BIOLANDES

CHEMICAL SAFETY DATA SHEET

according to 2020/878/EC (1907/2006/EC Article 31)

1726106

Reviewed on: 25.01.2023
Printing date: 25.01.2023

SECTION 01: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

- Trade name:
  ELEMI OIL
- Article number:
  E7250
- CAS Number:
  -
- EC Number:
  945-898-3
- Registration number
  01-2120735788-38-0004

1.2 Relevant identified uses of the substance or mixture and uses advised against
Application of the substance / the preparation
Perfume ingredient
Flavouring agent
Only for industrial use
For detailed identified uses please refer to the annex of this safety data sheet

1.3 Details of the supplier of the safety data sheet
Manufacturer/Supplier:
BIOLANDES, BP2 TEL: +33(0)5.58.51.00.00
2760 Route de Bélis email: fds@biolandes.com
40420 LE SEN
FRANCE

1.4 Emergency telephone number:
FR-ORFILA (INRS):+33(0)1 45 42 59 59

SECTION 02: Hazards identification

2.1 Classification of the substance or mixture

- Classification according to Regulation (EC) No 1272/2008

GHS08

Asp. Tox. 1 - H304 May be fatal if swallowed and enters airways.

GHS02

Flam. Liq. 3 - H226 Flammable liquid and vapour.

GHS07

Skin Irrit. 2 - H315 Causes skin irritation.
Skin Sens. 1B - H317 May cause an allergic skin reaction.

GHS09

Aquatic Chronic 2 - H411 Toxic to aquatic life with long lasting effects.

2.2 Label elements

- Labelling according to Regulation (EC) No 1272/2008
- Hazard pictograms

GHS08 GHS02 GHS07 GHS09

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- Signal word
  Danger
- Hazard statements
  H226 Flammable liquid and vapour.
  H304 May be fatal if swallowed and enters airways.
  H315 Causes skin irritation.
  H317 May cause an allergic skin reaction.
  H411 Toxic to aquatic life with long lasting effects.
- Precautionary statements
  P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
  P233 Keep container tightly closed.
  P240 Ground and bond container and receiving equipment.
  P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor.
  P403+P235 Store in a well-ventilated place. Keep cool.
  P501 Dispose of contents/container in accordance with local/regional/ national/international regulations.

2.3 Other hazards

- Results of PBT and vPvB assessment
- PBT:
  Not applicable.
- vPvB:
  Not applicable.
- Determination of endocrine-disrupting properties
  None of the ingredients is listed.

SECTION 03: Composition/information on ingredients

- 3.2 Mixtures
- Description:
  Mixture

- Dangerous components:

CAS Number		%
5989-27-5	d-limonene EC number: 227-813-5 Asp. Tox. 1 - H304; Flam. Liq. 3 - H226; Skin Irrit. 2 - H315, Skin Sens. 1B - H317; Aquatic Acute 1 - H400; Aquatic Chronic 3 - H412	20,001-50,00
99-83-2	Alpha phellandrene EC number: 202-792-5 Asp. Tox. 1 - H304; Flam. Liq. 3 - H226	10,001-20,00
586-62-9	Terpinolene EC number: 209-578-0 Asp. Tox. 1 - H304; Skin Sens. 1B - H317; Aquatic Acute 1 - H400, Aquatic Chronic 1 - H410	1,001- 5,00
98-55-5	p-menth-1-en-8-ol EC number: 202-680-6 Skin Irrit. 2 - H315, Eye Irrit. 2 - H319	1,001- 5,00
99-86-5	1-isopropyl-4-methylcyclohexa-1,3-diene EC number: 202-795-1 Asp. Tox. 1 - H304; Flam. Liq. 3 - H226; Acute Tox. 4 - H302, Skin Sens. 1 - H317; Aquatic Chronic 2 - H411	0,101-1,00

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	Oral: ATE = 1680 mg/kg	
80-56-8	**pin-2(3)-ene**	**0,101-1,00**
	EC number: 201-291-9	
	Asp. Tox. 1 - H304; Flam. Liq. 3 - H226; Acute Tox. 4 - H302, Skin Irrit. 2 - H315, Skin Sens. 1B - H317	
93-15-2	**methyl eugenol**	**0,101-1,00**
	EC number: 202-223-0	
	Acute Tox. 4 - H302; Muta. 2 - H341, Carc. 2 - H351	
127-91-3	**beta-Pinene**	**0,101-1,00**
	EC number: 204-872-5	
	Asp. Tox. 1 - H304; Flam. Liq. 3 - H226; Skin Irrit. 2 - H315, Skin Sens. 1B - H317	
87-44-5	**beta-Caryophyllene**	**0,101-1,00**
	EC number: 201-746-1	
	Asp. Tox. 1 - H304; Skin Sens. 1B - H317	

- Additional information:
  For the wording of the listed risk phrases refer to section 16.

SECTION 04: First aid measures

4.1 Description of first aid measures
- General information:
  Seek immediate medical advice.
- After inhalation:
  Supply fresh air and to be sure call for a doctor.
- After skin contact:
  If skin irritation continues, consult a doctor.
  Immediately wash with water and soap and rinse thoroughly.
- After eye contact:
  Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- After swallowing:
  Seek immediate medical advice.
- Information for doctor:

4.2 Most important symptoms and effects, both acute and delayed
No further relevant information available.

4.3 Indication of any immediate medical attention and special treatment needed
No further relevant information available.

SECTION 05: Firefighting measures

5.1 Extinguishing media
- Suitable extinguishing agents:
  CO2, sand, extinguishing powder. Do not use water.
  Use fire extinguishing methods suitable to surrounding conditions.
- For safety reasons unsuitable extinguishing agents:
  Water with full jet

5.2 Special hazards arising from the substance or mixture
Formation of toxic gases is possible during heating or in case of fire.

5.3 Advice for firefighters
- Protective equipment:
  Do not inhale explosion gases or combustion gases.

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- Additional information
  Cool endangered receptacles with water spray.

SECTION 06: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
Wear protective equipment. Keep unprotected persons away.
Ensure adequate ventilation
Keep away from ignition sources.

6.2 Environmental precautions:
Do not allow product to reach sewage system or any water course.
Inform respective authorities in case of seepage into water course or sewage system.

6.3 Methods and material for containment and cleaning up:
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.

6.4 Reference to other sections
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

SECTION 07: Handling and storage

7.1 Precautions for safe handling
Keep receptacles tightly sealed.
Keep away from heat and direct sunlight.
Ensure good ventilation/exhaustion at the workplace.
Handle with care. Avoid jolting, friction and impact.

- Information about fire - and explosion protection:
  Keep ignition sources away - Do not smoke.
  Protect against electrostatic charges.

7.2 Conditions for safe storage, including any incompatibilities
Storage:

- Requirements to be met by storerooms and receptacles:
  Store only in the original receptacle.
  Prevent any seepage into the ground.
  Use only receptacles specifically permitted for this substance/ product.
- Information about storage in one common storage facility:
  Not required.
- Further information about storage conditions:
  Keep container tightly sealed.
  Protect from heat and direct sunlight.
  Store receptacle in a well ventilated area.

7.3 Specific end use(s)
No further relevant information available.

SECTION 08: Exposure controls/personal protection

8.1 Control parameters

- Ingredients with limit values that require monitoring at the workplace:
  The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
- Additional information:
  The lists valid during the making were used as basis.

8.2 Exposure controls

- Individual protection measures, such as personal protective equipment
- General protective and hygienic measures:
  The usual precautionary measures are to be adhered to when handling chemicals.
  Keep away from foodstuffs, beverages and feed.
  Immediately remove all soiled and contaminated clothing

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Wash hands before breaks and at the end of work.
Avoid contact with the skin.

