, different (Q)SARs might perform better depending on the type of chemicals and endpoint under evaluation, thus it is not deemed necessary to identify which should be these (Q)SARs. Prediction from a (Q)SAR model without information on the validity and applicability domain shall not be accepted. Moreover, as already stated in the criterion, (Q)SAR data shall be only accepted to fill data gap in only one of the trophic levels rather having to perform the test with the substance under evaluation. The text has been included in the assessment and verification.</p>

Second proposed Criterion 3: Biodegradability and bioaccumulative potential

Comments received in AHWG2/written form	JRC Dir. B response
<p><i>This is a shift from the current < 3 and > 7 which has a strong impact on a) available LuSC list additives and b) the performance level of the lubricant which is formulated with the remaining additives: Just take the example of antioxidants. They are required to prolong the lifespan of a lubricant, which has a direct impact on the LCA. With the requirement of logKow > 10 the widely used (aminic) alkylated diphenylamines are lost. It is possible to have a logKow > 10 with phenolic antioxidants, but to the cost of increasing the ratio molecular weight vs functional group(s) (latter are polar, responsible for antioxidant activity) which reduces antioxidant efficiency. Additionally, high performance formulations rely on the synergy between phenolic and aminic antioxidants which presumably cannot be exploited for Ecolabel formulations with the proposed > 10. Lubricants are based in most cases on hydrophobic structures. It is no surprise that most additives have to be hydrophobic due to solubility requirements. It is suggested to take into account the low water solubility which comes with a log Kow > 7 and lower the upper limit to e. g. 8, so we would have a < 3 or > 8 requirement.</i></p>	<p>ACCEPTED The threshold value has been changed in order to align with the current test methods available. Since the upper limit measurable is 8,2, the log Kow limit value has been defined as: <3 and >8.</p>
<p><i>The experimental determination of the partition coefficient can be done by OECD 107, 117 or 123. Due to the precisions of these methods, it is possible to determine log Kow between 2 and 4 (107) resp. 0 and 6 (117) resp. 0 and 8.2. Based on best precision method OECD 123, it is possible to determine a partition of a hydrophobic substance to Kow = 1(octanol) : 158489319 (water) - which is a very small number. Below that only theoretical calculations are possible. Wouldn't it make sense - if it is JRC's most urgent interest to strengthen this criterion - to set this lowest measurable precision limit instead of a theoretical/hypothetical limit? I propose to set limits for logKow from < 3 to > 8.2.</i></p>	
<p><i>OECD test methods generally do not allow for measurement of partition coefficients greater than 6.7. Using a calculated method is feasible and all currently used esters would be > 10. However, using a calculation method is not an independently verifiable method; therefore there would still be a requirement for ester producers and other component suppliers to provide detailed compositional information to enable calculations to be made by a third-party.</i></p>	
<p><i>We understand that the origin of the > 10 upper limit for Log Kow introduced into ecolabel criteria after the 1st AHWG meeting was strongly influenced by UBA together with JRC's desire to harmonise ecolabel criteria with Blue Angel RAL-UZ 178. However, we strongly object to this upper limit for the following practical and scientific reasons and strongly request JRC revert to the original criteria for an upper limit of > 7. The same comments have been provided to RAL/UBA concerning the latest update of RAL-UZ 178. The reasons for our objection to an upper Log Kow</i></p>	<p>PARTIALLY ACCEPTED The threshold value has been changed in order to align with the current test methods available. The log Kow limit value has been defined as: <3 and >8. Different considerations have been taken into</p>

Comments received in AHWG2/written form	JRC Dir. B response
<p>limit of >10 are:</p> <p>Numerous peer reviewed articles support the observation that the BCF value of a substance increases with increasing hydrophobicity up to an optimum value in the range of 7 to 8, and then decreases with increasing hydrophobicity.⁹ Our company is aware of only one CRO globally that currently has a validated method with validated reference standards to measure LogPow >10. Current guidelines for measuring octanol:water partition coefficient cite the need to use reference standards but appear not to be valid where LogPow is > 8.2 (i.e. OECD method 123). Other than in exceptional cases the other OECD methods appear to be valid only for substances where LogPow is expected to be 6 or lower. The proposed change to the ecolabel criteria is therefore citing an upper cut off that may not be technically feasible and does not correlate with the OECD testing methods cited in the draft criteria (see below for more details). Additionally, on a practical basis, it is our experience that the majority of existing octanol:water partition coefficient data has been generated using reference standards that do not exceed 7.5. This means that existing licence holders and future applicants would be faced with the possibility of having to re-run the test using different reference standards to meet the new criterion. Unless the criterion would allow for accepted QSAR methods to be used to predict LogPow values then the proposed change to this criterion is not scientifically feasible nor defensible.</p> <p>In a 2007 Fraunhofer report entitled, "Literature Study: Effects of Molecular Size and Lipid Solubility on Bioaccumulation Potential", the authors discuss other criterion that should be considered as part of the weight of evidence for determining bioaccumulation potential. One of these criteria is solubility in octanol. The Commission should therefore consider adding this criterion to the weight of evidence assessment used to determine bioaccumulation potential because this report suggests that there is low bioaccumulation potential for substances with a low solubility in octanol (i.e. < 0.002 * MW mg/l).</p> <p>None of the existing OECD methods include the possibility of measuring Log Kow beyond 10. The following summarises key methodological considerations for the three existing OECD methods for measuring octanol:water partition coefficient</p> <ul style="list-style-type: none"> • OECD 123 (Slow-stirring method) <p>1-octanol/water partition coefficient (POW) values up to a log POW of 8.2 have been accurately determined by the slow-stirring method (1). Therefore, it is a suitable experimental approach for the direct determination of POW of</p>	<p>account to define the upper limit:</p> <ul style="list-style-type: none"> • The upper limit measurable is 8,2. • Data about SDS of substances included in LuSC-List. • Definitions of other ecolabels <p>For more information see the rationale of criterion 3 in the TR3.0.</p>

⁹ 1) R. Garg and C.J. Smith 2014, Food and Chemical Toxicology 69:252-259; 2) Arnot, J.A., Gobas, F.A.P.C., 2006. A review of bioconcentration factor (BCF) and bioaccumulation factor (BAF) assessments for organic chemicals in aquatic organisms. Environ. Rev. 14, 257–297; 3) Dearden, J.C., 2004. Improved prediction of fish bioconcentration factor of hydrophobic chemicals. SAR QSAR Environ. Res. 15, 449–455; 4) Devillers, J., Domine, D., Bintein, S., Karcher, W., 1998. Comparison of fish bioconcentration models. In: Devillers, J. (Ed.), Comparative QSAR. Taylor and Francis, Washington, DC, pp. 1–50.; 5) Müller, M., Nendza, M., 2009. Literature study: comparative analysis of estimated and measured BCF data (OECD 305) with a special focus on differential accumulation of (mixtures of) stereoisomers. <http://www.umweltbundesamt.de/publikationen/comparative-analysis-of-estimated-measured-bcf-data>; 6) Pavan, M., Worth, A.P., Netzeva, T.I., 2006. Review of QSAR models for bioconcentration. European Commission Publication Code Number EUR 22327 EN.

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<p>highly hydrophobic substances. Surrogates must be used to validate recovery where LogPow > 6. A substance with a high LogPow of 8.23 (decachlorobiphenyl) needs a long equilibration time (155 hours).</p> <ul style="list-style-type: none"> • OECD 107 (Shake flask method) <p>log Pow values in the range -2 to 4 (occasionally up to 5 and more) can be experimentally determined by the Shake-Flask method. An upper limit is given by the necessity to achieve a complete separation phase after adjustments of the partition equilibrium and before samples are taken out for analytical determinations. If proper care is taken, the upper limit can be extended to higher values of Pow</p> <ul style="list-style-type: none"> • OECD 117 (HPLC method) <p>The HPLC method covers log Pow in the range of 0 to 6, although an upper limit is given by the necessity to achieve a complete separation phase after adjustments of the partition equilibrium and before samples are taken out for analytical determinations. If proper care is taken, the upper limit can be extended to higher values of Pow Reverse phase HPLC method enables partition coefficients to be estimated in the log Pow range between 0 and 6, but can be expanded to cover the log Pow range between 6 and 10 in exceptional cases. Recommended reference substances and their Pow values are listed in Table 1 (maximum value listed is 6.5 for DDT).</p>	
<p>The existing log Kow value of <3 or >7 better describes the potential for substances to bioaccumulate. Substances with high log Kow i.e. >7 have been shown not to have the potential to bioaccumulate. In Part A.8. of REACH, the shake flask method can be used for determining log Pow -2 to 4 and the HPLC method from log Pow 0 to 6. The OECD 123 method can be used to measure log Pow up to 8.2. Therefore none of these methods can be used to measure log Pow >10.</p>	
<p>The OECD 117 (bioaccumulation test method) is only suitable for measuring Log Kow between 0-6 and GLP labs will only report that the log Pow is greater than 7. So it is impossible to quote a result >10.</p>	<p>REJECTED The threshold value has been increased until the upper limit 8, since the OECD 123 test is able to measure values from 0 to 8.2.</p>

