



**Development of Ecodesign and Energy Labelling implementing measures for High Pressure Cleaners**

**Stakeholder consultation  
Questionnaire**

**January 2018**

**This questionnaire has been prepared to gather input and opinions from stakeholders for use in the development of potential Ecodesign and Energy Labelling implementing measures for High Pressure Cleaners.**

**The data that you provide will help us better understand current products, technologies, and market conditions, and your approach to high environmental performance. It is your chance to convey your opinion about these regulations.**

**The deadline for submitting answers is 16February 2018**

**The answers received to this consultation are an important element of our work. Your time and expertise are greatly appreciated and valued.**

**Thank you in advance for your support.**

For further information regarding this project, please visit

<http://susproc.jrc.ec.europa.eu/HighPressureCleaners/index.html>



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BACKGROUND

The European Commission has launched the consideration of development of Ecodesign and Energy Labelling implementing measures for High Pressure Cleaners.

The initial step is an Ecodesign/ Energy Labelling Preparatory Study, which will consist of a comprehensive analysis of high-pressure cleaners, conducted following the [Methodology for the Ecodesign of Energy-related Products (MEErP)](https://publications.europa.eu/en/publication-detail/-/publication/b7650397-32f1-436c-82c4-df39aef297a3). JRC's Directorate B will undertake independent, neutral, science-based research, involving stakeholder experts through a structured stakeholder working group process. The project will include the collection, processing, analysis and production of environmental, economic and technical information, conducted with additional technical support from a small consortium of independent consultants (Viegand Maagøe and Intertek).

Based on this evidence, JRC's Directorate B will support DG Environment in subsequent stages of the decision-making process regarding the evaluation of suitable policy options for this product group.

The methodology of the preparatory study follows the Commission’s Methodology for the Evaluation of Energy related Products (MEErP), consisting of the following steps:

Task 1 – Scope definition, standard methods and legislation

Task 2 – Market analysis

Task 3 – Analysis of user behaviour and system aspects

Task 4 – Analysis of technologies

Task 5 – Environmental and economic assessment of base cases

Task 6 – Assessment of design options

Task 7 – Assessment of policy scenarios

The comprehensive analysis of the product group following the steps above will feed as research evidence basis into the development of possible Ecodesign and/ or Energy Labelling implementing measures for High Pressure Cleaners.

Stakeholder involvement is a crucial part of this study. During the project, continuous and wide consultation is foreseen with experts and stakeholders representing manufacturers, supply chain industry, consumer organizations, academia, and NGOs, as well as Member State representatives.

Access to information on background of the study, work in progress and instructions for registration as stakeholder is given on the official project website:

<http://susproc.jrc.ec.europa.eu/HighPressureCleaners/index.html>

#### STRUCTURE OF THE QUESTIONNAIRE FOR STAKEHOLDERS

The aim of this questionnaire is to gather updated representative input and information that will be used for the development of the first tasks of the MEErP methodology. This first questionnaire is composed of 5 sections:

* Section 1, dealing with Scope, standards and legislation;
* Section 2, dealing with Markets;
* Section 3, dealing with Users;
* Section 4, dealing with Technologies;
* Section 5, dealing with other information of interest.

#### HOW TO RESPOND

The deadline for responses is **16 February 2018.** We would appreciate yourcooperation in respecting this deadline**.** Thank you very much in advance for your feedback.

The information received by this date will be processed as part of drafting the Preparatory study. The **1st stakeholder meeting** will be held in **Brussels during spring 2018, at which the scope and related proposals outlined in this document will be discussed.** We will inform you of the exact date, venue and draft agenda of this meeting in due course.

You are invited to submit your feedback to:

JRC-B5-HIGH-PRESSURE-CLEANERS@ec.europa.eu

Please do not feel obliged to answer all questions. Partially-completed forms are also very welcome.

Should you require any further information in order to complete this questionnaire, please do not hesitate to contact us, also at the email address above.

NB Please also feel free to forward this document to other stakeholders whom you consider would have a potential interest in this policy study.

#### ORGANISATION OR INDIVIDUAL FILLING THE QUESTIONNAIRE

|  |  |
| --- | --- |
| Detail | **Please enter your details below** |
| **Name of contact person** |  |
| **Job title/Position** |  |
| **Are you responding to this questionnaire on behalf of/as:** | Individual  Company  Public authority  Standardisation organisation  Trade/manufacturers association  Consumer/Environment organisation  Other (please specify) |
| **If you are representing a company:**  **What is its size?** | micro (self-employed)  micro (1-9 employees)  small (10-49 employees)  medium (50-249 employees)  large (250 employees or more) |
| **If you are representing a company:**  **What is its activity?** | *(e.g. manufacturer of cleaning equipment)* |
| **Address** |  |
| **Postal Code** |  |
| **Country** |  |
| **Telephone Number** |  |
| **Email** |  |
| **Web** |  |

**Data management**

Please indicate clearly how you would like your answers to be treated:

The information provided can be freely shared with other stakeholders

The information provided below can be shared but in an anonymous form (please specify below if this applies to the whole document or to some parts only)

The information provided below should be treated as strictly confidential (please specify below if this applies to the whole document or to some parts only)

|  |  |
| --- | --- |
| **Confidential information** | **Information can be shared, but anonymously  (the source is not disclosed)** |
| ***Please specify section***  ***Section 1, 2 etc.*** | ***Please specify section***  ***Section 1, 2 etc.*** |

# SECTION 1: SCOPE, STANDARDS AND LEGISLATION

## 1.1 Product Scope and definitions

The initial scope of this study covers:

* Cold water domestic high pressure cleaners
* Cold water commercial high pressure cleaners
* Hot water commercial high pressure cleaners

The above sub-groups represent the three main categories which were preliminarily investigated in the Preparatory study to establish the Ecodesign Working Plan 2015-2017[[1]](#footnote-1).