- Respiratory protection:
  Use suitable respiratory protective device in case of insufficient ventilation.
- Protection of hands:
  Protective gloves
  The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
  Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.
  Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
- Material of gloves
  The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.
- Penetration time of glove material
  The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
- Eye/face protection
  Safety glasses

SECTION 09: Physical and chemical properties

9.1 Information on basic physical and chemical properties	
General Information	
Physical state	Fluid
Colour:	light yellow to orange
Odour:	terpenic
Odour threshold:	Not determined.
Melting point/freezing point:	< -20,0 °C
Boiling point or initial boiling point and boiling range	199,3 °C
Flammability	Not determined.
Lower and upper explosion limit	
Lower:	Not determined.
Upper:	Not determined.
Flash point:	57,0 °C NFT 60-103 CC
Decomposition temperature:	Not determined.
pH	Not determined.
Viscosity:	
Kinematic viscosity	Not determined.
Dynamic:	Not determined.
Solubility	
water:	Not determined.
Partition coefficient n-octanol/water (log value)	Not determined.
Vapour pressure:	Not determined.
Density and/or relative density	
Density:	Not determined.
Relative density	0,8520 - 0,8780 D20/4
Vapour density	Not determined.
9.2 Other information	No further relevant information available.
Appearance:	
Form:	fluid
Important information on protection of health and environment, and on safety.	
Auto-ignition temperature:	240 °C
Explosive properties:	Not determined.
Solvent content:	

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Solids content:	0,00 %
Change in condition	
Evaporation rate	Not determined.
Information with regard to physical hazard classes	
Explosives	not applicable
Flammable gases	not applicable
Aerosols	not applicable
Oxidising gases	not applicable
Gases under pressure	not applicable
Flammable liquids	Flammable liquid and vapour.
Flammable solids	not applicable
Self-reactive substances and mixtures	not applicable
Pyrophoric liquids	not applicable
Pyrophoric solids	not applicable
Self-heating substances and mixtures	not applicable
Substances and mixtures, which emit flammable gases in contact with water	not applicable
Oxidising liquids	not applicable
Oxidising solids	not applicable
Organic peroxides	not applicable
Corrosive to metals	not applicable
Desensitised explosives	not applicable

SECTION 10: Stability and reactivity

10.1 Reactivity
No further relevant information available.

10.2 Chemical stability

10.3 Possibility of hazardous reactions
No dangerous reactions known.

10.4 Conditions to avoid
No further relevant information available.

10.5 Incompatible materials:
No further relevant information available.

10.6 Hazardous decomposition products:
Not determined.

SECTION 11: Toxicological information

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008
• Acute toxicity
LD/LC50 values relevant for classification:

ISO LD/LC

ELEMI OIL
Oral, LD50: 3370 mg/kg (rat) (1974)
• Primary irritant effect:
- Skin corrosion/irritation
Irritant to skin and mucous membranes.
Causes skin irritation.
- Serious eye damage/irritation

ELEMI OIL
Irritation of eyes, OECD 492: NOT CLASSIFIED (in vitro) (Reach file, 2015)

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- Respiratory or skin sensitisation
  No sensitizing effects known.
- Germ cell mutagenicity

ELEMI OIL

OECD 471 AMES: NEGATIVE (in vitro) (OECD 471, 2015)

- Carcinogenicity
  Not determined.
- Reproductive toxicity
  Not determined.
- STOT-single exposure
  Not determined.
- STOT-repeated exposure
  Not determined.
- Aspiration hazard
  May be fatal if swallowed and enters airways.
  May be fatal if swallowed and enters airways.
- Subacute to chronic toxicity:
  Not determined.
- Additional toxicological information:
  The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:
  Harmful
  Irritant
  Carcinogenic if inhaled.

11.2 Information on other hazards

- Endocrine disrupting properties
  None of the ingredients is listed.

SECTION 12: Ecological information

12.1 Toxicity

- Aquatic toxicity:

ELEMI OIL

CE50/48h: 1,9 mg/l (daphnia) (OECD 202 calculation)
ErC50(0-72h): 5,2 mg/l (algae) (OECD 201 similar)

12.2 Persistence and degradability
No further relevant information available.

- Behaviour in environmental systems:
  Not determined.

12.3 Bioaccumulative potential
No further relevant information available.

12.4 Mobility in soil
No further relevant information available.

12.5 Results of PBT and vPvB assessment

- PBT:
  Not applicable.
- vPvB:
  Not applicable.

12.6 Endocrine disrupting properties
The product does not contain substances with endocrine disrupting properties.

12.6 Other adverse effects
No further relevant information available.

- Ecotoxical effects:
  Not determined.
- Remark:
  Toxic for fish
- Additional ecological information:
- General notes:
  Toxic for aquatic organisms
  The product contains materials that are harmful to the environment.

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SECTION 13: Disposal considerations

13.1 Waste treatment methods
- Recommendation
  Must be specially treated adhering to official regulations.
- Uncleaned packaging:
- Recommendation:
  Disposal must be made according to official regulations.

SECTION 14: Transport information

14.1 UN number or ID number

* **ADR** UN1197

* **IMDG** UN1197

* **IATA** UN1197

14.2 UN proper shipping name

* **ADR** 1197 EXTRACTS, LIQUID

* **IMDG** EXTRACTS, LIQUID

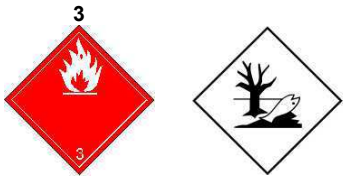
* **IATA** EXTRACTS, LIQUID

14.3 Transport hazard class(es)

ADR

Class 3 (F1) Flammable liquids.

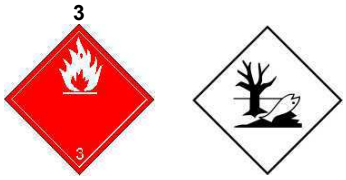
Label



IMDG

Class 3 Flammable liquids.

Label



IATA

Class 3 Flammable liquids.

Label

14.4 Packing group

ADR III

IMDG III

IATA III

14.5 Environmental hazards:

Marine pollutant: Yes

14.6 Special precautions for user

Warning: Flammable liquids.

Danger code (Kemler): 30

EMS Number: F-E,S-D

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14.7 Maritime transport in bulk according to IMO instruments
Not applicable.

- Transport/Additional information:
  Not applicable.

ADR

Excepted quantities (EQ):	E1
Limited quantities (LQ)	5L
Transport category	3
Tunnel restriction code	D/E

IMDG

Limited quantities (LQ)	5L
Excepted quantities (EQ)	E1

- UN "Model Regulation":

* UN 1197 EXTRACTS, LIQUID, 3, III, ENVIRONMENTALLY HAZARDOUS

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

- DIRECTIVE 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment - Annex II
  None of the ingredients is listed.
- REGULATION (EU) 2019/1148
- Annex I - RESTRICTED EXPLOSIVES PRECURSORS (Upper limit value for the purpose of licensing under Article 5(3))
  None of the ingredients is listed.
- Annex II - REPORTABLE EXPLOSIVES PRECURSORS
  None of the ingredients is listed.
- Regulation (EC) No 273/2004 on drug precursors
  108-88-3 toluene : 3
- Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug precursors
  108-88-3 toluene : 3

- National regulations:

- Technical instructions (air):
- Class Share in %
  I 0,04
  III

- Waterhazard class:
  Water hazard class 2 (Self-assessment): hazardous for water.

15.2 Chemical safety assessment:
A Chemical Safety Assessment has been carried out.

SECTION 16: Other information

The information in this safety data sheet is based on the state of our knowledge at the date indicated. The information in this sheet must be regarded as a description of the safety requirements for the product, they are not to be considered a warranty or quality specification and have no contractual value on properties and application areas thereof. The information contained in this safety data sheet relate to the specific material designated and may not be valid with respect to the product associated with another product or process, unless it is specified in the text of this document.
The required information complies with EU regulations in force. It does not exempt the user from knowing and applying all the national regulations in force.

- Relevant phrases

H226	Flammable liquid and vapour.
H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.

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H341	Suspected of causing genetic defects.
H351	Suspected of causing cancer.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.

- Training hints
  Minimum training in occupational risk prevention is recommended for personnel who will handle this product, in the purpose of facilitating the understanding and interpretation of this form of safety data in the same way as the labeling of the product.

- Abbreviations and acronyms:
  IFRA:International Fragrance Association IOFI:International Organization of the Flavor Industry IFRA:International Fragrance Association IOFI:International Organization of the Flavor Industry
  ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road) ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
  RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail) RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
  IMDG: International Maritime Code for Dangerous Goods IMDG: International Maritime Code for Dangerous Goods
  DOT: US Department of Transportation DOT: US Department of Transportation
  IATA: International Air Transport Association IATA: International Air Transport Association
  ICAO: International Civil Aviation Organisation ICAO: International Civil Aviation Organisation
  GHS: Globally Harmonised System of Classification and Labelling of Chemicals GHS: Globally Harmonised System of Classification and Labelling of Chemicals
  EINECS: European Inventory of Existing Commercial Chemical Substances EINECS: European Inventory of Existing Commercial Chemical Substances
  ELINCS: European List of Notified Chemical Substances ELINCS: European List of Notified Chemical Substances
  CAS: Chemical Abstracts Service (division of the American Chemical Society) CAS: Chemical Abstracts Service (division of the American Chemical Society)
  LC50: Lethal concentration, 50 percent LC50: Lethal concentration, 50 percent
  LD50: Lethal dose, 50 percent LD50: Lethal dose, 50 percent
  PBT: Persistent, Bioaccumulative and Toxic PBT: Persistent, Bioaccumulative and Toxic
  vPvB: very Persistent and very Bioaccumulative vPvB: very Persistent and very Bioaccumulative
  CE50: effective concentration at 50% ErC50:concentration of test substance which results in a 50 percent reduction in either growth rate (ErC50)relative to the control within 72hrs exposure.

- Sources
  IFRA/IOFI Labelling Manual,REACH registration dossier,supplier information

- * Data compared to the previous version altered.