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<p><i>The Draft Screening Assessment for Substituted Diphenylamines Environment and Climate Change Canada Health Canada December 2016 supports a lower cut-off for the log Kow.</i></p> <ul style="list-style-type: none"> • <i>"The measurement of log Kow values above 8 becomes increasingly uncertain due to the difficulty of measuring partitioning properties accurately for superhydrophobic compounds" p. 35</i> • <i>"This assessment considers log Kow values of 1.0--8.2 to be the empirical "log Kow domain" for model results based on Kelly et al. (2004) and Arnot and Gobas (2003a, 2003b, 2006). SDPAs that have a log Kow value greater than 8.2 are considered out of the model domain for the mass-balance three trophic level BCFBAF model (Arnot and Gobas 2003b) and the (Q)SAR-based Dimitrov et al. (2005) model." p 35</i> • <i>"SDPAs with log Kow values of 8.2 or less represent the most bioavailable forms and can be considered as a realistic worst-case for bioaccumulation and toxicity potential for SDPAs." p 35</i> • <i>"Diocetyl-diphenylamine und Dinonyl-diphenylamine (among others mentioned) have a logKow of approx 9 and "there is Insufficient field evidence for any significant bioaccumulation for structures within this range of log Kow. Given the low water solubility and the high log Kow values, it is considered that the bioaccumulation potential for these structures in aquatic organisms is very low or negligible." p 36</i> <p><i>In the opinion of our toxicologist the reference Dimitrov et al does not actually support a cut off for Log Kow of 10. In fact, there is no language in this article where the authors propose using a cut off of LogKow 10. Rather they propose to use molecular size/diameter as an additional factor to help explain uncertainty in BCF predictions, and highlight the downward trend of BCF past LogPow of 5.5 (Figures 1 and 6). The Dimitrov paper therefore actually supports maintaining the existing ecolabel criteria that uses molecular diameter as a cut off for bioaccumulation concern as well as an upper cut off limit for LogKow of 7.</i></p>	<p>ACKNOWLEDGED</p> <p>This information has been considered in the rationale to adjust the upper limit of log K_{ow}.</p>
<p><i>Even the Blue Angel (Blauer Engel) acknowledges the problems with log Kow <3 or > 10 as a requirement. In the draft version 1.3 of the award criteria document (July/September 2017) it is stated on page 30/40 that in "technically justified cases substances with logKow can deviantly be accepted".</i></p> <p><i>Standard requirement is log Kow <3 or >10 (same page of the award criteria draft document).</i></p> <p><i>I think such a deviation clause makes it difficult to compile a list such as the LuSC list. Clear criteria are needed. A better approach seems to be going to a specific upper limit which leaves additives available for ecolabel formulations. log Kow of 10 is a) too ambitious and b) there are scientific arguments that a "lower" upper cut-off limit value (as 10) for logKow is justified (see other comment to the same page; Draft Screening Assessment for Substituted Diphenylamines Canada 2016)</i></p>	<p>ACCEPTED</p> <p>In fact, in the current Blue Angel criteria the accumulation is assumed only when the log Kow value is <3. However, an exemption is included and substances with log Kow values > 6.0 may be permitted if technically justified.</p> <p>An explanation about which are those technical justified exemptions are not included, assuming that all the substances not able to be substituted in the</p>

Comments received in AHWG2/written form	JRC Dir. B response
<p><i>The log Kow limit of the Blue Angel is 6 and is therefore by far not similar as selected here.</i></p>	<p>formulation could be considered exemptions. From the point of view of EU Ecolabel, the most environmentally friendly products currently on the market should be able to comply with LogK_{ow} of 8. This value has been proposed by several stakeholders, it is supported by the OECD tests upper limit which is 8.2 and SDSs of current substances in LuSC List revealed that a minor impact could be expected.</p>
<p><i>The current upper choice of 10 will leave out around 80% of the additives on the LuSC list. The impact is disproportional on the current number of licenses.</i></p>	<p>ACKNOWLEDGED</p>
<p><i>It is our strong preference that JRC should set the upper limit of Log Kow to be > 7 which is the limit in the existing criteria. However, if JRC persists with an upper limit for Log Kow > 10 then they should also strongly consider including the same derogation that exists within the current Blue Angel RAL-UZ 178 for substances with log Kow > 6 (or >7 to align with current ecolabel criteria). Blue Angel allows applicants to provide a technical justification why the substance with Log Kow > 6 cannot be replaced in terms of the function that it provides to the finished lubricant. This would allow current licence holders (or LuSC listings) to continue under the new criteria without having to repeat Log Kow testing with a different standard (at significant additional cost where laboratory capacity is already significantly limited due to REACH etc) or relying on model data that may not have an appropriate test set. Alternatively, applicants should have the possibility of presenting a weight-of-evidence approach where substances in existing licenced products/LuSC listed products have a measured Log Kow >7. We should like to highlight to JRC that even though their goal is to increase uptake of the EU ecolabel it is difficult enough to justify and resource formulating a product for the existing ecolabel in the absence of any tangible, market-driven benefit without changes to the criteria creating additional barriers and cost to maintain current licences.</i></p>	<p>See comments above</p>
<p><i>Inherently biodegradable' means a substance, which achieves the following level of degradation:</i></p> <ul style="list-style-type: none"> • 70 % after 28 days for inherent biodegradation test, or • 20 % but < 60 % after 28 days in tests based on oxygen depletion or carbon dioxide generation. <p><i>The 2nd sentence refers to ready biodegradation tests which also give information about inherent biodegradability. It should be modified as: "> 20 % but < 60 % after 28 days in ready biodegradation tests based on oxygen depletion or carbon dioxide generation.</i></p>	<p>ACCEPTED</p> <p>The modification has been included in the complementary definitions section of the decision text.</p>
<p><i>Adopt the same format as the existing Lubricants criteria document by adding suitable test methods to respective pass levels to make it easier for applicants to understand which % amounts relate to which test methods described in section 3.3 on page 45 or vice versa.</i></p>	<p>Partially accepted</p> <p>Criteria text has been clarified as much as possible. Additional guidance could be included in the User Manual..</p>

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<i>The CO2 Headspace test OECD 310 has recently been included into the REACH test methods ordinance (C.42). Note that only the ratio of the biological and chemical oxygen demand BOD (C.5) and COD (C.6) gives an indication of ready biodegradability.</i>	ACCEPTED
<i>Regulation (EC) No 440/2008 (Part C.9 of the Annex) is equivalent to OECD 302 B, Note that the Zahn-Wellens test Part C.9 or OECD 302 B is only applicable for water soluble substances.</i>	ACCEPTED
<i>Biodegradability testing of lubricants often requires specific considerations due to their low water solubility. The following guidances should be considered (taken from the WAF section on ecotoxicity testing): ECETOC Technical Report No 20 (1986), Annex III to OECD 301 (1992) or the ISO 10634 (under revision).</i>	PARTIALLY ACCEPTED This information could be included in the User Manual, since it is referring to specific guidance to make easier to applicants the assessment and verification.
<i>Inherently biodegradable include nowadays also a 301 test based on CO2 generation or O2 depletion when the 60% pass level is reached within 60 days</i>	ACCEPTED Despite it is not specified in the text, other equivalent test methods different than those included in criterion text can be used.
<i>It is unknown why it is included. What about metal organics? It is in general not necessary to do a biodegradation test. If it is not performed only the bioaccumulation criterion needs to be fulfilled.</i>	REJECTED The clarification was included in the second revision because stakeholders were confused and to clarify this issue, the specification “organic compounds” was included.
<i>This is not the case for the Swedish Standard and the Korean label and I am not sure about the Blue Angel. The NF scheme is just equivalent to the EEL.</i>	ACKNOWLEDGED
<i>From an environmental point of view one cannot have a higher allowed fraction for PLL of 25% in the second row than for ALL.</i>	REJECTED The current valid in force EU Ecolabel criterion 3 also follows the same pattern in which a lower fraction of biodegradability for categories 2 and 4 of $\geq 75\%$ is allowed than for categories 1 and 5 ($\geq 90\%$). Moreover, it should be noted that the revised thresholds for biodegradability potential have been based on data on existing EU Ecolabel products provided by stakeholders and Competent Bodies.
<i>In table 4, we do not understand the reason why the requirements for the PLL category are less tough than those of the ALL category, when logically it should be the opposite.</i>	

Comments received in AHWG2/written form	JRC Dir. B response
<p><i>For biodegradability criteria, can you confirm that accredited laboratory according to ISO17025 with the tests included in their scope of application must be valid to conduct the biodegradability (like in the previous Ecolabel on lubricants). Laboratories that can demonstrate compliance with ISO 17025 have demonstrated they are technically competent to perform specific tests for which they hold accreditation.</i></p> <p><i>So I suggest « Testing according to acceptable protocols in a ISO 17025 accredited laboratory OR under GLP ». Moreover, they are a very little number of Lab which are GLP FOR INDUSTRIAL CHEMICALS.</i></p>	<p>ACCEPTED General assessment and verification text has been revised accordingly.</p>
<p><i>We do not know if this new limits and new restrictions will influence the LuSC list resp. the current limits of the approved substances. We have to wait for the feedback of the additive suppliers if the 10 days window will reduce the number of currently approved products in the LuSC list. Also we do not know the impact of the modified bioaccumulation limits on the currently approved products and the acceptable concentration in the LuSC list. It would be very helpful if you could provide a adapted LuSC list according to the proposed criteria!</i></p>	<p>The impact on current licences and LuSC List of the different requirements has been estimated in the light of the information and data received from CBs and stakeholders (i.e. SDSs, thresholds values for several criteria). Considering that the level of ambition is being raised to reflect best alternatives in the market, some licences will be unavoidable lost. The adapted LuSC List to the revised criteria will be produced once the criteria is finalised.</p>
<p><i>In the definition appears the concept of "10-day window", which in the current version of the Ecolabel is not being considered; it seems too restrictive and it is unclear how a substance will be classified if it won't meet the requirement within 10 days, but only in the 28.</i></p>	<p>REJECTED</p>
<p><i>Stakeholders do not agree that Criteria 3 should use readily biodegradable instead of ultimately biodegradable because the 10-day window should not be required for any components. It is an old definition that was put in place for biodegradability of simple individual organic chemicals. Once the OECD 301 became the method of choice to determine biodegradability of lubricants, the 10-day window became not relevant. Why include it at all, even if you make the exception for UVCB main components? It adds nothing of value to the Ecolabel specification and will introduce a lot of meaningless discussion of whether a main component is UVCB.</i></p>	<p>In order to be consistent with other EU Ecolabel product groups and with CLP, the terminology proposed in the 1st draft, of readily biodegradable is maintained. This definition includes the concept "10-day window", however also is included 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 exemption from the 10-day window can be applied.</p>
<p><i>Most synthetic esters listed on LuSC list do not pass the 10 day window criterion for biodegradability. Most of them, fortunately, are considered UVCB which is allows an exemption from the 10 day window rule.</i></p>	<p>ACKNOWLEDGED</p>