The following scope and definition are proposed:

*Initial scope proposed*

High-pressure cleaners without traction drive, intended for household and commercial indoor or outdoor use, having a rated pressure not less than 2.5 MPa and not exceeding 35 MPa. Hot water high pressure cleaners may incorporate a steam stage.

The following power systems of the drive for the high pressure pump are covered:

* mains powered motors up to a rated voltage of 250 V for single-phase machines and 480 V; for other machines;
* battery powered motors;
* internal combustion engines;
* hydraulic or pneumatic motors.

*Exclusions proposed*

* high pressure water jet machines having a rated pressure exceeding 35 MPa;
* steam cleaners *per se* (i.e., steam cleaning technology only);
* appliances for medical purposes;
* agricultural sprayers;
* non-liquid, solid abrasive cleaners;
* machines designed to be part of a production process;
* machines designed for use in corrosive or explosive environments (dust, vapour or gas);
* machines designed for use in vehicles or on board of ships or aircraft.

*Definitions proposed*

“High pressure cleaner” means a device that removes dirt, dust, mould, paint etc. from a surface with use of high pressure water cleaning.

"Hot water high pressure cleaner" means a high pressure cleaner that incorporates a water heater to raise the temperature of the water and facilitate the surface cleaning

"Domestic use" means intended use of high pressure cleaners in households

"Commercial use" means intended use of high pressure cleaners in a professional manner, with associated performance requirements and duty cycle(s), etc (to be detailed following feedback from this questionnaire).

**Questions**

1. *Do you agree with the initial scope? If no please provide your rationale. If you have suggestions, please list them together with your rationale and references to standards, legislation, technical terms etc.*

**Answer**

1. *Do you think that high pressure cleaners with internal combustion engines should be within the scope? Please provide your rationale and if possible the market relevance of this category.*

**Answer**

1. *Do you think that electric mains-operated high pressure cleaners that can also be powered by rechargeable batteries should be within the scope? Please provide your rationale and if possible the market relevance of this category.*

**Answer**

1. *Do you think that stationary high pressure cleaners should be within the scope? Please provide your rationale and if possible the market relevance of this category. If you think stationary cleaners should not be exempted of the scope, please also provide a proposal for the definition of stationary cleaners.*

**Answer**

1. *Some high pressure cleaners (ultra-high pressure cleaners) can reach pressures up to 70 MPa. Do you agree that domestic and commercial high pressure cleaners should be defined as those which have a maximum pressure of 35 MPa? If not, what do you think would be an appropriate delimitation between commercial and domestic high pressure cleaners? Please provide your rationale.*

**Answer**

1. *Some hot water high pressure cleaners integrate a steam stage. Do you agree that steam cleaners (solely steam technology) are out of the scope? Please provide your rationale.*

**Answer**

1. *Could you provide any* ***examples*** *of niche or special purpose high pressure cleaners that should be included in or excluded from the existing scope? For each product that you identify please kindly provide your rationale, regarding its scope inclusion or exclusion, together with a detailed technical definition of the relevant product.*

|  |  |  |  |
| --- | --- | --- | --- |
| **Niche product / Special- purpose equipment** | **Definition** | **Should be included or excluded in the scope?** | **Rationale** |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |

1. *Do you agree with the definitions proposed? If not please include your proposals below:*

|  |  |  |
| --- | --- | --- |
| **Definition of** | **Your definition proposal** | **Rationale** |
| **High pressure cleaner** |  |  |
| **Hot water high pressure cleaner** |  |  |
| **Domestic use** |  |  |
| **Commercial use** |  |  |
| **Other terms (please indicate)** |  |  |

1. *The* ***main function*** *of High Pressure Cleaners is* ***to remove dirt, dust, mould, paint etc. from a surface via the use of high pressure water cleaning.*** *Is this functional definition exhaustive/coherent or would you be able to identify additional functional performance parameters of relevance? If yes, please indicate which parameter(s).*

|  |
| --- |
| **Answer:** |
| **Primary function(s)** |
| **Secondary function(s)** |

## 1.2 Testing methods, standards and legislation

Technical and legislative elements for high pressure cleaners include for instance:

1. IEC-standard on safety standard IEC 60335-2-79:2016 “Household and similar electrical appliances – Safety – Part 2-79: Particular requirements for high pressure cleaners and steam cleaners" (exists as a draft European standard FprEN 60335-2-79:2016; and
2. European and international legislation (e.g. RoHS, REACH, WEEE, Outdoor Noise Directive)