Annex :
EXPOSURE ASSESSMENT
(and related risk characterisation)
for Elemi oil

Table of Contents

1. ES 1: Manufacture

1.1. Title section

ES name: *Manufacture*

Environment	
1: *Manufacture*	ERC 1
Worker	
2: *General process - Distillation phase including flexible connections and closed transfers .*	PROC 3
3: *General process - water/oil separator.*	PROC 5
4: *Transferts - IBC or drums loading.*	PROC 8b
5: *Cleaning and maintenance*	PROC 8a

1.2. Conditions of use affecting exposure

1.2.1. Control of environmental exposure: *Manufacture* (ERC 1)

Amount used, frequency and duration of use (or from service life)
Annual amount per site <= 30 tonnes/year
Daily amount per site <= 0.15 tonnes/day
Emission days
Conditions and measures related to biological sewage treatment plant
Municipal sewage treatment plant is assumed.
Assumed domestic sewage treatment plant flow >= 2E3 m3/day
Conditions and measures related to external treatment of waste (including article waste)
Dispose of waste product or used containers according to local regulations.
Other conditions affecting environmental exposure
Receiving surface water flow >= 1.8E4 m3/day

1.2.2. Control of worker exposure: *General process - Distillation phase including flexible connections and closed transfers .* (PROC 3)

Product (article) characteristics
Covers concentrations up to 4 %
Amount used (or contained in articles), frequency and duration of use/exposure
Covers use up to 8 h/day
Transfer of liquid product with flow of 10 - 100 l/minute
Technical and organisational conditions and measures
Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour).
ACH = Air Change per Hour
Assumes that activities are undertaken with appropriate and well maintained equipment by trained personnel operating under supervision.
Conditions and measures related to personal protection, hygiene and health evaluation
Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training.; If skin contamination is expected to extend to other parts of the body, then these body parts should also be protected with impervious garments in a manner equivalent to those described for the hands.; For further specification, refer to section 8 of the SDS.
Other conditions affecting workers exposure
Assumes process temperature up to 130 °C

Indoor use
Additional good practice advice. Obligations according to Article 37(4) of REACH do not apply
General house keeping practices are in place

1.2.3. Control of worker exposure: *General process - water/oil separator.* (PROC 5)

Product (article) characteristics
Covers concentrations up to 100 %
Amount used (or contained in articles), frequency and duration of use/exposure
Covers use up to 8 h/day
Technical and organisational conditions and measures
Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour).
ACH = Air Change per Hour
Assumes that activities are undertaken with appropriate and well maintained equipment by trained personnel operating under supervision.
Conditions and measures related to personal protection, hygiene and health evaluation
Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training.; If skin contamination is expected to extend to other parts of the body, then these body parts should also be protected with impervious garments in a manner equivalent to those described for the hands.; For further specification, refer to section 8 of the SDS.
Other conditions affecting workers exposure
Assumes process temperature up to 35 °C
Indoor use
Additional good practice advice. Obligations according to Article 37(4) of REACH do not apply
General house keeping practices are in place

1.2.4. Control of worker exposure: *Transferts - IBC or drums loading.* (PROC 8b)

Product (article) characteristics
Covers concentrations up to 100 %
Amount used (or contained in articles), frequency and duration of use/exposure
Covers use up to 8 h/day
Transfer of liquid product with flow of 1 - 10 l/minute
Technical and organisational conditions and measures
Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour).
ACH = Air Change per Hour
Assumes that activities are undertaken with appropriate and well maintained equipment by trained personnel operating under supervision.
Conditions and measures related to personal protection, hygiene and health evaluation
Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training.; If skin contamination is expected to extend to other parts of the body, then these body parts should also be protected with impervious garments in a manner equivalent to those described for the hands.; For further specification, refer to section 8 of the SDS.
Other conditions affecting workers exposure
Assumes process temperature up to 35 °C
Indoor use

Additional good practice advice. Obligations according to Article 37(4) of REACH do not apply
General house keeping practices are in place

1.2.5. Control of worker exposure: *Cleaning and maintenance* (PROC 8a)

Product (article) characteristics
Covers concentrations up to 25 %
Amount used (or contained in articles), frequency and duration of use/exposure
Covers use up to 1 h/day
Technical and organisational conditions and measures
Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour).
Assumes that activities are undertaken with appropriate and well maintained equipment by trained personnel operating under supervision.
ACH = Air Change per Hour
Activities with treated/contaminated objects (surface 1 - 3 m²)
Contamination 10-90 % of surface
Conditions and measures related to personal protection, hygiene and health evaluation
Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training.; If skin contamination is expected to extend to other parts of the body, then these body parts should also be protected with impervious garments in a manner equivalent to those described for the hands.; For further specification, refer to section 8 of the SDS.
Other conditions affecting workers exposure
Assumes process temperature up to 25 °C
Indoor use
Additional good practice advice. Obligations according to Article 37(4) of REACH do not apply
General house keeping practices are in place

1.3. Exposure estimation and reference to its source

1.4. Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Scaling method
The workers exposure have been evaluated using ECETOC TRA integrated tool version 3.0, ART 1.5 and Riskofderm and environmental emissions have been evaluated EUSES 2.1.2.
Health
Predicted exposures are not expected to exceed the DN(M)EL when the Risk Management Measures / Operational Conditions outlined in Section 2 are implemented. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.
Environment
Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination.

2. ES 2: Formulation or re-packing

2.1. Title section

ES name: *GES1 - Formulation of fragrance compounds*

Environment		SPERC
1: *Formulation of fragrance compounds (small sites)*	ERC 2	*IFRA 2.1b.v1*
2: *Formulation of fragrance compounds (large/medium sites)*	ERC 2	*IFRA 2.1a.v1 - REGIONAL*
Worker		SWED
3: *CS2 - Storage (IFRA F-2)*	PROC 1	
4: *CS3 - Mixing operations (closed systems) in batch process including filling of equipment and sample collection (IFRA F-3)*	PROC 3	
5: *CS4 - Mixing operations (open systems) in batch process including filling of equipment and sample collection (IFRA F-4)*	PROC 5	
6: *CS7 - Equipment cleaning and maintenance (IFRA F-7)*	PROC 8a	
7: *CS1 - Material transfers from/to vessel/container at dedicated facility (IFRA F-1).*	PROC 8b	
8: *CS6 - Transfer of substance or preparation into small containers (dedicated filling line, including weighing) (IFRA F-6)*	PROC 9	
9: *CS5 - QC laboratory (IFRA F-5)*	PROC 15	

2.2. Conditions of use affecting exposure

2.2.1. Control of environmental exposure: *Formulation of fragrance compounds (small sites)* (ERC 2)

Amount used, frequency and duration of use (or from service life)
Daily amount per site <= 6.8E-4 tonnes/day
Annual amount per site <= 0.17 tonnes/year
Conditions and measures related to biological sewage treatment plant
Municipal sewage treatment plant is assumed.
Assumed domestic sewage treatment plant flow >= 2E3 m3/day
Conditions and measures related to external treatment of waste (including article waste)
Dispose of waste product or used containers according to local regulations.

2.2.2. Control of environmental exposure: *Formulation of fragrance compounds (large/medium sites)* (ERC 2)

Amount used, frequency and duration of use (or from service life)
Daily amount per site <= 0.085 tonnes/day
Emission days
Annual amount per site <= 21.25 tonnes/year
Conditions and measures related to biological sewage treatment plant
Municipal sewage treatment plant is assumed.
Assumed domestic sewage treatment plant flow >= 2E3 m3/day
Conditions and measures related to external treatment of waste (including article waste)
Dispose of waste product or used containers according to local regulations.

2.2.3. Control of worker exposure: *CS2 - Storage (IFRA F-2)* (PROC 1)

Product (article) characteristics
Covers concentrations up to 100 %
Amount used (or contained in articles), frequency and duration of use/exposure
Covers use up to 1 h/day
Technical and organisational conditions and measures
Provide a basic standard of general ventilation (1 to 3 air changes per hour).
Assumes that activities are undertaken with appropriate and well maintained equipment by trained personnel operating under supervision.
Other conditions affecting workers exposure
Assumes process temperature up to 25 °C
Indoor use

2.2.4. Control of worker exposure: *CS3 - Mixing operations (closed systems) in batch process including filling of equipment and sample collection (IFRA F-3)* (PROC 3)

Product (article) characteristics
Covers concentrations up to 100 %
Amount used (or contained in articles), frequency and duration of use/exposure
Covers use up to 4 h/day
Technical and organisational conditions and measures
Splash loading, where the liquid dispenser remains at the top of the reservoir and the liquid splashes freely
Medium level containment
Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour).
Assumes that activities are undertaken with appropriate and well maintained equipment by trained personnel operating under supervision.
Conditions and measures related to personal protection, hygiene and health evaluation
Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training.; If skin contamination is expected to extend to other parts of the body, then these body parts should also be protected with impervious garments in a manner equivalent to those described for the hands.; For further specification, refer to section 8 of the SDS.
Other conditions affecting workers exposure
Assumes process temperature up to 25 °C
Indoor use

2.2.5. Control of worker exposure: *CS4 - Mixing operations (open systems) in batch process including filling of equipment and sample collection (IFRA F-4)* (PROC 5)

Product (article) characteristics
Covers concentrations up to 100 %
Amount used (or contained in articles), frequency and duration of use/exposure
Covers use up to 4 h/day
Technical and organisational conditions and measures
Low level containment
Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour).
Assumes that activities are undertaken with appropriate and well maintained equipment by trained personnel operating under supervision.