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<p><i>The OECD 3016 test method should also be used as a method for determining ready biodegradability of a substance and therefore should be referenced in this section. OECD 306 marine biodegradation tests are much harder to pass than OECD 301 freshwater tests. The OECD recognises that both the OECD 301 and 306 tests can be considered as evidence of rapid degradability. Therefore the OECD 306 test should be used to demonstrate both inherent and rapid biodegradability. In the OECD guidelines for testing the degradation of organic chemicals it states that The OECD TG 306 on Biodegradability in Seawater includes seawater variants of the Closed Bottle Test (TG 301 D) and of the Modified OECD Screening Test (TG 301 E). Degradation of organic chemicals in seawater has generally been found to be slower than that in freshwater, activated sludge and sewage effluent, and, therefore, a positive result obtained during 28 (Closed Bottle Method) or 60 days (Shake Flask Method) in the biodegradability. Seawater test can be regarded as evidence of a chemical's potential for biodegradation in the marine environment. For example, a result of > 20% ThOD or DOC removal is indicative of potential for primary biodegradation in the marine environment, whereas a result of > 60% ThOD "The results of a ready biodegradability test may be used for aquatic hazard classification of chemicals. According to the principles described in the "Harmonised Integrated Classification System for Human Health and Environmental Hazards of Chemical Substances and Mixtures" (4), a positive result in one of the OECD tests for ready biodegradability can be considered as indicative of rapid degradation in most environments. Positive results obtained by the TG 306, which is more suitable for marine environments, can also be considered as evidence of rapid degradability. OSPAR also uses the OECD 306 test as a method for determining ready biodegradability of chemicals.</i></p>	<p>ACCEPTED Despite is not specified in the text, other equivalent test methods different than those included in criterion text can be used.</p>
<p><i>Greases using Lithium hydroxystearate will not pass the criteria, for the same reasons as with aquatic toxicity. No worries for current manufacturers, so logically feasible even if they judge it more severe.</i></p> <ul style="list-style-type: none"> • <i>One grease would not fit the criteria but the licence holder doesn't know the product category (ALL/PLL/TLL)</i> • <i>Some esters which are on the Lucslist won't fit the criteria</i> • <i>Grease with lithium hydroxide won't fit the criteria, it's not technology feasible.</i> <p><i>In table 4, compared to the current version of the Ecolabel, the criteria for TLL greases change very much: today 25% of non-biodegradable materials were considered, while with the 5% expected as a limit, it is almost impossible to make a TLL grease with the Ecolabel mark (examples: rail lubrication or rail-based lubrication: more or less the same formula across Europe and total loss).</i></p>	<p>ACCEPTED The biodegradability limit for TLL- Greases has been modified in order not to leave out most of the greases that are currently EU Ecolabeled certified. However, the limit has not been kept as the original because for total loss application, less restrictive values will be equivalent to a direct higher impact on the environment. For more information see the rationale of criterion 3 in the TR3.0</p>
<p><i>It will cause blocking effect on greases applications. All, except calcium soap, is inherently biodegradable. The inherently biodegradable soap and a non-biodegradable polymer with non-degradable functional additives in many application a must. The idea is good, to apply the total loss category on total loss grease, but the original requirements were difficult enough. With the new, it will be even close to impossible to achieve. I propose to keep the original TLL requirement in case of greases.</i></p>	

Comments received in AHWG2/written form	JRC Dir. B response
<p><i>Stakeholders agree that the ALL category should continue with requirement to have 90% of the main components be readily biodegradable. We do not agree that the TLL should require 95% readily biodegradable because you have put stern tube oils in TLL.</i></p>	
<p><i>If a product meets the biodegradability criteria, is it necessary to determine bioaccumulation?</i></p> <p><i>Will biodegradable materials still be considered to be non-bioaccumulative? This statement should remain in the Ecolabel specification.</i></p>	<p>Despite is not included in the criterion text, the bioaccumulation potential has not to be calculated when a substance is biodegradable. If a substance is biodegradable is per se non-bioaccumulative. To avoid a complex criterion text the conclusion was to delete this part, as in the current decision text. User Manual could include this information.</p>
<p><i>JRC should consider adding percentage degradation needed to achieve a pass against the different test methods to make it easier for the applicant even though addition of the relevant, corresponding test method to the definition of ready and inherent biodegradation has been requested.</i></p>	<p>PARTIALLY ACCEPTED Information partially included in under the definitions section. Additional information could be included for guidance in the User Manual.</p>
<p><i>This BCF value is far outside of the norm of globally accepted cut off values for BCF, which range from 1000 (US) to > 2000 (EU) and > 5000 (Canada), below which substances are a low bioaccumulation concern. A cutoff of 100 for BCF is overly restrictive and is within analytical variation as some BCF experimental studies cannot detect less than 100 and report values below a detection limit of BCF < 150 for example (e.g, BCF studies performed in Japan). As communicated at the 2nd AHWG meeting a BCF value of < 500 (or preferably < 1000 to align with current US guidance on PBTs) should therefore be considered as a criterion for the EU ecolabel to demonstrate low bioaccumulation concern.</i></p>	<p>REJECTED Despite in the first meeting a value of BCF < 500 was presented, finally was decided to maintain the current value of BCF < 100.</p>

Second proposed Criterion 4: Raw materials

Comments received in AHWG2/written form	JRC Dir. B response
<p><i>Mineral based oils can't be accepted:</i></p> <ul style="list-style-type: none"> • <i>CO2 circle not closed.</i> • <i>Enormous environmental risks.</i> 	<p>ACCEPTED Mineral base oils, that suppose an environmental risk, are not included in the scope, because they are not able to comply with Criteria 1, 2 and 3.</p>
<p><i>I think the coherent text is "Petrochemical or biochemical alcohols and carboxylic acids (in different percentages)"</i></p> <p><i>About table 3.12 of TR.2.0:</i></p> <ul style="list-style-type: none"> • <i>The biodegradability of PAO and PAG varies between 30% to 70%.</i> • <i>The table lacks a row of semi-vegetable oils</i> 	<p>REJECTED This information is from a specific source, for this reason no changes have been introduced.</p>
<p><i>Please expand Table 3.12 to include a line for farnesene-polyolefins as renewable, readily biodegradable and low toxicity.</i></p>	
<p><i>I would like to have some clarification on the meaning of the acceptable Raw Materials in section 4. I suspect you are saying that the raw materials should either be renewable or from synthetic origin, which you have defined as being PAO or PAG? If I am correct, it would be possible for a PAG or PAO based product which contains 0% renewable carbon to be registered as long as the product met the other criteria?</i></p> <p><i>Please explain your rationale for the narrow definition of synthetic products being simply PAO or PAG? Synthetic base oil is defined as "being comprised of, man-made chemical compounds that have lubricating properties similar, or superior, to comparable mineral oil". PAO and PAG are certainly synthetic but they are not the only synthetic products available, many of which could not be incorporated in an Ecolabel product as per your definition. I would suggest that you define synthetic base oil in a better way and remove reference to PAO and PAG. This will widen the scope of R.materials further.</i></p>	<p>The aim of the criterion was to open the scope and include also products from non-renewable sources, but that are able to comply with other requirements (biodegradability, toxicity, substances).. Finally, the Criterion about raw materials has been deleted to open the scope to those non-renewable synthetic lubricants compliant with other requirements.</p>
<p><i>The inclusion of PAO and PAG increases the dependency on the fossil oil economy substantially. This is all the more true since 50% of the lubricant is lost in some form into the environment during each use cycle. When mineralized to CO2 it stays in the biosphere.</i></p> <p><i>Remove reference to PAO and PAG</i></p>	<p>REJECTED</p>
<p><i>According to EN 16227 on the definition of biolubricant, moreover the low toxicity and biodegradability, minimum 25% must come from renewable materials. So if the renewable carbon content is less than 25%, we can not use the term "Biolubricant".</i></p> <p><i>What about the criteria on CO2 reduction?</i></p>	<p>Finally, the criterion about raw materials has been deleted to open the scope to those non-renewable synthetic lubricants compliant with other requirements</p>
<p><i>Basically we do not support the fundamental change by adding non-renewable base oils as main components. We do recommend to keep the existing limits for renewable content ($\geq 50\%$ for ALL, ≥ 70 for TLL). Otherwise we expect massive confusion in the market and a significant loss of EEL approvals for currently awarded products.</i></p>	<p>With this approach, an EU Ecolabel will not necessary be a bio-based lubricant. However, in the criterion of traceability has been included a reference to CEN biolubricants standard.</p>
<p><i>If JRC is intent on retaining the possibility of lubricant producers formulating with a base stock containing no renewable material then as a compromise we suggest that a lubricant should contain at least 25% renewable raw</i></p>	