**Questions**

1. *Are there relevant* ***standards, test methods and/or legislation*** *worth mentioning? If yes, please describe relevant updates and/or new standards and where relevant the status of development.*

|  |
| --- |
| **Answer** |
| 1. Functional performance parameters |
| 1. Resources use (energy, water, detergents and other materials) |
| 1. Durability (e.g. lifetime, reparability), and end-of-life management (e.g. identification, separation and treatment of hazardous parts) |
| 1. Emissions |
| 1. Safety |
| 1. Noise and vibrations |
| 1. Others |

1. *Which of the elements identified above in question 10 a) to g) would you considered as creating* ***technical or economic barriers*** *to manufacturers? Which other elements could create difficulties to manufacturers? Please provide your rationale.*

|  |
| --- |
| **Answer** |

1. *Are there any instruments such as* ***environmental labels, voluntary industry agreements*** *or similar at national, European or international level that you consider as relevant for high pressure cleaners? Please indicate them.*

|  |
| --- |
| **Answer** |

1. *Based on your* ***experience of the******existing test standards****,**do you have any evidence they are not fit-for-purpose, are incomplete, misused or do not reflect “real-life” consumer behaviour conditions sufficiently? If so, please provide explanations and indications on which aspects should be integrated / modified, or for which a new standardisation request(s) might be needed.*

|  |
| --- |
| **Answer** |

# SECTION 2: MARKETS

## 2.1 Basic market data

In order to better assess both the size of the market of high pressure cleaners in the EU, and the relative importance of specific types of products, the following pieces of information are necessary:

* Market data on production, sales and trade for different countries / companies
* Stocks (products already placed into the EU market, installed and in operation) and their average lifetimes,
* Market trends in the EU28, including any relevant segmentation for different Member States and technical/functional characteristics.

Data should be, as far as possible, expressed in physical volume (e.g. number of units) and in value (Euro), and split by Member State.

Aggregated EU data on total production and trade will be obtained from Eurostat (Prodcom category “28.29.22.30 – Steam or sand blasting machines and similar jet-projecting machines (excluding fire extinguishers, spray guns and similar appliances”) to estimate EU sales, and calculate stocks. As the category includes several other products it cannot be used exclusively and additional data on these parameters is welcome to cross-check the estimations. The following questions aim at completing and updating the information base available.

**Questions**

1. *For which categories of high pressure cleaners would you be able to share* ***representative market data or any relevant sources of information*** *which can contain such data (for EU28, Member States, or companies)? If possible, please fill the table below with key market data and/or data sources, also indicating when possible the units (physical volume and/or money value), year and source of information.*

|  |  |  |
| --- | --- | --- |
| **Data** | ***Cold water domestic high pressure cleaners*** | |
| EU28 | Member State(s) |
| Annual production |  |  |
| Annual sales |  |  |
| Annual imports |  |  |
| Annual exports |  |  |
| Stocks |  |  |
| Indications of market trends |  |  |
| Note:  (1) If providing data, please indicate unit of measurement (e.g. physical volume and/or money value, %), year and context of reference  (2) You are welcome to indicate also databases and other key data sources or non-public studies which can be shared with us (please contact us in case of confidentiality) | | |

|  |  |  |
| --- | --- | --- |
| **Data** | ***Cold water commercial high pressure cleaners*** | |
| EU28 | Member State(s) |
| Annual production |  |  |
| Annual sales |  |  |
| Annual imports |  |  |
| Annual exports |  |  |
| Stocks |  |  |
| Indications of market trends |  |  |
| Note:  (1) If providing data, please indicate unit of measure (e.g. physical volume and/or money value, %), year and context of reference  (2) You are welcome to indicate also databases and other key data sources or non-public studies which can be shared with us (please contact us in case of confidentiality) | | |

|  |  |  |
| --- | --- | --- |
| **Data** | ***Hot water commercial high pressure cleaners*** | |
| EU28 | Member State(s) |
| Annual production |  |  |
| Annual sales |  |  |
| Annual imports |  |  |
| Annual exports |  |  |
| Stocks |  |  |
| Indications of market trends |  |  |
| Note:  (1) If providing data, please indicate unit of measure (e.g. physical volume and/or money value, %), year and context of reference  (2) You are welcome to indicate also databases and other key data sources or non-public studies which can be shared with us (please contact us in case of confidentiality) | | |

|  |  |  |
| --- | --- | --- |
| **Data** | ***Other relevant markets (please specify)*** | |
| EU28 | Member State(s) |
| Annual production |  |  |
| Annual sales |  |  |
| Annual imports |  |  |
| Annual exports |  |  |
| Stocks |  |  |
| Indications of market trends |  |  |
| Note:  (1) If providing data, please indicate unit of measure (e.g. physical volume and/or money value, %), year and context of reference  (2) You are welcome to indicate also databases and other key data sources or non-public studies which can be shared with us (please contact us in case of confidentiality) | | |

## 2.2 Stocks, market segmentation, technology penetration and trends

In order to obtain a better insight into the market of high pressure cleaners, information regarding functional, technical and geographical differences between market segments is needed.