Conditions and measures related to personal protection, hygiene and health evaluation
Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training.; If skin contamination is expected to extend to other parts of the body, then these body parts should also be protected with impervious garments in a manner equivalent to those described for the hands.; For further specification, refer to section 8 of the SDS.
Other conditions affecting workers exposure
Assumes process temperature up to 25 °C
Indoor use

2.2.6. Control of worker exposure: *CS7 - Equipment cleaning and maintenance (IFRA F-7)* (PROC 8a)

Product (article) characteristics
Covers concentrations up to 25 %
Amount used (or contained in articles), frequency and duration of use/exposure
Covers use up to 1 h/day
Technical and organisational conditions and measures
Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour).
Assumes that activities are undertaken with appropriate and well maintained equipment by trained personnel operating under supervision.
Activities with treated/contaminated objects (surface 1 - 3 m²)
Contamination 10-90 % of surface
Conditions and measures related to personal protection, hygiene and health evaluation
Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training.; If skin contamination is expected to extend to other parts of the body, then these body parts should also be protected with impervious garments in a manner equivalent to those described for the hands.; For further specification, refer to section 8 of the SDS.
Other conditions affecting workers exposure
Assumes process temperature up to 25 °C
Indoor use

2.2.7. Control of worker exposure: *CS1 - Material transfers from/to vessel/container at dedicated facility (IFRA F-1).* (PROC 8b)

Product (article) characteristics
Covers concentrations up to 100 %
Amount used (or contained in articles), frequency and duration of use/exposure
Covers use up to 1 h/day
Technical and organisational conditions and measures
Splash loading, where the liquid dispenser remains at the top of the reservoir and the liquid splashes freely
Low level containment
Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour).
Assumes that activities are undertaken with appropriate and well maintained equipment by trained personnel operating under supervision.
Conditions and measures related to personal protection, hygiene and health evaluation
Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training.; If skin contamination is expected to extend to other parts of the body, then these body parts should also be protected with impervious garments in a manner equivalent to those described for the hands.; For further specification, refer to section 8 of the SDS.

Other conditions affecting workers exposure
Assumes process temperature up to 25 °C
Indoor use

2.2.8. Control of worker exposure: *CS6 - Transfer of substance or preparation into small containers (dedicated filling line, including weighing) (IFRA F-6)* (PROC 9)

Product (article) characteristics
Covers concentrations up to 25 %
Amount used (or contained in articles), frequency and duration of use/exposure
Covers use up to 1 h/day
Technical and organisational conditions and measures
Splash loading, where the liquid dispenser remains at the top of the reservoir and the liquid splashes freely
Low level containment
Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour).
Assumes that activities are undertaken with appropriate and well maintained equipment by trained personnel operating under supervision.
Conditions and measures related to personal protection, hygiene and health evaluation
Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training.; If skin contamination is expected to extend to other parts of the body, then these body parts should also be protected with impervious garments in a manner equivalent to those described for the hands.; For further specification, refer to section 8 of the SDS.
Other conditions affecting workers exposure
Assumes process temperature up to 25 °C
Indoor use

2.2.9. Control of worker exposure: *CS5 - QC laboratory (IFRA F-5)* (PROC 15)

Product (article) characteristics
Covers concentrations up to 100 %
Amount used (or contained in articles), frequency and duration of use/exposure
Covers use up to 0.25 h/day
Technical and organisational conditions and measures
Local exhaust ventilation; Inhalation - minimum efficiency of 90 %
Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour).
Assumes that activities are undertaken with appropriate and well maintained equipment by trained personnel operating under supervision.
Conditions and measures related to personal protection, hygiene and health evaluation
Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training.; If skin contamination is expected to extend to other parts of the body, then these body parts should also be protected with impervious garments in a manner equivalent to those described for the hands.; For further specification, refer to section 8 of the SDS.
Other conditions affecting workers exposure
Assumes process temperature up to 25 °C
Indoor use

2.3. Exposure estimation and reference to its source

2.4. Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Scaling method
The workers exposure have been evaluated using ECETOC TRA integrated tool version 3.0, ART 1.5 and Riskofderm and environmental emissions have been evaluated EUSES 2.1.2.
Health
Predicted exposures are not expected to exceed the DN(M)EL when the Risk Management Measures / Operational Conditions outlined in Section 2 are implemented. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.
Environment
Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination.

3. ES 3: Formulation or re-packing

3.1. Title section

ES name: *GES2 - Formulation of fragrance end-products*

Environment		SPERC
1: *AISE Granular & Low Viscosity Liquids - large scale*	ERC 2	*AISE 2.1a,g.v2*
2: *AISE Granular & Low Viscosity Liquids - medium scale*	ERC 2	*AISE 2.1b,h.v2*
3: *AISE Granular & Low Viscosity Liquids - small scale*	ERC 2	*AISE 2.1c,i.v2*
4: *AISE High Viscosity Liquids + CE/AISE Solid Products + CE Low Viscosity Liquids - large scale*	ERC 2	*AISE 2.1j.v2*
5: *AISE High Viscosity Liquids + CE/AISE Solid Products + CE Low Viscosity Liquids - medium scale*	ERC 2	*AISE 2.1.k CE/AISE 2.3.b CE 2.1.b*
6: *AISE High Viscosity Liquids + CE/AISE Solid Products + CE Low Viscosity Liquids - small scale*	ERC 2	*AISE 2.1.l CE/AISE 2.3.c CE 2.1.c*
7: *AISE & CE Fine Fragrances (cleaning with solvent) - all scales*	ERC 2	*CE 2.2.a-c*
8: *Cosmetics Europe - Other formulations - all scales*	ERC 2	
Worker		SWED
9: *CS2 - Storage (IFRA F-2)*	PROC 1	
10: *CS3 - Mixing operations (closed systems) in batch process including filling of equipment and sample collection (IFRA F-3)*	PROC 3	
11: *CS4 - Mixing operations (open systems) in batch process including filling of equipment and sample collection (IFRA F-4)*	PROC 5	
12: *CS7 - Equipment cleaning and maintenance (IFRA F-7)*	PROC 8a	
13: *CS6 - Transfer of substance or preparation into small containers (dedicated filling line, including weighing) (IFRA F-6)*	PROC 9	
14: *CS8 - Production of preparations or articles by tabletting, compression, extrusion, pelletisation (AISE M-8)*	PROC 14	
15: *CS5 - QC laboratory (IFRA F-5)*	PROC 15	

3.2. Conditions of use affecting exposure

3.2.1. Control of environmental exposure: *AISE Granular & Low Viscosity Liquids - large scale* (ERC 2)

Amount used, frequency and duration of use (or from service life)
Daily amount per site <= 0.153 tonnes/day
Annual amount per site <= 38.25 tonnes/year
Technical and organisational conditions and measures
Product applied in aqueous process solution with negligible volatilization.
Residues of granular detergents recovered in cleaning steps at packaging or transfer lines are recycled into the slurries.
Conditions and measures related to biological sewage treatment plant
Municipal sewage treatment plant is assumed.
Assumed domestic sewage treatment plant flow >= 2E3 m3/day
Conditions and measures related to external treatment of waste (including article waste)
Dispose of waste product or used containers according to local regulations.

3.2.2. Control of environmental exposure: *AISE Granular & Low Viscosity Liquids - medium scale* (ERC 2)

Amount used, frequency and duration of use (or from service life)
Daily amount per site <= 0.045 tonnes/day
Annual amount per site <= 11.25 tonnes/year
Technical and organisational conditions and measures
Indoor Use
Granular detergents are obtained by drying liquid slurries.
Process optimized for efficient use of raw materials.
Residues of granular detergents recovered in cleaning steps at packaging or transfer lines are recycled into the slurries.
Conditions and measures related to biological sewage treatment plant
Municipal sewage treatment plant is assumed.
Assumed domestic sewage treatment plant flow >= 2E3 m3/day

3.2.3. Control of environmental exposure: *AISE Granular & Low Viscosity Liquids - small scale* (ERC 2)

Amount used, frequency and duration of use (or from service life)
Daily amount per site <= 0.45 tonnes/day
Annual amount per site <= 4.5 tonnes/year
Technical and organisational conditions and measures
Indoor
Granular detergents are obtained by drying liquid slurries.
Process with efficient use of raw materials.
Residues of granular detergents recovered in cleaning steps at packaging or transfer lines are recycled into the slurries.
Conditions and measures related to biological sewage treatment plant
Municipal sewage treatment plant is assumed.
Assumed domestic sewage treatment plant flow >= 2E3 m3/day

3.2.4. Control of environmental exposure: *AISE High Viscosity Liquids + CE/AISE Solid Products + CE Low Viscosity Liquids - large scale* (ERC 2)

Amount used, frequency and duration of use (or from service life)
Daily amount per site <= 0.044 tonnes/day
Annual amount per site <= 11.05 tonnes/year
Technical and organisational conditions and measures
Process optimized for highly efficient use of raw materials
Equipment cleaning with minimized emissions to wastewater
Conditions and measures related to biological sewage treatment plant
Municipal sewage treatment plant is assumed.
Assumed domestic sewage treatment plant flow >= 2E3 m3/day
Conditions and measures related to external treatment of waste (including article waste)
Dispose of waste product or used containers according to local regulations.