Comments received in AHWG2/written form	JRC Dir. B response
<p><i>material to be eligible for the ecolabel. This is in line with the CEN biolubricants standard 16807.</i></p> <p><i>It is understood that some environmental standards such as Blue Angel and EPA VGP do not contain a requirement for a certain level of renewable raw material. However, we believe that removing the requirement for a high content of renewable material from the ecolabel criteria weakens its environmental credentials. We also note that UBA/RAL has committed to including an amount of renewable raw material in the next update of the Blue Angel (communicated at the meeting on 24th October in Berlin) and so it makes no sense for JRC to eliminate this requirement if the aim of this exercise is to harmonise with Blue Angel criteria (since JRC would only have to re-introduce an amount of renewable material once a revised Blue Angel includes renewable raw material at its next update). It is also incongruous that most of the changes proposed by JRC have made attaining the ecolabel more difficult whereas this proposed relaxing of this criterion appears to make it easier for applicants to formulate products suitable for the ecolabel. The proposed change also means that products that meet the ecolabel criteria may not be considered to be biolubricants due to the requirement for at least 25% renewable material in CEN 16807. This will create confusion amongst stakeholders and consumers who naturally associate the 'bio' prefix with environmentally acceptable lubricants.</i></p>	
<p><i>As the meaning of criterion 4 is not comprehensible we would like ask for the intended idea: How is the 2nd proposal for criterion 4 meant? E.g. for ALL group: Are $\geq 60\%$ renewable ester or $\geq 60\%$ (non-renewable synthetic ester or PAO or PAG) or $\geq 60\%$ of any combination of renewable and one of the 3 mentioned alternatives accepted? E.g. 50% renewable + 15% PAO = 65% would meet the limits for EEL? E.g. 50% PAO + 15% non-renewable synthetic ester would meet the limits for EEL? And what could the remaining part of the formulation beyond renewable, non-renewable ester, PAO or PAG be? If this is meant criterion 5 seems obsolete because practically no minimum renewable content is defined</i></p> <p><i>With a fraction of e.g. 60% renewable, 40% can still be of non-renewable resources like PAO or PAG. Remove reference to PAO and PAG. When a fraction renewability is defined it automatically include the possibility for non-renewable base fluids like PAO or PAG when they meet the other criteria.</i></p>	<p>The criterion has been deleted.</p>
<p><i>One must compare the evidence for different types of base fluids including aspects on the 50% loss, the lifetime of the lubricant and the possible return of the lost lubricant into the production phase.</i></p>	<p>ACKNOWLEDGED</p>
<p><i>What is the current fraction of vegetable oils produced that is designated to other products apart from fuels? According to Earth Policy Institute in 2005 6% of the biomaterials grown worldwide was applied in biolubricants. What is the figure in 2017?</i></p>	
<p><i>The conclusion is misleading. Biodegradation of PAO and PAG varies between $30 - 70\%$</i></p>	<p>ACKNOWLEDGED</p>
<p><i>In the preliminary report, synthetic oils were listed as having several environmental impacts (e.g. higher GHG emissions during production phase compared to mineral base oil, resources depletion, ozone depletion, photochemical ozone creation potential, etc.), however the second technical report only addresses toxicity, biodegradability and bioaccumulation topics. Why are the other environmental impacts not taken into account</i></p>	<p>During the first consultation some stakeholders pointed out the limitation of existing evidence on LCA because there is not a comparison between all the base fluids.</p>

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<p><i>anymore?</i></p>	<p>From the LCA, the conclusions were that the synthetic base fluids have a better environmental performance than mineral, and for this reason they were included in the scope as long as they could comply with the biodegradability and toxicity requirements.</p>
<p><i>Renewable raw materials are at the heart of our business and are the basis for our sustainability anchoring. We use about 90% renewable raw materials, including animal fat, rapeseed oil, sunflower oil, soybean oil, palm oil, palm kernel oil, coconut oil and their derivatives.</i></p> <p><i>Our raw materials are not only sustainable thanks to their renewable nature, they also valorise by-products of other industries. E.g. rendered animal fat, stakeholder's main raw material, is made from by-products from the meat industry.</i></p> <p><i>Allowing lubricants based on mineral oils can't be accepted. This will support the dependency on mineral based oils. When investigating the life cycle of a lubricant, in general 50% gets lost during the use-phase, 25% can be re-used and 25% is burned. If we assume that the lost lubricant is biodegraded, then 75% of the lubricant is converted to CO2. Using renewable raw materials is the only way to close this CO2 circle. Besides, when 60-65 or 70% of the lubricant must be renewable, there is still room for 40-35 or 30% non renewable material such as PAGs/PAOs. In the additional comments on page 55 there is stated: "there is no absolute evidence which supports bio-based as a superior environmental option".</i></p> <p><i>The stakeholder agrees on the fact that there is indeed no absolute evidence yet of bio-based products being a superior environmental option. However instead of automatically considering mineral oils equal to bio-based products we would urge the JRC to review the approach. Mineral oils and other products 100% derived from mineral oils (like certain PAG's and PAO), can only be put equal to bio-based materials after thorough analysis. We would ask the commission to select a range of environmental indicators (eg. CO2 – reduction, contribution to global warming, land occupation, depletion of fossil reserves...) on which they want to evaluate both product categories. This would allow to compare both categories in an LCA. This is in our opinion the only valid method to compare different product categories and their impact on the environment.</i></p> <p><i>Like mentioned above, the stakeholder can follow the rationale of the commission and agrees that bio-sourced materials do not have no environmental impact by definition, namely nitrification and land occupation can be potential points of attention in agriculture. These issues can for big parts be solved by performing agriculture in a sustainable way. However mineral oils have an undeniable and intrinsic environmental impact, which is inherently linked to the toxicity of the product.</i></p> <p><i>The stakeholder supports the use of sustainable renewable materials and this is supported by our CSR policy. It is the ambition to source from sustainable suppliers, with the use of a supplier code of conduct.</i></p>	<p>PARTIALLY ACCEPTED</p> <p>LCA analysis was revealed difficulties to compare different base oils, because there are not a comparison covering all the base fluid considered and because the potential environmental impact of a base fluid depends on the impact category analysed.</p> <p>For this reason, during the second revision, a research was done to cover other environmental aspects not included in the LCA: biodegradability and toxicity of the lubricant.</p> <p>Finally, the criterion has been deleted and the raw materials accepted are only influenced by the Criteria 1, 2 and 3.</p>
<p><i>Criteria 4 and 5 disproportionately punish renewable material because all extra requirements are ONLY referring to renewable material.</i></p>	

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<i>Not all base fluid types are submitted to the same requirements: vegetable oils, for instance, will have to go through ASTM D6866 and account for sustainable growth (criterion 5), whereas synthetics will have nothing to justify. Equality of treatment is not respected, which introduces a bias towards some technologies over others.</i>	
<i>All base fluids should be assessed according to an independent method of determination, even if they are known to be non-renewable. As a principle, it is better to have independent assessments rather than self-declarations whenever possible.</i>	ACKNOWLEDGED
<i>In the list of raw materials there are also "poly-alphaolefins (PAOs) or poly-alkylene glycols (PAGs)", but these are substances characterized by low biodegradability and are not from renewable source. It is therefore considered that they should not be a preferential basis for formulations.</i>	REJECTED
<i>We would need binding guarantees about the agency/authority ability and proposed process to safeguard Confidential Business Information. Compositional information of formulated lubricants is highly sensitive and must be protected from inadvertent release to potential competitors.</i>	ACKNOWLEDGED All data provided to the competent body during a certification procedure is treated with complete confidentiality.
<i>No worries for current manufacturers, so logically feasible. A licence holder asks about a precise definition of synthetic esters. Could other esters be accepted? According to him, non-fluid esters are non-biodegradable. Licence holders are unanimously saying that there is more severity on renewable raw materials and that is would encourage the use of petroleum raw materials (synthetic).</i>	ACCEPTED Finally, the criterion has been deleted opening the scope to all those lubricants able to comply with the Criteria 1, 2 and 3.
<i>One stakeholder is pleased to see that clarity to this section has been added. We would like to suggest further clarity related to poly-alphaolefins and STRONGLY Recommend the use of PAO and hydrocarbon and related type (This is the language used for ISO 6743 part b that defines and HEPR fluid. This will allow for the use of PAO, IPO (internal poly olefins) and highly refined readily biodegradable bases like GRP III + that are used in our EnviroLogic and Futerra product line. GRP III + base oils act and perform like PAO and IPO's and therefore should be included in this by incorporating HEPR base fluids</i>	
<i>One stakeholder is very pleased to see a new approach for this Criteria. We believe that this is an enlightened method of requiring environmentally friendly main components. The listing in b) needs to be expanded to specifically allow bio-polyolefins, and synthetic hydrocarbons produced by Gas to Liquid base oil synthesis. Re-refined oils do not meet this requirement and should not be allowed. We suggest that you use the ISO 6743 designations: HETG for the vegetable oils, HEES for the synthetic esters, HEPR for the polyalphaolefin (PAO), Gas-to-Liquids Group III (GTL) and farnesene-polyolefins Group III, and HEPG for the polyalkylene glycols.</i>	
<i>Requirement to include PAO or PAG, which are typically synthetic base fluids based on fossil resources, is hard to understand. It is simply misleading for the end user of an Ecolabel certified product to allow (or even require) the use of fossil material based. Such a criterion defeats the initial purpose of the revision of the criteria: to lower environmental impact of products</i>	REJECTED Finally, the criterion has been deleted opening the scope to all those lubricants able to comply with the Criteria 1, 2 and 3.