**Questions**

1. *Could you provide updated information about the* ***market******penetration of domestic high pressure cleaners in the EU****? Are there any significant variations between Member States, and which are the trends for the next years?*

|  |
| --- |
| **Answer** |

1. *Could you provide updated information about* ***the market penetration* of *high pressure cleaners in the commercial business sectors in the EU****? Which* commercial business sectors use the HPCs*? Are there any significant variations between Member States, and what are the trends for the next years?*

|  |
| --- |
| **Answer** |

1. *Could you please fill in, to the best of your knowledge, the* ***information on market segmentation*** *and technology penetration reported in the tables below?*
2. Segmentation and expected trends by energy source in Europe (please also indicate: country and year of reference and if percentages refer to physical volume or money value)

**Cold water domestic high pressure cleaners (EU-28)**

|  |  |  |
| --- | --- | --- |
| ***Power fuels*** | ***Current shares  (e.g. 2017 or year to be specified) (%)*** | ***Expected shares in the near future (e.g. 2022 or year to be specified) (%)*** |
| Electric |  |  |
| Petrol |  |  |
| Diesel |  |  |
| Battery driven |  |  |
| **Additional information/comments** | | |

**Cold water commercial high pressure cleaners (EU-28)**

|  |  |  |
| --- | --- | --- |
| ***Power fuels*** | ***Current shares  (e.g. 2017 or year to be specified) (%)*** | ***Expected shares in the near future (e.g. 2022 or year to be specified) (%)*** |
| Electric |  |  |
| Petrol |  |  |
| Diesel |  |  |
| Battery driven |  |  |
| **Additional information/comments** | | |

**Hot water commercial high pressure cleaners (EU-28)**

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| ***Water heating fuel***  ***Power/***  ***fuel*** | | ***Current shares  (e.g. 2017 or year to be specified) (%)*** | | | | | ***Expected shares in the near future (e.g. 2022 or year to be specified) (%)*** | | | | |
| ***Electric*** | ***Oil*** | ***Diesel*** | ***Natural gas*** | ***LPG*** | ***Electric*** | ***Oil*** | ***Diesel*** | ***Natural gas*** | ***LPG*** |
| Electric | |  |  |  |  |  |  |  |  |  |  |
| Petrol | |  |  |  |  |  |  |  |  |  |  |
| Diesel | |  |  |  |  |  |  |  |  |  |  |
| Battery driven | |  |  |  |  |  |  |  |  |  |  |
|  | **Additional information/comments** | | | | | | | | | | |

(b) Segmentation and expected trends by **maximum pressure** (please indicate: if percentages refer to physical volume or money value, country and year of reference)

|  |  |  |
| --- | --- | --- |
| ***Maximum pressure (MPa)*** | ***Current shares  (e.g. 2017 or year to be specified) (%)*** | ***Expected shares in the near future (e.g. 2022 or year to be specified) (%)*** |
| ≤ 10 MPa |  |  |
| 10 to 13 MPa |  |  |
| 13 to 35 MPa |  |  |
| 35 to 70 MPa  *(If you consider they should be part of the scope)* |  |  |
| **Additional information/comments** | | |

(c) Is there any **other relevant market segmentation** of high pressure cleaners which has not been mentioned above (e.g. design, water consumption, noise emissions, materials, durability)?

|  |  |  |
| --- | --- | --- |
| ***Other type of market segmen-tation of relevance*** | ***Current shares  (e.g. 2017 or year to be specified) (%)*** | ***Expected shares in the near future (e.g. 2022 or year to be specified) (%)*** |
| Please specify |  |  |
| … |  |  |

(d) What is your knowledge or perception of the **market composition** in terms of **turnover and size** (in number of employees) of companies?

|  |  |  |
| --- | --- | --- |
| ***Companies in the market*** | ***Current shares  (e.g. 2017 or year to be specified) (%)*** | ***Expected shares in the near future (e.g. 2022 or year to be specified) (%)*** |
| Large companies |  |  |
| SME (\*) |  |  |
| *(\*) number of employees < 250 and annual turnover < 50 M€, and/or annual balance sheet < 43 M€* | | |

(g) Please indicate current **market leaders** (company shares and brand shares in % of retail volume) on the European high pressure cleaner market and other key players on the market (e.g. suppliers, manufacturers, retailers, recyclers, associations).

|  |  |  |
| --- | --- | --- |
| ***Company / brand*** | ***Company shares  (% of retail volume)*** | ***Brand shares  (% of retail volume)*** |
| 1. … |  |  |
| 1. … |  |  |
| 1. … |  |  |
| 1. … |  |  |
| 1. … |  |  |
| ***Other key players:*** | | |

## 2.3 Production costs and consumer expenditure data

**Answer directly in the table below or send data separately…**

**Questions**

1. *Would you be able to provide information on* ***production costs and******consumer expenditure base data for Cold water domestic high pressure cleaners and detergents for these cleaners*** *(please indicate year and technical and geographic context of reference)?*

|  |  |
| --- | --- |
| ***Cost category (please specify if VAT is included or not)*** *Note: It is assumed that all costs are given with reference to 2017* | ***Please indicate the information below or mark with X if you provide the information in a separated document*** |
| Consumer purchase prices of the high pressure cleaner (€/product)  *When possible provide technical aspects as maximum pressure, power fuel, noise level, etc.* |  |
| Factory prices (production costs) (€/product)  *When possible provide technical aspects as maximum pressure, power fuel, noise level, etc.* |  |
| Consumer purchase price for detergents (€/kg/litre, please specify type)   * Gel/liquids (please specify) * Powder (please specify) * Tabs/pods (please specify) * Others (please specify) |  |
| Type and average number of maintenance actions and related costsalong the product life time (€/product life – please specify the considered lifetime) |  |
| Average number of repairs and repair costs along the product life time (€/product life– please specify the considered lifetime) |  |
| Disposal costs (€/product)  *It is assumed that under WEEE, the financing of the costs of collection, treatment, recovery and environmentally sound disposal of WEEE from private households is producer’s responsibility. Normally, this cost is passed over to the consumer in the final purchase price.* |  |