3.2.5. Control of environmental exposure: *AISE High Viscosity Liquids + CE/AISE Solid Products + CE Low Viscosity Liquids - medium scale* (ERC 2)

Amount used, frequency and duration of use (or from service life)
Daily amount per site <= 0.024 tonnes/day
Annual amount per site <= 5.95 tonnes/year
Technical and organisational conditions and measures
Indoor
Product applied in aqueous process solution with negligible volatilization.
Process optimized for efficient use of raw materials.
Conditions and measures related to biological sewage treatment plant
Municipal sewage treatment plant is assumed.
Assumed domestic sewage treatment plant flow >= 2E3 m3/day
Conditions and measures related to external treatment of waste (including article waste)
Dispose of waste product or used containers according to local regulations.

3.2.6. Control of environmental exposure: *AISE High Viscosity Liquids + CE/AISE Solid Products + CE Low Viscosity Liquids - small scale* (ERC 2)

Amount used, frequency and duration of use (or from service life)
Daily amount per site <= 0.45 tonnes/day
Annual amount per site <= 4.5 tonnes/year
Technical and organisational conditions and measures
Indoor
Product applied in aqueous process solution with negligible volatilization.
Process with efficient use of raw materials.
Conditions and measures related to biological sewage treatment plant
Municipal sewage treatment plant is assumed.
Assumed domestic sewage treatment plant flow >= 2E3 m3/day

3.2.7. Control of environmental exposure: *AISE & CE Fine Fragrances (cleaning with solvent) - all scales* (ERC 2)

Amount used, frequency and duration of use (or from service life)
Daily amount per site <= 16.7 tonnes/day
Annual amount per site <= 17 tonnes/year
Technical and organisational conditions and measures
Indoor
Process with efficient use of raw materials.
Conditions and measures related to biological sewage treatment plant
Municipal sewage treatment plant is assumed.
Assumed domestic sewage treatment plant flow >= 2E3 m3/day
Conditions and measures related to external treatment of waste (including article waste)
Dispose of waste product or used containers according to local regulations.

3.2.8. Control of environmental exposure: *Cosmetics Europe - Other formulations - all scales* (ERC 2)

Amount used, frequency and duration of use (or from service life)
Daily amount per site <= 6.8E-3 tonnes/day
Annual amount per site <= 1.7 tonnes/year

Conditions and measures related to biological sewage treatment plant
Municipal sewage treatment plant is assumed.
Assumed domestic sewage treatment plant flow >= 2E3 m3/day
Conditions and measures related to external treatment of waste (including article waste)
Dispose of waste product or used containers according to local regulations.

3.2.9. Control of worker exposure: *CS2 - Storage (IFRA F-2)* (PROC 1)

Product (article) characteristics
Covers concentrations up to 25 %
Amount used (or contained in articles), frequency and duration of use/exposure
Covers use up to 1 h/day
Technical and organisational conditions and measures
Provide a basic standard of general ventilation (1 to 3 air changes per hour).
Assumes that activities are undertaken with appropriate and well maintained equipment by trained personnel operating under supervision.
Other conditions affecting workers exposure
Assumes process temperature up to 25 °C
Indoor use

3.2.10. Control of worker exposure: *CS3 - Mixing operations (closed systems) in batch process including filling of equipment and sample collection (IFRA F-3)* (PROC 3)

Product (article) characteristics
Covers concentrations up to 25 %
Amount used (or contained in articles), frequency and duration of use/exposure
Covers use up to 4 h/day
Technical and organisational conditions and measures
Splash loading, where the liquid dispenser remains at the top of the reservoir and the liquid splashes freely
Medium level containment
Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour).
Assumes that activities are undertaken with appropriate and well maintained equipment by trained personnel operating under supervision.
Conditions and measures related to personal protection, hygiene and health evaluation
Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training.; If skin contamination is expected to extend to other parts of the body, then these body parts should also be protected with impervious garments in a manner equivalent to those described for the hands.; For further specification, refer to section 8 of the SDS.
Other conditions affecting workers exposure
Assumes process temperature up to 25 °C
Indoor use

3.2.11. Control of worker exposure: *CS4 - Mixing operations (open systems) in batch process including filling of equipment and sample collection (IFRA F-4)* (PROC 5)

Product (article) characteristics
Covers concentrations up to 25 %

Amount used (or contained in articles), frequency and duration of use/exposure
Covers use up to 1 h/day
Technical and organisational conditions and measures
Low level containment
Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour).
Assumes that activities are undertaken with appropriate and well maintained equipment by trained personnel operating under supervision.
Conditions and measures related to personal protection, hygiene and health evaluation
Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training.; If skin contamination is expected to extend to other parts of the body, then these body parts should also be protected with impervious garments in a manner equivalent to those described for the hands.; For further specification, refer to section 8 of the SDS.
Other conditions affecting workers exposure
Assumes process temperature up to 25 °C
Indoor use

3.2.12. Control of worker exposure: *CS7 - Equipment cleaning and maintenance (IFRA F-7)* (PROC 8a)

Product (article) characteristics
Covers concentrations up to 1 %
Amount used (or contained in articles), frequency and duration of use/exposure
Covers use up to 4 h/day
Technical and organisational conditions and measures
Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour).
Assumes that activities are undertaken with appropriate and well maintained equipment by trained personnel operating under supervision.
Conditions and measures related to personal protection, hygiene and health evaluation
Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training.; If skin contamination is expected to extend to other parts of the body, then these body parts should also be protected with impervious garments in a manner equivalent to those described for the hands.; For further specification, refer to section 8 of the SDS.
Other conditions affecting workers exposure
Assumes process temperature up to 25 °C
Indoor use

3.2.13. Control of worker exposure: *CS6 - Transfer of substance or preparation into small containers (dedicated filling line, including weighing) (IFRA F-6)* (PROC 9)

Product (article) characteristics
Covers concentrations up to 1 %
Amount used (or contained in articles), frequency and duration of use/exposure
Covers use up to 1 h/day
Technical and organisational conditions and measures
Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour).
Assumes that activities are undertaken with appropriate and well maintained equipment by trained personnel operating under supervision.
Conditions and measures related to personal protection, hygiene and health evaluation

Wear chemically resistant gloves (tested to EN374) in combination with ‘basic’ employee training.; If skin contamination is expected to extend to other parts of the body, then these body parts should also be protected with impervious garments in a manner equivalent to those described for the hands.; For further specification, refer to section 8 of the SDS.
Other conditions affecting workers exposure
Assumes process temperature up to 25 °C
Indoor use

3.2.14. Control of worker exposure: *CS8 - Production of preparations or articles by tabletting, compression, extrusion, pelletisation (AISE M-8)* (PROC 14)

Product (article) characteristics
Covers concentrations up to 1 %
Amount used (or contained in articles), frequency and duration of use/exposure
Covers use up to 4 h/day
Technical and organisational conditions and measures
Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour).
Conditions and measures related to personal protection, hygiene and health evaluation
Wear chemically resistant gloves (tested to EN374) in combination with ‘basic’ employee training.; If skin contamination is expected to extend to other parts of the body, then these body parts should also be protected with impervious garments in a manner equivalent to those described for the hands.; For further specification, refer to section 8 of the SDS.
Other conditions affecting workers exposure
Assumes process temperature up to 25 °C
Indoor use

3.2.15. Control of worker exposure: *CS5 - QC laboratory (IFRA F-5)* (PROC 15)

Product (article) characteristics
Covers concentrations up to 25 %
Amount used (or contained in articles), frequency and duration of use/exposure
Covers use up to 0.25 h/day
Technical and organisational conditions and measures
Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour).
Assumes that activities are undertaken with appropriate and well maintained equipment by trained personnel operating under supervision.
Conditions and measures related to personal protection, hygiene and health evaluation
Wear chemically resistant gloves (tested to EN374) in combination with ‘basic’ employee training.; If skin contamination is expected to extend to other parts of the body, then these body parts should also be protected with impervious garments in a manner equivalent to those described for the hands.; For further specification, refer to section 8 of the SDS.
Other conditions affecting workers exposure
Assumes process temperature up to 25 °C
Indoor use

3.3. Exposure estimation and reference to its source

3.4. Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Scaling method
The workers exposure have been evaluated using ECETOC TRA integrated tool version 3.0, ART 1.5 and Riskofderm and environmental emissions have been evaluated EUSES 2.1.2.
Health
Predicted exposures are not expected to exceed the DN(M)EL when the Risk Management Measures / Operational Conditions outlined in Section 2 are implemented. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.
Environment
Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination.