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<p><i>by considering not only impact in operation and disposal but across the whole life cycle of the product. Synthetic esters are very specific base fluids that are at the same time synthetic, high performance products, as well as fluids that may contain a high amount of renewable carbon content. The criterion as proposed simply erases the unique added value of synthetic esters, by putting all synthetics at the same level.</i></p>	
<p><i>The use of synthetic oils is only beneficial if they can be used longer than traditional mineral oil as they consume more resources during production. Many products in the scope of this Ecolabel are not intended to be used for a very long time but are made for "loss" lubrication. We question if the use of synthetic oils is beneficial over the life cycle compared to "normal" mineral oil based base oils. In our opinion the label should focus on environmental and human health toxicity and the environmental fate of the components.</i></p>	<p>ACKNOWLEDGED In fact, using synthetic oils is only accepted in those cases that the lubricant does not suppose environmental and human health toxicity.</p>
<p><i>We highly recommend not to favour biobased material use in ecolabeling as this might lead to an increased demand in the market leading to unwanted environmental and social effects as land grabbing, mono cultures, use of GMO, destruction of local production structures for food production. It is also non demonstrated that their environmental performance is superior. Even if the amounts used for this product group might not influence the raw material market and it is possible to source the materials from schemes as indicated in criterion 5, the incentive is given to shift rural production towards technical applications and endanger natural landscapes or traditional food production. Moreover, there are concerns that certification options currently available, do not offer enough guarantees of sustainable production. We consider that the reduction of hazardous substances, low aquatic toxicity and high biodegradability should be the environmental performance requirements set by the Ecolabel, as these are the main impacts of lubricants. They should be addressed regardless of the origin of the raw materials used to manufacture them.</i></p>	<p>ACCEPTED</p>
<p><i>We are in favour of deleting criterion 4 and 5. As stated in the draft technical report (Dec 2016) studies indicate that the release to the environment during use and disposal stages can be critical from an environmental point of view. These impacts are addressed: Use phase: Criterion 1, 2, 3 disposal stages criterion 9. We don't see a need to address these impacts indirectly again with criterion 4 by favouring EAL. We have looked at existing drivers for the EU Ecolabel (Marine Vessel General Permit and the Belgian criteria for sustainable forestry Principles and Criteria for a responsible forest management in Belgium). It wouldn't be a problem that there is no longer a minimum content of renewable material.</i></p>	<p>ACCEPTED</p>
<p><i>The Draft 2 wording including % minimum limits is confusing and redundant. If the proposed policy to allow non-renewable synthetic esters, PAOs and PAGs at any percentage, including 100% is adopted, then Criterion 4 is not needed. The Draft 2 rationale states that you found it was not easy to have a clear picture of bio bio-based lubricants as a superior environmental choice and that you intend to include lubricants such as PAGs, PAOs and non-renewable ester base oils providing they present good biodegradability, low toxicity and do not bioaccumulate (which you</i></p>	<p>ACCEPTED</p>

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<p><i>regard as the most relevant environmental aspects for loss lubricants, compared to conventional mineral lubricants). Mineral oils are not specifically excluded but their content is probably limited by Criteria 2 and/or Criteria 3 (Aquatic Toxicity, Biodegradability or Bioaccumulation).</i></p> <p><i>Since synthetic esters, PAOs and PAGs may not be renewable, this means that for those base oils, there is no minimum limit at all on renewability anymore e.g. an Ecolabel product can consist of a very high percentage of non-renewable synthetic ester, PAO or PAG, providing it meets Criteria 1, 2 and 3. However, as Draft 2 is written, an ALL class Ecolabel product that is based only on carbon derived from renewable raw materials, must contain at least 60% of it (so this base oil does have a minimum renewability limit). The remaining 40% of an ALL Ecolabel product e.g. grease thickener, additives or even mineral oil, can be anything that meets all other criteria, notably Criteria 1, 2 and 3.</i></p> <p><i>Draft 2 seems to regard mineral oil as fundamentally worse than synthetic base oils (esters, PAOs and PAG) even when the synthetic base oil is derived from mineral oil. However, mineral oil is probably excluded by Criteria 2 or 3. Therefore no % limits are required and there is no need to determine the renewable carbon content e.g. by ASTM D6866.</i></p> <p><i>If the Draft 2 proposal to drop minimum renewable content is reversed, then the existing Ecolabel limits should be retained. The limits proposed in Draft 1 restrict the use of new technologies that may offer superior performance, increase the lifetime of the lubricant and in turn, increase consumer adoption of the Ecolabel.</i></p>	
<p><i>If synthetic esters are allowed under the same conditions than carbon derived from renewable sources, what is the profitability of introducing the ASTM D6866 to determine the renewable carbon content of an ester in general? It is discriminatory and unfair. The logical position of the ester manufacturers will be not to declare anything as renewable to avoid unnecessary tests and costs without payback.</i></p>	
<p><i>Keep the existing criteria of balance of C just supported by declaration (possible to audit)</i></p>	
<p><i>It is not clear why the current Carbon method is not allowed anymore. Now it is compulsory to pay for an extra test.</i></p>	
<p><i>What is the impact on such an approach?</i></p>	
<p><i>Refer to the ASTM test ONLY in case the chemical identity of the Carbons cannot be determined to a sufficient degree.</i></p>	
<p><i>ASTM D6866 to prove renewable carbon content is not adding value, only costs.</i></p>	ACCEPTED
<p><i>Certified RM's is disproportional. Why require that natural origin base fluids are certified versus no additional requirements for e.g. synthetic based PAO's and PAG's.</i></p>	
<p><i>Furthermore, there is limited availability on the market for certified base oils, for example Oleic acid.</i></p>	
<p><i>Additionally, proving the renewability content with a test method ASTM D6866 is an extra burden for oleochemicals.</i></p>	
<p><i>This adds to the costing only for renewable, favouring the use of mineral based oils. Why is this additional testing required? If the composition of a lubricant is given, with the sources of the raw materials indicated, the renewable carbon content can perfectly be calculated. If a lubricant producer doesn't want to give the composition of the lubricant, then the ASTM D6866 test could be an alternative to indicate the renewable carbon content. Otherwise a</i></p>	

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<i>calculation based on the composition should be sufficient.</i>	
<p><i>We agree with the assessment and verification requirements listed including the use of D6866 to determine modern carbon content. It is sufficient to declare the base oil type on the application since it is easy to verify by infrared analysis whether a base oil is a pure hydrocarbon, ester-veg oil or PAG.</i></p> <p><i>Use D6866 to determine modern carbon content.</i></p>	PARTIALLY ACCEPTED

Second proposed Criterion 5: Origin and traceability of renewable raw materials

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<p><i>Since the moment that according to the criterion 4 b), synthetic esters are allowed, it is discriminatory asking for this only for renewable materials. Simple traceability based on the internal ISO 9001 should be enough</i></p>	<p>ACKNOWLEDGED</p> <p>All renewable materials (being 100% of a renewable substance or the renewable part of a synthetic ester) would be affected by this criterion.</p> <p>Effectively, mineral origin substances would not be included in this requirement; nevertheless, non-renewable materials would be higher difficulties in order to comply with the rest of criteria (toxicity, biodegradability and bioaccumulation).</p> <p>The goal of this criterion is not to penalize renewable materials, but to ensure that they are sourced according to sustainability principles and have a good environmental profile in line with the goals of EU Ecolabel.</p> <p>The criterion has been modified in order to set feasible requirements according to the market situation of renewable substances and certifications.</p> <p>Non-mandatory requirement have been proposed for most renewable materials. Only palm oil is required to be sourced from third-party certified origin in a percentage of 25%.</p>
<p><i>That would mean to disadvantage renewable materials on one side compared to synthetic hydrocarbon oil (PAOs), synthetic esters and PAGs on the other side, because for the latter you do not need the certificate which means less work load. We suggest to ask for sustainability for all base oils which are acceptable under criterion 4 (see a) and b) on page 54).</i></p>	
<p><i>Ester manufacturers we are sourcing from rapeseed, sunflower seed, palm, coconut, olive, tallow,... and in my understanding there is not a recognized standard covering all these materials. On the other hand more developed standards as RSPO (only involving palm) are still under development and nobody is offering 100 % traceable sustainable palm derived materials. On the other hand this rule may represent an increase in the price of the raw materials (because shortage) acting as a a constraint in the development of environmental friendly lubricants</i></p>	
<p><i>Requiring traceability for renewables and not for other product groups is disproportionately disadvantaging renewables.</i></p>	
<p><i>As Ecolabel-certificate holder and producer of more than 30 products on the LuSC list, expresses their concern regarding the proposed criteria in the second technical EU Ecolabel for lubricants report. The proposition is discriminating for renewable materials in a way that it would be impossible to use renewable raw materials for Ecolabel products. It is disproportional that renewable must prove their sustainability and mineral based products can be used without any ecological considerations. Additionally, the market is not ready to supply sustainable raw materials with certificates and it would also impose a drastic price increase that can't be justified. Overall the proposed criteria would result in less products with an Ecolabel, reducing the impact of the label.</i></p>	
<p><i>The rationale of the commission to allow PAGs/PAOs, is that there should be no discrimination based on the source of the raw material, but to focus on the biotoxicity, bioaccumulation and aquatic toxicity. Demanding a certificate scheme for only renewable materials is not only discriminating compared to PAGs/PAOs, it is adding an enormous cost premium to renewable raw material, making those product not competitive anymore. Certified raw materials are more costly than non-certified raw materials. When the commission is demanding for a segregated supply chain as stated on p61 of the document, then this burden would be totally impossible to handle. In practice, this would lead to an enormous shift to non-renewables, which can't be the idea of the Ecolabel.</i></p>	