## 2.4 Production costs and professional consumer expenditure data

**Questions**

1. *Would you be able to provide information on* ***production costs and******consumer expenditure base data for Cold water commercial high pressure cleaners*** *(please indicate year and technical and geographic context of reference)?*

|  |  |
| --- | --- |
| ***Cost category (please specify if VAT is included or not)*** *Note: It is assumed that all costs are given with reference to 2017* | ***Please indicate the information below or mark with X if you provide the information in a separated document*** |
| Consumer purchase prices of the high pressure cleaner (€/product)  *When possible provide technical aspects as maximum pressure, power fuel, noise level, etc.* |  |
| Factory prices (production costs) (€/product)  *When possible provide technical aspects as maximum pressure, power fuel, noise level, etc.* |  |
| Purchase price for detergents (€/kg/litre, please specify type)   * Liquids/gel (please specify) * Powder (please specify) * Tabs/pods (please specify) * Others (please specify) |  |
| Type and average number of maintenance actions and related costsalong the product life time (€/product life – please specify the considered lifetime) |  |
| Average number of repairs and repair costs along the product life time (€/product life– please specify the considered lifetime) |  |
| Disposal costs (€/product)  *It is assumed that under WEEE, the financing of the costs of collection, treatment, recovery and environmentally sound disposal of WEEE from private households is producer’s responsibility. Normally, this cost is passed over to the consumer in the final purchase price.* |  |

1. *Would you be able to provide information on* ***production costs and******consumer expenditure base data for Hot water commercial high pressure cleaners*** *(please indicate year and technical and geographic context of reference)?*

|  |  |
| --- | --- |
| ***Cost category (please specify if VAT is included or not)*** *Note: It is assumed that all costs are given with reference to 2017* | ***Please indicate the information below or mark with X if you provide the information in a separated document*** |
| Consumer purchase prices of the high pressure cleaner (€/product)  *When possible provide technical aspects as maximum pressure, power fuel, noise level, etc.* |  |
| Factory prices (production costs) (€/product)  *When possible provide technical aspects as maximum pressure, power fuel, noise level, etc.* |  |
| Purchase price for detergents (€/kg or €/litre, please specify type)   * Powder (please specify) * Tabs/pods (please specify) * Gel/liquids (please specify) * Others (please specify) |  |
| Type and average number of maintenance actions and related costsalong the product life time (€/product life – please specify the considered lifetime) |  |
| Average number of repairs and repair costs along the product life time (€/product life– please specify the considered lifetime) |  |
| Disposal costs (€/product)  *It is assumed that under WEEE, the financing of the costs of collection, treatment, recovery and environmentally sound disposal of WEEE from private households is producer’s responsibility. Normally, this cost is passed over to the consumer in the final purchase price.* |  |

# SECTION 3: USERS

Any potential Ecodesign and/ or Energy Labelling regulation(s) proposed, as well as their underlying test and measurement standards, will be based on certain defined end-user behaviour patterns/ duty cycles. This includes, among other elements, the frequency and duration of operations and use of detergents and temperatures, etc.

To gain more reliable and up-to-date information, an online user survey might be designed, to be undertaken in the course of the project.

The questions below address your opinion on some of these issues.

## 3.1 General

1. *Could you kindly inform us about* ***existing studies concerning end-user behaviour patterns and needs regarding high pressure cleaners*** *(preferably in the EU-28 or Member States, but also overseas)? These studies for instance may contain data on frequency of operation, use of detergents, typical uses, use of energy and/or water saving options, product lifetime, and maintenance/repair/end-of-life behaviour, including cultural or geographical differences in consumption patterns.*

|  |
| --- |
| **Answer** |

## 3.2 Frequency of operation

1. *Do you have statistical information (average data and/or variation range) on the* ***frequency and duration of operation*** *of an average domestic high pressure cleaner as well as a commercial HPC across the EU-28? Please also provide, if relevant, dependencies / variations in the number of cleaning cycles (use in different Member States, different capacities and/or household sizes) in order to understand how these could influence the use frequency.*

|  |  |  |  |
| --- | --- | --- | --- |
|  |  | ***Total number of uses per year*** | ***Average duration of operation*** |
| Cold water Domestic HPC | Average domestic high pressure cleaner in the EU |  |  |
| Differences (e.g. by capacity, household size, Member States etc., please specify which type of difference) |  |  |
| Cold water commercial HPC | Average cold water commercial high pressure cleaner in the EU |  |  |
| Differences (e.g. by capacity, business sector, Member States etc., please specify which type of difference) |  |  |
| Hot water commercial HPC | Average hot water commercial high pressure cleaner in the EU |  |  |
| Differences (e.g. by capacity, business sector, Member States etc., please specify which type of difference) |  |  |