4. ES 4: Use at industrial sites

4.1. Title section

ES name: *GES3 - Industrial end-use of washing and cleaning products*

Environment		SPERC
1: *GES3 - Industrial end-use of washing and cleaning products*	ERC 4	*AISE 4.1.v2-regional*
Worker		SWED
2: *Industrial use of Food beverage and pharmacos products; Process cleaner; Cleaning In place (CIP) process (AISE-P801); Use Phase - Industrial use of Food beverage and pharmacos products; Defoaming product; Automatic process (AISE-P805); Use Phase*	PROC 1	
3: *Industrial use of Laundry products; Laundry detergent; Automatic process (AISE-P101); Use Phase - Industrial use of Laundry products; Conditioner (softner/starch); Automatic process (AISE-P104); Use Phase - Industrial use of Laundry products; Laundry aid (gasing); Automatic process (AISE-P107); Use Phase - Industrial use of Laundry products; Laundry aid (non-gasing); Automatic process (AISE-P110); Use Phase*	PROC 2	
4: *Industrial use of pharmacos products; Disinfection product; Semi-automatic process (AISE-P810); Use Phase*	PROC 4	
5: *Industrial use of Vehicle cleaning Products; Train cleaner; Semi-Automatic process (AISE-P707); Use Phase - Industrial use of Vehicle cleaning Products; Aeroplane cleaner; Semi-Automatic process (AISE-P708); Use Phase -Industrial Use of Vehicle cleaning Products; Car wash product; Semi-Automatic process (AISE-P709); Use Phase - Industrial Use of Vehicle cleaning Products; Dewaxing product; Semi-Automatic process (AISE-P712); Use Phase Industrial use of Food beverage and pharmacos products; Process cleaner; Semi closed cleaning process (AISE-P802); Use Phase*	PROC 4	
6: *Industrial use of Water treatment Products; Preservation and sanitation agent ; Drink and pool water (AISE-P904); Use Phase - Industrial use of Water treatment Products; Sanitation agent; Waste water (AISE-P905); Use Phase*	PROC 4	
7: *Industrial Use of Vehicle cleaning Products; Car wash product; Spray and rinse process (AISE-P710); Use Phase*	PROC 7	
8: *Industrial Use of Vehicle cleaning Products; Car wash product; Spray and wipe process (AISE-P711); Use Phase - Industrial Use of Vehicle cleaning Products; Boat cleaner; Spray and wipe process (AISE-P714); Use Phase*	PROC 7	
9: *Industrial use of Food beverage and pharmacos products; Foam cleaner; Semi-Automatic with venting process (AISE-P806); Use Phase*	PROC 7	
10: *Industrial use of Food beverage and pharmacos products; Chain maintenance product; Automatic spray process (AISE-P803); Use Phase - Industrial use of Food beverage and pharmacos products; Foam cleaner; Semi-Automatic without venting process (AISE-P807); Use Phase - Industrial use of Food beverage and pharmacos products; Animal housing care; Semi-Automatic process (AISE-P809); Use Phase - Industrial use of Food beverage and pharmacos products; Disinfection product; Fogging and gassing Semi-automatic process (AISE-P811); Use Phase*	PROC 7	
11: *Industrial Use of Facade/surface Cleaning Products; Façade/surface cleaner; High pressure process (AISE-P906); Use Phase - Industrial Use of Façade/surface Cleaning Products; Facade/surface cleaner; Medium pressure process (AISE-P907); Use Phase*	PROC 7	
12: *Industrial use of Laundry products; Laundry detergent; Automatic process (AISE-P101); Preparatory Phase - Industrial use of Laundry*	PROC 8b	

products; Conditioner (softner/starch); Automatic process (AISE-P104); Preparatory Phase - Industrial use of Laundry products; Laundry aid (gasing); Automatic process (AISE-P107); Preparatory Phase - Industrial use of Laundry products; Laundry aid (non-gasing); Automatic process (AISE-P110); Preparatory Phase - Industrial use of Food beverage and pharmacos products; Process cleaner; Cleaning In place (CIP) process (AISE-P801); Preparatory Phase - Industrial use of Food beverage and pharmacos products; Process cleaner; Semi closed cleaning process (AISE-P802); Preparatory Phase - Industrial use of Food beverage and pharmacos products; Chain maintenance product; Automatic spray process (AISE-P803); Preparatory Phase - Industrial use of Food beverage and pharmacos products; Defoaming product; Automatic process (AISE-P805); Preparatory Phase	
13: *Industrial use of Water treatment Products; Preservation and sanitation agent ; Drink and pool water (AISE-P904); Preparatory Phase - Industrial use of Water treatment Products; Sanitation agent; Waste water (AISE-P905); Preparatory Phase - Industrial Use of Façade/surface Cleaning Products; Façade/surface cleaner; High pressure process (AISE-P906); Preparatory Phase - Industrial Use of Façade/surface Cleaning Products; Façade/surface cleaner; Medium pressure process (AISE-P907); Preparatory Phase*	PROC 8b
14: *Industrial use of Vehicle cleaning Products; Train cleaner; Semi-Automatic process (AISE-P707); Preparatory Phase - Industrial use of Vehicle cleaning Products; Aeroplane cleaner; Semi-Automatic process (AISE-P708); Preparatory Phase - Industrial Use of Vehicle cleaning Products; Car wash product; Semi-Automatic process (AISE-P709); Preparatory Phase - Industrial Use of Vehicle cleaning Products; Car wash product; Spray and rinse process (AISE-P710); Preparatory Phase - Industrial Use of Vehicle cleaning Products; Dewaxing product; Semi-Automatic process (AISE-P712); Preparatory Phase - Industrial use of Food beverage and pharmacos products; Foam cleaner; Semi-Automatic without venting process (AISE-P807); Preparatory Phase - Industrial use of Food beverage and pharmacos products; Disinfection product; Fogging and gassing Semi-automatic process (AISE-P811); Preparatory Phase*	PROC 8b
15: *Industrial Use of Vehicle cleaning Products; Car wash product; Spray and wipe process (AISE-P711); Preparatory Phase - Industrial Use of Vehicle cleaning Products; Boat cleaning; semi automatic (AISE-P713); Preparatory Phase - Industrial Use of Vehicle cleaning Products; Boat cleaner; Spray and wipe process (AISE-P714); Preparatory Phase*	PROC 8b
16: *Industrial use of Food beverage and pharmacos products; Animal housing care; Semi-Automatic process (AISE-P809); Preparatory Phase - Industrial use of pharmacos products; Disinfection product; Semi-automatic process (AISE-P810); Preparatory Phase*	PROC 8b
17: *Industrial use of Food beverage and pharmacos products; Foam cleaner; Semi-Automatic with venting process (AISE-P806); Preparatory Phase*	PROC 8b
18: *Industrial Use of Vehicle cleaning Products; Car wash product; Spray and wipe process (AISE-P711); Use Phase - Industrial Use of Vehicle cleaning Products; Boat cleaning; semi automatic (AISE-P713); Use Phase - Industrial Use of Vehicle cleaning Products; Boat cleaner; Spray and wipe process (AISE-P714); Use Phase*	PROC 10
19: *Industrial use of Food beverage and pharmacos products; Chain maintenance product; Automatic drip and brush process (AISE-P804); Use Phase*	PROC 13

4.2. Conditions of use affecting exposure

4.2.1. Control of environmental exposure: *GES3 - Industrial end-use of*

washing and cleaning products **(ERC 4)**

Amount used, frequency and duration of use (or from service life)
Annual amount per site <= 2.55E-3 tonnes/year
Daily amount per site <= 1.16E-5 tonnes/day
Conditions and measures related to biological sewage treatment plant
Municipal sewage treatment plant is assumed.
Assumed domestic sewage treatment plant flow >= 2E3 m3/day
Conditions and measures related to external treatment of waste (including article waste)
Dispose of waste product or used containers according to local regulations.