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<p><i>If JRC allows the use of non-renewable base stocks to provide the bulk of the lubricant then the requirement to provide certification that any renewable component is obtained from a sustainable source should be dropped. This requirement will add considerable cost to any lubricant manufacturer who formulates with renewable material through additional administrative burden and potentially higher raw material price. Lubricant manufacturers who chose to formulate with non-renewable base stick will not have this burden and so will be at a competitive advantage. In effect, this requirement will drive lubricant manufacturers towards using base stocks exclusively from a non-renewable source because it is an easier option in terms of complying with the ecolabel criteria.</i></p>	
<p><i>Such systems are already available for RRM, due to the Renewable Energy Directive and the work of CEN/TC411. A similar approach for petroleum-based products is still missing: This discrepancy must not lead to a discrimination of RRM-based ester oils! The proposed alternative "carbon derived from RRM" or "synthetic ester, PAO or PAG" is unfair.</i></p>	
<p><i>Only vegetable oils are included. No reference is made to animal fats which is a waste product.</i></p>	<p>REJECTED Within the current criterion proposal, it would cover all renewable materials, both animal and vegetable origin.</p>
<p><i>If Palm and soybean oils are seen as more controversial focus on those base fluids to decrease the controversial issues.</i></p>	<p>PARTIALLY ACCEPTED It is proposed to establish only mandatory requirement on certification for a minimum percentage when palm oil derivatives are used as ingredients.</p>
<p><i>While it clearly states the outline of sustainability criteria and schemes it still concerns renewable energy and not renewable raw material.</i></p>	<p>REJECTED There are existing certifications which cover all renewable materials (not only energy).</p>
<p><i>The consequence of criterion is 5 is that an estimated 75% (my estimation based on limited information) of the approved base fluids on the LuSC-list are affected.</i></p>	<p>ACKNOWLEDGED</p>
<p><i>Moreover we do not know if the supplier of the currently approved renewable base oils will be able to offer the newly requested documents in time. It would not be acceptable if the EEL would get lost due to missing confirmation by the suppliers.</i></p>	<p>Information on current used of certified renewable raw materials have been gathered from current EU Ecolabelled products in order to assess the potential impact on current licenses.</p>
<p><i>General statement: This criterion only make sense if the concept of a minimum content of renewable base oils will not be cancelled as suggested in 3.4 / criterion 4.</i></p>	<p>ACKNOWLEDGED</p>
<p><i>We think we should keep the criterion but simplify it to make it feasible to industrials: we propose to reduce the criterion to 2 or 3 sub-criteria that would be: Easily achievable by industrials Aligned by criteria verified by NGOs when assessing the sustainability of plantations (e.g. French NGO Les Amis de la Terre).</i></p>	<p>The criterion has been modified in order to set feasible requirements according to the market situation of renewable substances and certifications.</p>
<p><i>The selected schemes are biased towards the exclusion of renewability. The list of other ecolabels excludes for example the Hongkong Scheme where renewability content is included in the scheme.</i></p>	<p>ACKNOWLEDGED</p>

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<p><i>Segregated would incur not only a severe premium in order to buy the certified raw materials but it would have drastic logistic implications. The complete supply chain needs to be segregated, meaning adding new raw material tanks, different piping, new end-product tanks, separated and less flexible transport.</i></p> <p><i>We are a member of RSPO since 2007 and we have been working on implementing RSPO mass balance and segregated since then. Despite all our efforts we are after 10 years still not capable of offering a segregated RSPO product, this due to the complexity of the process. Knowing that it took more than 5 years to organize the current sustainable mass balance supply chain for palm and more than 10 years for segregated while RSPO is a widely accepted certification body exists, setting this up for oils without widely available certification scheme, where the lubricant industry is only a niche customer, would take even longer. Besides our focus on the renewability of our raw materials, we want to increase our share of certified sustainable materials. This is the direction, but the reality is that the market is not ready. An important raw material for the production of bio lubricant is Sunflower oil. This oil can't be sourced with sustainability certificate. In theory this could be the case, in reality this is impossible to find. If the commission would like to proceed in this way, there should be an accepted certification scheme proposed. The proposed timeline for implementing this is far from realistic to achieve in 2018-2019. Nevertheless, we keep working on sourcing our raw materials as sustainable as possible.</i></p> <p><i>In particular by purchasing certified sustainable palm oil. Palm oil represents between 5 and 10% of the total volume of our raw materials. We purchased 50% of our consumed volume of palm oil in 2016 as RSPO certified with a target of 100% by 2018 (incl. Book & Claim, Mass Balance and Segregated). We want to address effectively the ongoing challenges linked to the use of palm oil. Together with the Avril Group and The Forest Trust (TFT), we developed at the end of 2016 a dedicated Sustainable Palm Policy. Our ambition is to obtain palm oil from suppliers who can prove that its cultivation does not contribute to the destruction of forests and peatlands, and respects the rights of workers and local communities. The commission should also make a difference between vegetable and animal based oils. Animal based oils that are frequently used as raw material for lubricants should be considered as sustainable by definition. The animals are raised for the meat industry and the oils are considered as a waste stream. Therefore using these oils in lubricant is not putting stress on the environment, in contrary they add value. The bad image of renewables is mainly based on the contribution of soy and palm to deforestation, the impact on animal wild life and the violation of human rights. European raw materials are subjected to the common agricultural legislations, and are the main source of the European lubricant market. Asking for a certification scheme for these oils is therefore disproportional.</i></p> <p><i>To comply with the rationale that not all renewables are sustainable, there can be a push to a certification scheme, but not as it is proposed right now. Therefore we ask to cancel this criteria completely, In the same mindset, there should be a certification scheme for mineral based oils as well. This certification scheme should take into account the biological and ecological disruptions. Mineral oil sourced from locations with minimal pollution impact should be favoured, just like agriculture from sustainable source is favoured.</i></p>	<p>ACKNOWLEDGED</p> <p>The first-hand experience of stakeholders with current certifications schemes and the current limitations have been taken into account for setting the final proposal.</p>

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<p><i>A licence holder asks if every raw material is concerned with this criterion? What content? What level of information is needed? Are "fatty acid" of the esthers included? (because they contain palmoil). In France, colza oil and sunflower oil are mainly use. The information seems to be difficult to provide from raw materials suppliers and a licence holder is worried about the future cost of raw materials due to this evolution. Why not used the ISO biobased standards (ISO 16848)? French licence holder agree with adding this criterion but don't think it would be feasible.</i></p>	<p>ACKNOWLEDGED As it is formulated, the proposed criterion includes all renewable raw materials, including the renewable part from synthetic substances. ISO 16848 only refers to requirements for Business to Business communication for bio-products.</p>
<p><i>The term bio can only be used in accordance with CEN 1622 and ASTM is used to verify the bio content (in line with Blue Angel) Verification: Results of the ASTM</i></p>	<p>ACKNOWLEDGED A requirement for the term bio in accordance to CEN 1622 has been included, in line with Blue Angel.</p>
<p><i>There are concerns on limitations of certification schemes to guarantee sustainable production, which justify our demand for not setting mandatory requirement on biomass content. We would recommend the JRC to further investigate possibilities of compliance with ISO 13065 sustainability criteria when biomass is used as raw material.</i></p>	<p>ACKNOWLEDGED ISO 13065 is referred to Sustainability criteria for bioenergy.</p>
<p><i>RSC Bio Solutions believes that this Criterion should be dropped. The certification schemes do not exist for the types of vegetable oils like canola that are almost always used in Ecolabel lubricants. This Criterion would only apply to a subset of base oils used in Ecolabel lubricants.</i></p>	<p>ACKNOWLEDGED Regarding the existence of third-party certifications of renewable materials at European level, it has been found that there are available certifications, as described in the rationale. Nevertheless, comments from industry indicate that these schemes are not mature and are not commonly used for suppliers from lubricant sectors. The criterion has been modified in order to set feasible requirements according to the market situation of renewable substances and certifications. It is proposed to establish only mandatory requirement on certification for a minimum percentage when palm oil derivatives are used as ingredients.</p>
<p><i>There is no internationally recognised third-party certification of vegetable oils, therefore it cannot be legislated for.</i></p>	
<p><i>The certification schemes do not exist for the types of vegetable oils like canola that are almost always used in Ecolabel lubricants. Right now, this Criterion would only apply to a subset of base oils used in Ecolabel lubricants. Note that the renewable part of the bio-polyolefins (farnesene) comes from sugar that has been certified by the RSB and has Bonsucro approval. This Criterion needs more work, and maybe should be voluntary until suitable certification schemes exist for canola oil</i></p>	
<p><i>Certification of a third entity (eg NGO) is required for the origin and traceability of renewable raw materials; also in this case, it violates the principle of loyalty of the information chain between the producer and the user, requiring downstream companies to request third party certification of their suppliers' products, and it is also not clear how is it possible find this information. The requirement would in practice be impossible to meet by small and medium-sized companies.</i></p>	
<p><i>We propose to postpone the discussion to future updates of the criteria, waiting for a wider diffusion of the certification schemes of vegetable oils sustainability.</i></p>	