## 3.3 Operation pattern

**Questions**

1. *Do you think it would be possible to define typical operation usage for developing a test method for non-professional consumers as well as professional users? And would the operation usage differ for hot water high pressure cleaners compared to cold water high cleaners? Please explain the reasons and the operation variation for different high pressure cleaners.*

**Answer**

## 3.3 Typical soiled surfaces

**Questions**

1. *Do you think it would be possible to define typical soiled surfaces to be cleaned for non-professional consumers as well as professional users? Please explain the reasons*

**Answer**

## 3.5 Detergents

1. *Do you have statistical information (average data and/or variation range) on the average share of appliances that use* ***detergent and types used*** *across the EU-28? Please also indicate and explain relevant variations from EU average in different Member States.*

|  |  |  |
| --- | --- | --- |
|  | ***Average share of appliance that use detergent across EU-28 (%)*** | ***Relevant variations in certain Member States (%) (please give reasons)*** |
| Cold Water Domestic HPC |  |  |
| Cold Water Commercial HPC |  |  |
| Hot Water Commercial HPC |  |  |

|  |  |  |
| --- | --- | --- |
|  | ***Detergent type used across EU-28 (please specify)*** | ***Relevant variations in certain Member States (%) (please give reasons)*** |
| Cold Water Domestic HPC |  |  |
| Cold Water Commercial HPC |  |  |
| Hot Water Commercial HPC |  |  |

1. *Do you have information on the user behaviour with regard to* ***dosage of detergents*** *across the EU-28 (dosage according to manufacturer recommendations or possible over-/under-dosage, differences depending on type of detergent, reasons for dosage failures)? Please also indicate and explain relevant variations from EU average in different Member States.*

|  |
| --- |
| **Answer** |

## 3.6 Stand-by

1. *Do you have statistical information (average data and/or variation range) on the* ***use of standby modes*** *across the EU-28? Our present understanding is that this is only relevant for commercial or battery driven high pressure cleaners – however, please add information for domestic cold water high pressure cleaners, if standby, "left-on" or other modes are relevant, and time details.*

|  |  |  |  |
| --- | --- | --- | --- |
|  | ***Average time in standby mode per cycle (minutes)*** | ***Power consumption (W)*** | ***Average number of uses   per year*** |
| Use of time delay  *before* cleaning cycle |  |  |  |
| Left-on mode  *after* cleaning cycle |  |  |  |
| If relevant, please indicate additional functions/phases or elements involving stand-by not captured above |  |  |  |

## 3.7 Product lifetime, maintenance, repair and end-of-life

1. *The technical* ***lifespan of products*** *may differ from the real time of use after which products are disposed and replaced. Do you have statistical information (average data and/or variation range) on the average lifetime of high pressure cleaners across the EU-28, both technical and actual (e.g. product substitution of machines still operational)?*

|  |  |
| --- | --- |
|  | ***High pressure cleaners*** |
| Average technical lifespan  (time-to-failure of critical parts)   * Number of operations * Equivalent years   Please provide 'bandwidth' deviation data, if available (e.g. 10 ± 3 years) |  |
| Average real time of use for **domestic HPC**   * Number of operations * Equivalent years   Please provide 'bandwidth' deviation data, if available (e.g. 10 ± 3 years) |  |
| Average real time of use for **commercial HPC**   * Number of operations * Equivalent years   Please provide 'bandwidth' deviation data, if available (e.g. 10 ± 3 years) |  |
| Warranty provided by manufacturers (in years or other [please specify]) |  |

1. *How relevant is* ***maintenance and repair*** *for this product group and what are the usual practices? Please provide practical examples.*

|  |
| --- |
| **Answer** |

1. *Do you have information (test reports or similar) regarding typical or most frequent* ***failures and/or defects*** *of high pressure cleaners that lead to a shorter technical lifespan? How do design choices address these typical failures? Please provide a list of critical components (e.g. motor, electronics, water pumps, water tank, nozzles, hose etc.), expected duration, and replacement costs.*

|  |
| --- |
| **Answer** |

1. *How might* ***design choices*** *address / overcome these typical failures?*

|  |
| --- |
| **Answer** |

1. *Are there any* ***service*** *measures (e.g. extended warranty, take-back / repair / leasing service etc.) that you specifically provide to consumers or professional users* ***to extend the life of products****? Please describe.*

|  |
| --- |
| **Answer** |

1. *Do you have statistical information (average data and/or variation range) on* ***the average end of life management of high pressure cleaners*** *across the EU-28? Please also indicate and explain relevant variations from the EU-average in different Member States, if you have data. Should you have waste management data for specific homogeneous parts of the dismantled high pressure cleaners, please also include these.*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | *% prepared for reuse / remanufacture (disassembly)* | *% recycled* | *% incinerated with recovery of energy* | *% disposed of in landfill* | *Other practices/comments* |
| Whole product |  |  |  |  |  |
| Please specify if specific components/ materials differ |  |  |  |  |  |

1. *Please describe the* ***market*** *for* ***reused*** *and* ***remanufactured products*** *or* ***components****.*

|  |
| --- |
| **Answer** |

1. *Are there to your knowledge any specific* ***problems concerning the recycling of high pressure cleaners*** *(e.g. hazardous components that affect recyclability, parts or pieces difficult to separate for recycling), or affecting the compliance with waste legislation (e.g. WEEE)?*

|  |
| --- |
| **Answer** |

## 3.8 User information

In this section we would like your suggestions regarding relevant user information for both domestic and professional end-consumers, which can reduce the environmental impact from these products.