4.2.2. Control of worker exposure: *Industrial use of Food beverage and pharmacos products; Process cleaner; Cleaning In place (CIP) process (AISE-P801); Use Phase - Industrial use of Food beverage and pharmacos products; Defoaming product; Automatic process (AISE-P805); Use Phase* (PROC 1)

Product (article) characteristics
Covers concentrations up to 1 %
Amount used (or contained in articles), frequency and duration of use/exposure
Covers use up to 8 h/day
Technical and organisational conditions and measures
Provide a basic standard of general ventilation (1 to 3 air changes per hour).
Assumes that activities are undertaken with appropriate and well maintained equipment by trained personnel operating under supervision.
Other conditions affecting workers exposure
Assumes process temperature up to 25 °C
Indoor use

4.2.3. Control of worker exposure: *Industrial use of Laundry products; Laundry detergent; Automatic process (AISE-P101); Use Phase - Industrial use of Laundry products; Conditioner (softner/starch); Automatic process (AISE-P104); Use Phase - Industrial use of Laundry products; Laundry aid (gasing); Automatic process (AISE-P107); Use Phase - Industrial use of Laundry products; Laundry aid (non-gasing); Automatic process (AISE-P110); Use Phase* (PROC 2)

Product (article) characteristics
Covers concentrations up to 1 %
Amount used (or contained in articles), frequency and duration of use/exposure
Covers use up to 8 h/day
Technical and organisational conditions and measures
Provide a basic standard of general ventilation (1 to 3 air changes per hour).
Assumes that activities are undertaken with appropriate and well maintained equipment by trained personnel operating under supervision.
Other conditions affecting workers exposure
Assumes process temperature up to 25 °C
Indoor use

4.2.4. Control of worker exposure: *Industrial use of pharmacos products; Disinfection product; Semi-automatic process (AISE-P810); Use Phase* (PROC 4)

Product (article) characteristics
Covers concentrations up to 1 %
Amount used (or contained in articles), frequency and duration of use/exposure
Covers use up to 4 h/day
Technical and organisational conditions and measures
Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour).
Assumes that activities are undertaken with appropriate and well maintained equipment by trained personnel operating under supervision.
Other conditions affecting workers exposure
Assumes process temperature up to 25 °C
Indoor use

4.2.5. Control of worker exposure: *Industrial use of Vehicle cleaning Products; Train cleaner; Semi-Automatic process (AISE-P707); Use Phase - Industrial use of Vehicle cleaning Products; Aeroplane cleaner; Semi-Automatic process (AISE-P708); Use Phase -Industrial Use of Vehicle cleaning Products; Car wash product; Semi-Automatic process (AISE-P709); Use Phase - Industrial Use of Vehicle cleaning Products; Dewaxing product; Semi-Automatic process (AISE-P712); Use Phase Industrial use of Food beverage and pharmacos products; Process cleaner; Semi closed cleaning process (AISE-P802); Use Phase* (PROC 4)

Product (article) characteristics
Covers concentrations up to 1 %
Amount used (or contained in articles), frequency and duration of use/exposure
Covers use up to 4 h/day
Technical and organisational conditions and measures
Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour).
Assumes that activities are undertaken with appropriate and well maintained equipment by trained personnel operating under supervision.
Other conditions affecting workers exposure
Assumes process temperature up to 25 °C
Indoor use

4.2.6. Control of worker exposure: *Industrial use of Water treatment Products; Preservation and sanitation agent ; Drink and pool water (AISE-P904); Use Phase - Industrial use of Water treatment Products; Sanitation agent; Waste water (AISE-P905); Use Phase* (PROC 4)

Product (article) characteristics
Covers concentrations up to 1 %
Amount used (or contained in articles), frequency and duration of use/exposure
Covers use up to 4 h/day
Technical and organisational conditions and measures

Assumes that activities are undertaken with appropriate and well maintained equipment by trained personnel operating under supervision.
Other conditions affecting workers exposure
Assumes process temperature up to 25 °C
Outdoor use

4.2.7. Control of worker exposure: *Industrial Use of Vehicle cleaning Products; Car wash product; Spray and rinse process (AISE-P710); Use Phase* (PROC 7)

Product (article) characteristics
Covers concentrations up to 1 %
Amount used (or contained in articles), frequency and duration of use/exposure
Covers use up to 1 h/day
Moderate application rate (0.3 - 3 l/minute)
Technical and organisational conditions and measures
Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour).
Assumes that activities are undertaken with appropriate and well maintained equipment by trained personnel operating under supervision.
Spraying with no or low compressed air use
Conditions and measures related to personal protection, hygiene and health evaluation
Wear suitable respiratory protection.; Inhalation - minimum efficiency of 90 %; For further specification, refer to section 8 of the SDS.
Wear chemically resistant gloves (tested to EN374) in combination with ‘basic’ employee training.; If skin contamination is expected to extend to other parts of the body, then these body parts should also be protected with impervious garments in a manner equivalent to those described for the hands.; For further specification, refer to section 8 of the SDS.
Other conditions affecting workers exposure
Assumes process temperature up to 25 °C
Indoor use

4.2.8. Control of worker exposure: *Industrial Use of Vehicle cleaning Products; Car wash product; Spray and wipe process (AISE-P711); Use Phase - Industrial Use of Vehicle cleaning Products; Boat cleaner; Spray and wipe process (AISE-P714); Use Phase* (PROC 7)

Product (article) characteristics
Covers concentrations up to 1 %
Amount used (or contained in articles), frequency and duration of use/exposure
Covers use up to 1 h/day
Moderate application rate (0.3 - 3 l/minute)
Technical and organisational conditions and measures
Assumes that activities are undertaken with appropriate and well maintained equipment by trained personnel operating under supervision.
Spraying with no or low compressed air use
Conditions and measures related to personal protection, hygiene and health evaluation
Wear suitable respiratory protection.; Inhalation - minimum efficiency of 90 %; For further specification, refer to section 8 of the SDS.

Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training.; If skin contamination is expected to extend to other parts of the body, then these body parts should also be protected with impervious garments in a manner equivalent to those described for the hands.; For further specification, refer to section 8 of the SDS.
Other conditions affecting workers exposure
Assumes process temperature up to 25 °C
Outdoor use

4.2.9. Control of worker exposure: *Industrial use of Food beverage and pharmacos products; Foam cleaner; Semi-Automatic with venting process (AISE-P806); Use Phase* (PROC 7)

Product (article) characteristics
Covers concentrations up to 1 %
Amount used (or contained in articles), frequency and duration of use/exposure
Covers use up to 8 h/day
Technical and organisational conditions and measures
Local exhaust ventilation; Inhalation - minimum efficiency of 95 %
Assumes that activities are undertaken with appropriate and well maintained equipment by trained personnel operating under supervision.
Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour).
Conditions and measures related to personal protection, hygiene and health evaluation
Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training.; If skin contamination is expected to extend to other parts of the body, then these body parts should also be protected with impervious garments in a manner equivalent to those described for the hands.; For further specification, refer to section 8 of the SDS.
Other conditions affecting workers exposure
Assumes process temperature up to 25 °C
Indoor use

4.2.10. Control of worker exposure: *Industrial use of Food beverage and pharmacos products; Chain maintenance product; Automatic spray process (AISE-P803); Use Phase - Industrial use of Food beverage and pharmacos products; Foam cleaner; Semi-Automatic without venting process (AISE-P807); Use Phase - Industrial use of Food beverage and pharmacos products; Animal housing care; Semi-Automatic process (AISE-P809); Use Phase - Industrial use of Food beverage and pharmacos products; Disinfection product; Fogging and gassing Semi-automatic process (AISE-P811); Use Phase* (PROC 7)

Product (article) characteristics
Covers concentrations up to 1 %
Amount used (or contained in articles), frequency and duration of use/exposure
Covers use up to 4 h/day
Technical and organisational conditions and measures
Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour).
Assumes that activities are undertaken with appropriate and well maintained equipment by trained personnel operating under supervision.

Conditions and measures related to personal protection, hygiene and health evaluation
Wear suitable respiratory protection.; Inhalation - minimum efficiency of 90 %; For further specification, refer to section 8 of the SDS.
Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training.; If skin contamination is expected to extend to other parts of the body, then these body parts should also be protected with impervious garments in a manner equivalent to those described for the hands.; For further specification, refer to section 8 of the SDS.
Other conditions affecting workers exposure
Assumes process temperature up to 25 °C
Indoor use

4.2.11. Control of worker exposure: *Industrial Use of Facade/surface Cleaning Products; Façade/surface cleaner; High pressure process (AISE-P906); Use Phase - Industrial Use of Façade/surface Cleaning Products; Facade/surface cleaner; Medium pressure process (AISE-P907); Use Phase* (PROC 7)

Product (article) characteristics
Covers concentrations up to 1 %
Amount used (or contained in articles), frequency and duration of use/exposure
Covers use up to 4 h/day
Technical and organisational conditions and measures
Assumes that activities are undertaken with appropriate and well maintained equipment by trained personnel operating under supervision.
Conditions and measures related to personal protection, hygiene and health evaluation
Wear suitable respiratory protection.; Inhalation - minimum efficiency of 90 %; For further specification, refer to section 8 of the SDS.
Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training.; If skin contamination is expected to extend to other parts of the body, then these body parts should also be protected with impervious garments in a manner equivalent to those described for the hands.; For further specification, refer to section 8 of the SDS.
Other conditions affecting workers exposure
Assumes process temperature up to 25 °C
Outdoor use