Comments received in AHWG2/written form	JRC Dir. B response
<p><i>We have serious doubts that criterion 5 is feasible in reality and we propose to delete this requirement.</i></p> <ul style="list-style-type: none"> • <i>According to September 2017 statistics less than 400 products from the product group lubricants have been awarded with the EU Ecolabel. Increasing the administrative burden further is hence something to avoid. The volume of certified lubricants is hence very limited and it is unclear if applicants will be able to find certified versions of the ingredients they use.</i> • <i>It is unclear if certificates can be found for certain resources such as products derived from sunflower and tallow</i> • <i>We are in doubt if we should favour RSPO certified resources given the questionable added value of this certification scheme</i> <p><i>On top of that the criterion is limited to renewable resources which do not seem justifiable given the absence of a sustainability requirement for mineral resources.</i></p>	
<p><i>We think we should keep the criterion, because origin and traceability of products is currently a rising topic (see the French Devoir de Vigilance Law, recent papers from NGOs regarding palm oil or EE labelled paper product, etc) and the EE reputation could be put at risk if plantations are mismanaged (for example : https://www.greenpeace.org.uk/press-releases/great-northern-forest-pulped-toilet-roll-velvets-dirty-secret/).</i></p> <p><i>In case criterion 4 is effectively removed and in order to make the criterion simpler, we suggest to add a threshold in the content of renewable materials above which the producer would have to certify the sustainability of the bio-based material. This would apply to :</i></p> <ul style="list-style-type: none"> - <i>palm oil (not largely used among French producers): minimum content of segregated or identify preserved palm oil in the product.</i> - <i>other oils (such as rapeseed and sunflower oils that are commonly used among French fabricants). As of today it is difficult to propose operational criteria, we suggest to align by criteria verified by NGOs when assessing the sustainability of plantations (e.g. BEUC)</i> <p><i>It should be noted the consequences of these changes in comparison of the current criteria : the removal of a minimum renewable content (criterion 4) and the conservation of requirements linked to traceability of renewable raw materials (criterion 5) would not favour bio-based lubricants in the future.</i></p> <p><i>Adverse consequences of bio-based lubricants have been highlighted by the BEUC and various industrials during the AHWG (deforestation, land use, etc.). The EE would therefore steer the development of mineral and synthetic lubricants as requirements are less stringent.</i></p>	<p>ACKNOWLEDGED</p> <p>These considerations have been taken into account for the third proposal. It is proposed to keep the criterion with less restrictive requirements, in order to cover this area and set a criterion which is feasible for industry.</p>
<p><i>We agree to the specific requirements of 3.5. However, we have to emphasize again that it will need some years to establish the new requirements in the value chain of base oils. Therefore, a transition period has to be conceded.</i></p>	

Second proposed Criterion 6: Packaging requirements

Comments received in AHWG2/written form	JRC Dir. B response
<p><i>Criterion 6 and 9 refer to waste and recycling aspects. Current scope refers to a very large degree to B2B sales and not B2C and are therefore 6 and 9 are of low relevance. Therefore 2 criteria referring to B2C is disproportionate in relation to the number of other criteria.</i></p>	<p>REJECTED Criterion 9 refers to B2C; however Criterion 6 is not exclusively for this type of products. The aim of this criterion is to minimise the environmental impact of waste generated due to lubricant packaging and improper dosage, including all the plastic packaging.</p>
<p><i>What exactly are private end consumers? It must be clear for applicants and CBs what is meant here since it refers to a criterion.</i></p>	<p>ACCEPTED Text has been clarified.</p>
<p><i>Clarification is needed for how the criterion should be interpreted in cases where the product is sold for both private end consumer and B2B and when the product is not a bulk product and is sold to B2B.</i></p>	
<p><i>Proper definition of “private end consumers” and “sold in bulk (B2B)” are needed in order to apply this criterion in an harmonized way. What with B2B not sold in bulk?</i></p>	
<p><i>Believe the distinction between B2C and B2B is irrelevant, as even those lubricants sold B2B may still end up being used by an individual with potential exposure to the environment.</i></p>	<p>ACCEPTED The aim of this criterion was to ensure the right waste packaging treatment. In the previous document a question about current used take-back systems was included, however low information was received about this issue. On the basis of this system is not extensively used in the B2B business, the criterion has been modified and this requirement has been deleted.</p>
<p><i>About take-back system: What is expected here? A compulsory system? A location place?</i></p>	
<p><i>No take back systems established so far.</i></p>	
<p><i>It is required to make consistent the packaging take-back mechanism with the complex waste collection rules, that place the user in charge of disposal of the used packaging and that make the collection and transport extremely complex for third parties. It should also be clarified that, even where a manufacturer's withdrawal obligation was required, the costs of transporting the packaging from the user to the producer remain chargeable to the user. In the case of BtoB, the packaging take-back is also complicated by the different non-harmonized national regulations.</i></p>	
<p><i>How will the provision of a take back system be verified?</i></p>	
<p><i>What kind of take-back system is it referred to? Such a system is very difficult to put in place. An efficient take-back system is actually a full recycling system that involves many players, a full logistic system, cleaning and inspection of packaging, and lots of additional costs.</i></p>	
<p><i>Take-back systems should not be included, as those may be available in some geographies but not in others, or for product sold through some channels but not through others. In that situation, how would the product in general be classified according to the Eco-label?</i></p>	
<p><i>Can the existing take-back containers, made out of non recycled material before, stay in the cycle after the new regulation introduced until they need to be discarded? It would have a negative environmental impact to destroy them and replace with new, but 25% recycled.</i></p>	

Comments received in AHWG2/written form	JRC Dir. B response
<i>Why 25% and how must this be enforced?</i>	Specific test to determine the share of recycled material used is not available, for this reason the proposed assessment and verification of this criterion will be information provided for the producer of the packaging, where the percentage of recycled content of material used should be indicated.
<i>Recycled plastic is an article and may contain a fraction of SVHC > 0.1%? It is currently not restricted in the criteria</i>	Following other similar PGs (detergents for instance), this criterion it is not suggested to be introduced. This requirement will be difficult to implement together with the requirement on recycled content.
<i>Regarding the updated criterion and discussion during the AHWG 2: We do not support additional requirements on SVHC in plastic packaging if it is not achievable by industrialist.</i>	
<i>French EE lubricants are essentially B2B products. As stated after the first AHWG, packaging has an overall low impact in the life cycle of lubricants and therefore the criterion should not be impossible to achieve for industrials.</i>	ACKNOWLEDGED
<i>Regarding the updated criterion and discussion during the AHWG 2: We support the sub-criterion regarding the minimum recycled content in plastic packaging, provided that the criterion is feasible for industrials.</i>	ACKNOWLEDGED
<i>We do not know if such packaging material is available. Moreover, this request will for sure increase the costs because additional packaging material has to be handled.</i>	ACKNOWLEDGED
<i>The classification of packaging, particularly plastic packaging, is relevant to the Ecolabel scheme. This should apply for lubricants sold both B2C and B2B. If there is no packaging (ie products sold in bulk), then obviously that criteria would not apply. In terms of the technical availability of plastic containing 25% recycled product, we not comment and suggest feedback should come from the plastic packaging industry.</i>	ACKNOWLEDGED
<i>There is no take-back system in the field of French regulation but a specific sector which concerns every field, it's heavy and expensive to implement. And manufacturers contribute to the eco-packaging tax linked to the waste system in France.</i>	ACKNOWLEDGED
<i>A licence holder says that eco design would not be possible without heavy investment on the packaging tool.</i>	ACKNOWLEDGED
<i>Most manufacturers do not use plastic. A licence holder says that the technology is very expensive, it only exists on small packaging of 1 litter and technology doesn't exist on packaging used for example for hydraulic fluids. Manufacturers are working on this point but no deadline has been announced yet.</i>	ACKNOWLEDGED
<i>Criteria 6: More research should be perform to understand compatibility of lubricants with such containers, cost associated with developing containers and availability of such containers in the market today.</i>	

Comments received in AHWG2/written form	JRC Dir. B response
<p><i>The recycled content should refer to post consumer material, furthermore we would tend to favour a minimum content of 50 % recycled material.</i></p> <p><i>Post production material is usually already recycled very efficiently. The Ecolabel should be used as an instrument that supports the EU intention to strengthen the Circular Economy and create a demand for such recycled post consumer material. With regards to consumers information on the recycled content of the package a threshold below 50 % might be misleading. The expectation would be that most of the material is recycled.</i></p>	<p>PARTIALLY ACCEPTED</p> <p>The requirement about recycled content of plastic packaging has been maintained. Following the Directive 2008/98/EC, which promotes the recycling of waste, the minimum percentage of 25% of plastic recycling has been maintained.</p>
<p><i>Recycled plastic must be defined and clarification is needed for what is accepted as recycled plastic, post-consumer pre-consumer?</i></p>	
<p><i>One stakeholder sells Ecolabel base oil and lubricants in packaging that is reused such as metal drums, bulk trucks or plastic totes and flexibags. These containers were designed with product integrity in mind. There can be encouragement to use plastic with recycled content, but it is not practical to insist on a specific amount. Ecolabel can allow the use of a special tag on the label of such containers to show consumers that that both the lubricant and the container are eco-friendly. This is the scheme used by the USDA BioPreferred program.</i></p>	
<p><i>With regard to our aim to keep logistics low and to favour regional suppliers it will be difficult to achieve the 25% of recycled plastics in packaging in Switzerland (transport costs, CO2 emissions).</i></p> <p><i>Here, the typical way for most plastic is thermal utilization (waste-to-energy). Only PET exhibits a very high recycling rate.</i></p> <p><i>Therefore, I propose to drop the 25%: "plastic packaging containing recycled material shall be preferred."</i></p> <p><i>The latest study on plastic recycling (KuRve of 07/2017) supported by Swiss authorities and Swiss Recycling reported about a recycling rate of only 10% for plastics in Switzerland.</i></p> <p><i>Best ranking: PET - all other plastics is seen to be more cost efficient in thermal utilization than in separate recycling.</i></p> <p><i>Reason: too much effort for too low quantities in Switzerland.</i></p> <p><i>Unfortunately this study is in German language, only. It is available in the internet:</i></p> <p><i>www.swissrecycling.ch/fileadmin/rd/pdf/wertstoffe/kunststoffe/KURVE/KuRve_Bericht_oeffentlich_01.pdf</i></p>	<p>REJECTED</p> <p>The EU approach to waste management is based on the “waste hierarchy”. The priority objectives for waste policy in the EU are:</p> <ol style="list-style-type: none"> 1. Reduce waste generated 2. Maximise recycling and re-use 3. Incineration of non-recyclable materials 4. Eliminate the waste in landfills <p>Following the Directive 2008/98/EC, the recycling of the plastic to reintroduce in new products should be encouraged.</p>