**Questions**

1. *Do you know of valuable information that should be available to the consumers? I.e. which information do you think is necessary? (e.g. current pressure level displayed on the machine)*

**Answer**

1. *Do you know of valuable information that should be available to the professional user? I.e. which information do you think is necessary?*

**Answer**

# SECTION 4: TECHNOLOGIES

This section aims at collecting information on technologies and preliminarily identifying the main product options for which it could be relevant to perform an environmental and economic assessment, such as, for instance:

* Typical reference products available on the market (for building product "Base Cases"),
* Product (design) options which have improved performance,
* Best available technologies on the market ("BAT"),
* Technologies for improving energy/resource efficiency, which are not yet available on the market (so-called "BNAT")

## 4.1 Average products / Base Cases

**Questions**

1. *Can you propose one or more* ***Base Case(s)*** *to realistically reflect the current average market situation for* ***Cold domestic high pressure cleaners****? Please justify your proposal.*

|  |  |  |  |
| --- | --- | --- | --- |
|  | ***Proposal for  Base Case 1*** | ***Proposal for  Base Case 2*** | ***Proposal for Base Case 3 (please add columns if needed)*** |
| Technology description and rationale |  |  |  |
| Energy source e.g. Electrical, liquid/ gas fuel combustion…. |  |  |  |
| Maximum inlet pressure (MPa)  Power rating (kW) |  |  |  |
| Rated Pressure (range) x-y MPa |  |  |  |
| Cleaning performance (e.g. area performance (m2/h))  *Please describe the performance parameter and the test method used to measure it* |  |  |  |
| Water flow rate (litres/h) |  |  |  |
| Weight |  |  |  |
| Dimensions |  |  |  |
| Application – Portable, fixed, floor mounted, vehicle mounted etc. |  |  |  |
| Single head/multi-head |  |  |  |
| Water feed and temperature – cold and/or hot |  |  |  |
| Detergent supply (yes/no), volume |  |  |  |
| Noise (dB(A)) |  |  |  |
| Other information of importance (such as costs, End of Life scenarios), please specify |  |  |  |

1. *Do you have any proposals for a* ***Base Case*** *to reflect the current average market situation for* ***Cold commercial high pressure cleaners****? Please justify your proposal.*

|  |  |  |  |
| --- | --- | --- | --- |
|  | ***Proposal for  Base Case 1*** | ***Proposal for  Base Case 2*** | ***Proposal for Base Case 3 (please add columns if needed)*** |
| Technology description and rationale |  |  |  |
| Energy source e.g. Electrical, liquid/ gas fuel combustion…. |  |  |  |
| Maximum inlet pressure (MPa)  Power rating (kW) |  |  |  |
| Rated Pressure (range) x-y MPa |  |  |  |
| Cleaning performance (e.g. area performance (m2/h))  *Please describe the performance parameter and the test method used to measure it* |  |  |  |
| Water flow rate (litres/h) |  |  |  |
| Weight |  |  |  |
| Dimensions |  |  |  |
| Application – Portable, fixed, floor mounted, vehicle mounted etc. |  |  |  |
| Single head/multi-head |  |  |  |
| Water feed and temperature – cold and/or hot |  |  |  |
| Detergent supply (yes/no), volume |  |  |  |
| Noise (dB(A)) |  |  |  |
| Other information of importance (such as costs, EoL scenarios), please specify |  |  |  |

1. *Do you have any proposals for a* ***Base Case*** *to reflect the current average market situation for* ***Hot commercial high pressure cleaners****? Please justify your proposal.*

|  |  |  |  |
| --- | --- | --- | --- |
|  | ***Proposal for  Base Case 1*** | ***Proposal for  Base Case 2*** | ***Proposal for Base Case 3 (please add columns if needed)*** |
| Technology description and rationale |  |  |  |
| Energy source e.g. Electrical, liquid/ gas fuel combustion…. |  |  |  |
| Maximum inlet pressure (MPa)  Power rating (kW) |  |  |  |
| Rated Pressure (range) x-y MPa |  |  |  |
| Area performance (m2/h)  Washing performance  *Please describe the performance parameter and the test method used to measure it* |  |  |  |
| Water flow rate (litres/h) |  |  |  |
| Weight |  |  |  |
| Dimensions |  |  |  |
| Application – Portable, fixed, floor mounted, vehicle mounted etc. |  |  |  |
| Single head/multi-head |  |  |  |
| Water feed and temperature – cold and/or hot |  |  |  |
| Detergent supply (yes/no), volume |  |  |  |
| Noise (dB(A)) |  |  |  |
| Other information of importance (such as costs, EoL scenarios), please specify |  |  |  |

1. ***FOR MANUFACTURERS:*** *Which of the following* ***specific information*** *would you be able to provide* ***on your products?*** *NB This can also be given via an attachment to this questionnaire, or by contacting the project team.*

|  |  |  |  |
| --- | --- | --- | --- |
|  | ***Product 1*** | ***Product 2*** | ***Product 3 (please add columns if needed)*** |
| Technology description and rationale |  |  |  |
| Power source e.g. Electrical, combustion….  If combustion which fuel |  |  |  |
| Maximum inlet pressure (MPa)  Power rating (kW) |  |  |  |
| Rated Pressure (range) x-y MPa |  |  |  |
| Cleaning performance (e.g. Area performance (m2/h))  *Please describe the performance parameter and the test method used to measure it* |  |  |  |
| Water flow rate (litres/h |  |  |  |
| Weight |  |  |  |
| Dimensions |  |  |  |
| Application – Portable, fixed, floor mounted, vehicle mounted etc. |  |  |  |
| Single head/multi-head |  |  |  |
| Water feed and temperature – cold and/or hot |  |  |  |
| Detergent supply (yes/no), volume |  |  |  |
| Noise (dB(A)) |  |  |  |
| Cable length (m) |  |  |  |
| Maximum lance length |  |  |  |
| Maximum supply feed length |  |  |  |
| Supply voltage (V) |  |  |  |
| Supply frequency (Hz) |  |  |  |
| Other information of importance (e.g., costs, EoL scenarios) - please specify |  |  |  |

1. *What is the* ***unexploited potential*** *for reducing the energy and water consumption of high pressure cleaners and how (please provide the benchmark)?*

|  |
| --- |
| **Answer** |

1. *What is in your opinion the* ***relative importance of other environmental aspects*** *besides energy and water consumption to be taken into account when developing the potential Ecodesign / Energy Label implementing measures for high pressure cleaners?*

|  |
| --- |
| **Answer** |

1. *Do you have information on the* ***material composition (by mass) of cold domestic high pressure cleaners****? (NB This can also be given via an attachment to this questionnaire, or by contacting the project team.)*

|  |
| --- |
| **Answer** |

1. *Do you have information on the* ***material composition (by weight) of cold commercial high pressure cleaners****? (NB This can also be given via an attachment to this questionnaire, or by contacting the project team.)*

|  |
| --- |
| **Answer** |

1. *Do you have information on the* ***material composition (by weight) of hot commercial high pressure cleaners****? (NB This can also be given via an attachment to this questionnaire, or by contacting the project team.)*

|  |
| --- |
| **Answer** |

1. *Could you please provide data related to the* ***volume of the product itself and of the final packaged*** *product and indications on the* ***weight and composition of the packaging****?*

|  |  |  |  |
| --- | --- | --- | --- |
|  | ***Product*** | ***Final packaged product*** | ***Packaging composition (e.g. cardboard, PU foam)*** |
| Weight (kg) |  |  |  |
| Volume (m³) |  |  |  |

1. *Could you please provide the percentage of* ***primary scrap production*** *during sheet metal manufacturing, if deviating from 25% (default setting of the MEErP EcoReport tool[[2]](#footnote-2))? (NB This can also be given via an attachment to this questionnaire, or by contacting the project team.)*

|  |
| --- |
| **Answer** |

1. *The MEErP EcoReport tool uses an average mix of* ***transport modes*** *by type of product. If the transport mix for high pressure cleaners deviates substantially from the average transport mix, e.g. if your industry sector has an environmentally friendly transport policy, could you please provide actual means of transport employed in shipment of components, sub-assemblies and finished products? (NB This can also be given via an attachment to this questionnaire, or by contacting the project team.)*

|  |
| --- |
| **Answer** |

## 4.2 Technologies

1. *Which are* the m*ain changes or innovations to the products expected to enter the market in the coming years ((e.g. improvements in nozzle design, increasing power to reduce time, boiler technology, etc.)? Could you specify which improvement potential they have on the products? (NB This can also be given via an attachment to this questionnaire, or by contacting the project team.)*

|  |
| --- |
| **Answer** |

1. *What is the typical time for high pressure cleaners after which there is a significant change in product design / technology, i.e. what is the average* ***design cycle****?*

|  |
| --- |
| **Answer** |

# SECTION 5: OTHER INFORMATION

Thank you very much for the time invested to provide the feedback to us. Your valuable input will be processed and taken into account along the study.

Please submit it to JRC-B5-HIGH-PRESSURE-CLEANERS@ec.europa.eu

If your responses or part of them are to be treated confidentially or anonymously, please indicate this clearly in the section about data management at the beginning of this questionnaire.

If there is any other relevant information on high pressure cleaners you would like to provide, please also submit it to JRC-B5-HIGH-PRESSURE-CLEANERS@ec.europa.eu.

This information may for instance concern:

* Availability of LCA/LCC studies and information;
* Further needs and general views on the preparatory study to assess the feasibility of eco-design and/or energy labelling requirements for high pressure cleaners.

|  |
| --- |
| **Additional comments** |

1. http://ec.europa.eu/DocsRoom/documents/20374 [↑](#footnote-ref-1)
2. http://ec.europa.eu/growth/industry/sustainability/ecodesign\_da [↑](#footnote-ref-2)