Second proposed Criterion 7: Minimum technical performance

Comments received in AHWG2/written form	JRC Dir. B response
<p><i>Factory Mutual does not contain a technical specification, it only states that the fluid is fire resistant. Proposal: ISO 15380 + Factory Mutual or ISO 12922. However, we stick to our first comment that fire resistance is something between supplier and end user. Should the reference to this standard cite Tables 1-3?</i></p>	<p>ACCEPTED Fire-resistant hydraulic fluids have to meet ISO 15380 (Tables 2 to 5) and additional requirements for fire resistance: ISO 12922 (Table 1 to 3) or Factory Mutual Approval</p>
<p><i>Should Table 5 be arranged in the same way as Table 1.1 and show separate columns for TLL, PLL and ALL to avoid confusion?</i></p>	<p>REJECTED Each product type has its one functions. For example, the technical performance of TLL cannot be the same for chainsaw oils than for concrete release agents or open gear oils. The relation between them is shown in Table 1.1</p>
<p><i>The "concrete release agents" family is too generic.</i></p>	<p>PARTIALLY ACCEPTED Agree that there is a wide range of applications. The technical performance is "ISO/TS 12928:1999" considers different product types: neat products, solvent based products, water miscible products, plastic compounds and paste products.</p>
<p><i>The "metalworking fluids" family is too generic.</i></p>	<p>PARTIALLY ACCEPTED Agree that there is a wide range of applications. However, for metalworking fluids, the technical performance is "at least one relevant OEM approval", consequently this sub-classification does not apply.</p>
<p><i>We recommend to add the currently under revision standard ISO 12925 as an alternative standard beside DIN 51517.</i></p>	<p>ACCEPTED ISO 12925 has been added as an alternative standard for enclosed gear boxes besides DIN 51517.</p>
<p><i>What is a RELEVANT OEM? MWF still are not defined by standardized performance criteria like hydraulic fluids etc. MWF are sold on the market as "fit for purpose".</i></p>	<p>PARTIALLY ACCEPTED Relevant OEM means with expertise on the particular product group, for instance, if it is about chainsaw oils, it will have to be an OEM with expertise in this type of product. A definition has been included in text.</p>
<p><i>Impartiality & Independency. To fulfill the criteria of independency and integrity, when it is possible, the results for the minimum technical performance should be provided by independent third party testing laboratories which are ISO 17025 accredited; just avoid to be judge and jury. ISO 9001 quality system seems to be not enough because this doesn't give the recognition of the technical competency. ISO 17025 is dedicated to test and calibration</i></p>	<p>ACCEPTED The testing laboratories confirming compliance with the requirements must preferentially be third party independent ISO 17025 accredited laboratories as specified in the General Assessment and Verification text.</p>

Comments received in AHWG2/written form	JRC Dir. B response
<p>facilities and include the technical aspects. If a competent body control a lubricant, will it be sent to the lubricant producer?</p>	
<p>The stakeholder supports the introduction in the criterion of case studies based on market experience or field tests, in order to demonstrate compliance. We are going to send you by email a document that The stakeholder developed during the application requirement process to demonstrate compliance of its product. This test demonstrates compliance with strict performance requirements. Furthermore, for The stakeholder the use of such documents may reduce the high costs by avoiding some of tests from accredited laboratories and the difficulties in finding these accredited laboratories for all tests required. For The stakeholder, it is necessary to treat the document submitted as a confidential document.</p>	<p>OEM approvals is preferentially requested for "fit for purpose" however testing is asked in the absence of OEM approval.</p> <p>Laboratory choice/options guidance will be included in the User Manual as in the current in force.</p>
<p>I would strongly recommend that you replace the following wording: At least one relevant OEM approval with Meets specification of application or has OEM approval to support use of product. There are some applications like wire rope where there is a specification but NO OEM approval in place.</p> <p>It is important to require good technical performance for Ecolabel lubricants. This is easy when there are established specifications such as ISO 15380 for hydraulic fluids and DIN 51517 for gear oils. However, it is very difficult when there are no such specifications or when OEM maintain proprietary specifications. Therefore, the following options must be available "fit for purpose" demonstration:</p> <p>Lab testing including on-house testing Field testing OEM approvals Successful commercial demonstration Or other methods to be determined by the competent bodies.</p>	
<p>The stakeholder agrees that it is important to require good technical performance for Ecolabel lubricants. This is easy when there are established specifications such as ISO 15380 for hydraulic fluids and DIN 51517 for gear oils. However, it is very difficult when there are no such specifications or when OEM maintain proprietary specifications. Therefore, the following options must be available "fit for purpose" demonstration:</p> <p>Lab testing including on-house testing Field testing OEM approvals Successful commercial demonstration Or other methods to be determined by the competent bodies.</p>	
<p>In table 5, all technical performances need to be better and properly defined: in particular, it makes no sense to refer to the approval of an OEM, a commercial rather than a technical criterion, which would have the effect of preventing small and medium-sized enterprises from gaining Ecolabel.</p>	
<p>Wire rope OEMs rarely give approvals. Some OEMs have their own in-house lubricant brands that they</p>	

Comments received in AHWG2/written form	JRC Dir. B response
<i>prefer to promote (although the matter of anti-competitive practices by some OEMs across the whole European lubricants sector is subject to challenge by UEIL). Additionally, many wire rope makers have no lubricant specification or approval process and simply use what is available at low cost or specified by an end-customer. It would be better to adopt "Fit for purpose" requirements.</i>	

Second proposed Criterion 8: Consumer information regarding use and disposal

Comments received in AHWG2/written form	JRC Dir. B response
<p><i>“Lubricating oil may contain substances harmful to health and environment “: With such an emphasis on criterion 1 this phrase overestimates the presences of these substances.</i></p>	<p>PARTIALLY ACCEPTED Effectively substances classified as harmful to the aquatic environment (H412 and H413(safety net classification)) are included in the list of restricted hazard classifications according to table 1 of criterion 1 and restricted up to or above the half of the relevant concentration that would lead to classification of the final product. Nevertheless, there are some hazard statements not covered by this table, such as H302, H312 and H332 related to substances classified as harmful to human health and currently not restricted under the EU Ecolabel for lubricants. It cannot be assured that “small fractions” of this type of substances are present in lubricants and therefore the text has been maintained.</p>
<p><i>“Lubricating oil may contain substances harmful to health and environment “: The wording is not educational. The content of the harmful substances in EU Ecolabelled lubricants is so low that this text is not justified. It could be written for example: All kind of chemical products have impact on environment, therefore....</i></p>	
<p><i>“Product residue must be managed by an authorized waste manager” : This is similar as the take-back system in Criterion 6</i></p>	<p>REJECTED This part of the sentence makes reference to residual product not used. Despite it is regulated in business where lubricants or chemicals are used, the sentence was designed for those non-professional users who buy a lubricant, for example, in a supermarket.</p>
<p><i>Remove the statement about product residue must be managed by an authorized waste manager. This is very vague and no one will pay attention to it. And it is already being done due to other regulatory requirements.</i></p>	
<p><i>We support the proposed formulation.</i></p>	<p>ACKNOWLEDGED</p>
<p><i>As it was saying during the webinar, may we could add, for private end consumers products, some information such as how to use the product, safety measures, what to do with waste residues and the packaging, conditions after opening...</i></p>	<p>PARTIALLY ACCEPTED - The first part of the sentence includes advices for minimise the environmental impact during use. - The last part is referring to the management of the residual product and has been extended to the packaging c/container. .</p>
<p><i>It is good idea to encourage consumers to properly dispose the lubricant but the sentence “Lubricating oil may ... authorized waste manager” should be made more straightforward. Proposal from EEB seems to be much better: "The language should be adapted to make it clear what concrete recommendations a consumer should follow during use and disposal. As proposed in BA: "store out of reach of children", "do not allow unused quantities of the product to reach the sewage system, watercourses or soil", "product residue should be disposed of in municipal/dedicated collection points for harmful substances"</i></p>	<p>PARTIALLY ACCEPTED</p>

Second proposed Criterion 9: Information appearing on the EU Ecolabel

Comments received in AHWG2/written form	JRC Dir. B response
<p><i>The performance of the product is an important marketing asset and the current last sentence is not positive for industrials. The sentence should be reworded and we propose: "The effective performance of the product has been verified » or « The product is fit for purpose" instead of « Verified performance/As effective as the average product on the market ».</i></p>	<p>ACCEPTED The sentences were presented in the 2nd AHWG meeting to discuss with stakeholders about the best option to be included in the last proposal. Finally <i>Verified performance</i> seems to be the most accepted wording.</p>
<p><i>Licence holders unanimously don't agree with the last sentence. They want to emphasize on the performance aspect of the product but in a positive way: average is kind of a pejorative word and the comparison with other products which are non ecological is disappointing (because EU products are expensive) and not measurable. The aim is to sale the product, what about writing instead "suitable for use" or "Verified performance"?</i></p>	
<p><i>Drop this. The statements are vague and alarming to customers. No one will put a statement like this on their products.</i></p>	
<p><i>Take away the text "As effective as the average product on the market" It will scare the customers away. "Verified performance" is enough.</i></p>	
<p><i>We agree with ADEME that the sentence "Verified performance/As effective as the average product on the market" is not attractive and doesn't sound positive. A reformulation is welcome.</i></p>	
<p><i>Optional label language should be: Reduced amount of hazardous substances, reduced impact on the aquatic environment and verified performance</i></p>	<p>PARTIALLY ACCEPTED</p>
<p><i>The ALL, PLL and TLL categories need to be easily recognizable and understandable on the labels to avoid end-users misjudging the environmental impact of a product based on the flower.</i></p>	<p>REJECTED The information in the label has to be easily understandable by user. The classification of the lubricant is internally needed for the categorization in EU Ecolabel.</p>