4.2.12. Control of worker exposure: *Industrial use of Laundry products; Laundry detergent; Automatic process (AISE-P101); Preparatory Phase - Industrial use of Laundry products; Conditioner (softner/starch); Automatic process (AISE-P104); Preparatory Phase - Industrial use of Laundry products; Laundry aid (gasing); Automatic process (AISE-P107); Preparatory Phase - Industrial use of Laundry products; Laundry aid (non-gasing); Automatic process (AISE-P110); Preparatory Phase - Industrial use of Food beverage and pharmacos products; Process cleaner; Cleaning In place (CIP) process (AISE-P801); Preparatory Phase - Industrial use of Food beverage and pharmacos products; Process cleaner; Semi closed cleaning process (AISE-P802); Preparatory Phase - Industrial use of Food beverage and pharmacos products; Chain maintenance product; Automatic spray process (AISE-P803); Preparatory Phase - Industrial use of Food beverage and*

pharmacos products; Defoaming product; Automatic process (AISE-P805); Preparatory Phase (PROC 8b)

Product (article) characteristics
Covers concentrations up to 1 %
Amount used (or contained in articles), frequency and duration of use/exposure
Covers use up to 0.25 h/day
Technical and organisational conditions and measures
Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour).
Assumes that activities are undertaken with appropriate and well maintained equipment by trained personnel operating under supervision.
Conditions and measures related to personal protection, hygiene and health evaluation
Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training.; If skin contamination is expected to extend to other parts of the body, then these body parts should also be protected with impervious garments in a manner equivalent to those described for the hands.; For further specification, refer to section 8 of the SDS.
Other conditions affecting workers exposure
Assumes process temperature up to 25 °C
Indoor use

4.2.13. Control of worker exposure: *Industrial use of Water treatment Products; Preservation and sanitation agent ; Drink and pool water (AISE-P904); Preparatory Phase - Industrial use of Water treatment Products; Sanitation agent; Waste water (AISE-P905); Preparatory Phase - Industrial Use of Façade/surface Cleaning Products; Façade/surface cleaner; High pressure process (AISE-P906); Preparatory Phase - Industrial Use of Façade/surface Cleaning Products; Façade/surface cleaner; Medium pressure process (AISE-P907); Preparatory Phase* (PROC 8b)

Product (article) characteristics
Covers concentrations up to 1 %
Amount used (or contained in articles), frequency and duration of use/exposure
Covers use up to 0.25 h/day
Technical and organisational conditions and measures
Assumes that activities are undertaken with appropriate and well maintained equipment by trained personnel operating under supervision.
Conditions and measures related to personal protection, hygiene and health evaluation
Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training.; If skin contamination is expected to extend to other parts of the body, then these body parts should also be protected with impervious garments in a manner equivalent to those described for the hands.; For further specification, refer to section 8 of the SDS.
Other conditions affecting workers exposure
Assumes process temperature up to 25 °C
Outdoor use

4.2.14. Control of worker exposure: *Industrial use of Vehicle cleaning Products; Train cleaner; Semi-Automatic process (AISE-P707); Preparatory Phase - Industrial use of Vehicle cleaning Products; Aeroplane cleaner;*

Semi-Automatic process (AISE-P708); Preparatory Phase - Industrial Use of Vehicle cleaning Products; Car wash product; Semi-Automatic process (AISE-P709); Preparatory Phase - Industrial Use of Vehicle cleaning Products; Car wash product; Spray and rinse process (AISE-P710); Preparatory Phase - Industrial Use of Vehicle cleaning Products; Dewaxing product; Semi-Automatic process (AISE-P712); Preparatory Phase - Industrial use of Food beverage and pharmacos products; Foam cleaner; Semi-Automatic without venting process (AISE-P807); Preparatory Phase - Industrial use of Food beverage and pharmacos products; Disinfection product; Fogging and gassing Semi-automatic process (AISE-P811); Preparatory Phase (PROC 8b)

Product (article) characteristics
Covers concentrations up to 1 %
Amount used (or contained in articles), frequency and duration of use/exposure
Covers use up to 1 h/day
Technical and organisational conditions and measures
Provide a basic standard of general ventilation (1 to 3 air changes per hour).
Assumes that activities are undertaken with appropriate and well maintained equipment by trained personnel operating under supervision.
Conditions and measures related to personal protection, hygiene and health evaluation
Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training.; If skin contamination is expected to extend to other parts of the body, then these body parts should also be protected with impervious garments in a manner equivalent to those described for the hands.; For further specification, refer to section 8 of the SDS.
Other conditions affecting workers exposure
Assumes process temperature up to 25 °C
Indoor use

4.2.15. Control of worker exposure: *Industrial Use of Vehicle cleaning Products; Car wash product; Spray and wipe process (AISE-P711); Preparatory Phase - Industrial Use of Vehicle cleaning Products; Boat cleaning; semi automatic (AISE-P713); Preparatory Phase - Industrial Use of Vehicle cleaning Products; Boat cleaner; Spray and wipe process (AISE-P714); Preparatory Phase* (PROC 8b)

Product (article) characteristics
Covers concentrations up to 1 %
Amount used (or contained in articles), frequency and duration of use/exposure
Covers use up to 1 h/day
Technical and organisational conditions and measures
Assumes that activities are undertaken with appropriate and well maintained equipment by trained personnel operating under supervision.
Conditions and measures related to personal protection, hygiene and health evaluation
Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training.; If skin contamination is expected to extend to other parts of the body, then these body parts should also be protected with impervious garments in a manner equivalent to those described for the hands.; For further specification, refer to section 8 of the SDS.

Other conditions affecting workers exposure
Assumes process temperature up to 25 °C
Outdoor use

4.2.16. Control of worker exposure: *Industrial use of Food beverage and pharmacos products; Animal housing care; Semi-Automatic process (AISE-P809); Preparatory Phase - Industrial use of pharmacos products; Disinfection product; Semi-automatic process (AISE-P810); Preparatory Phase* (PROC 8b)

Product (article) characteristics
Covers concentrations up to 1 %
Amount used (or contained in articles), frequency and duration of use/exposure
Covers use up to 1 h/day
Technical and organisational conditions and measures
Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour).
Assumes that activities are undertaken with appropriate and well maintained equipment by trained personnel operating under supervision.
Other conditions affecting workers exposure
Assumes process temperature up to 25 °C
Indoor use

4.2.17. Control of worker exposure: *Industrial use of Food beverage and pharmacos products; Foam cleaner; Semi-Automatic with venting process (AISE-P806); Preparatory Phase* (PROC 8b)

Product (article) characteristics
Covers concentrations up to 1 %
Amount used (or contained in articles), frequency and duration of use/exposure
Covers use up to 1 h/day
Technical and organisational conditions and measures
Local exhaust ventilation; Inhalation - minimum efficiency of 95 %
Provide a basic standard of general ventilation (1 to 3 air changes per hour).
Assumes that activities are undertaken with appropriate and well maintained equipment by trained personnel operating under supervision.
Conditions and measures related to personal protection, hygiene and health evaluation
Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training.; If skin contamination is expected to extend to other parts of the body, then these body parts should also be protected with impervious garments in a manner equivalent to those described for the hands.; For further specification, refer to section 8 of the SDS.
Other conditions affecting workers exposure
Assumes process temperature up to 25 °C
Indoor use

4.2.18. Control of worker exposure: *Industrial Use of Vehicle cleaning Products; Car wash product; Spray and wipe process (AISE-P711); Use Phase - Industrial Use of Vehicle cleaning Products; Boat cleaning; semi automatic (AISE-P713); Use Phase - Industrial Use of Vehicle cleaning*

Products; Boat cleaner; Spray and wipe process (AISE-P714); Use Phase (PROC 10)

Product (article) characteristics
Covers concentrations up to 1 %
Amount used (or contained in articles), frequency and duration of use/exposure
Covers use up to 4 h/day
Technical and organisational conditions and measures
Assumes that activities are undertaken with appropriate and well maintained equipment by trained personnel operating under supervision.
Conditions and measures related to personal protection, hygiene and health evaluation
Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training.; If skin contamination is expected to extend to other parts of the body, then these body parts should also be protected with impervious garments in a manner equivalent to those described for the hands.; For further specification, refer to section 8 of the SDS.
Other conditions affecting workers exposure
Assumes process temperature up to 25 °C
Outdoor use

4.2.19. Control of worker exposure: *Industrial use of Food beverage and pharmacos products; Chain maintenance product; Automatic drip and brush process (AISE-P804); Use Phase* (PROC 13)

Product (article) characteristics
Covers concentrations up to 1 %
Amount used (or contained in articles), frequency and duration of use/exposure
Covers use up to 4 h/day
Technical and organisational conditions and measures
Local exhaust ventilation; Inhalation - minimum efficiency of 90 %
Provide a basic standard of general ventilation (1 to 3 air changes per hour).
Assumes that activities are undertaken with appropriate and well maintained equipment by trained personnel operating under supervision.
Conditions and measures related to personal protection, hygiene and health evaluation
Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training.; If skin contamination is expected to extend to other parts of the body, then these body parts should also be protected with impervious garments in a manner equivalent to those described for the hands.; For further specification, refer to section 8 of the SDS.
Other conditions affecting workers exposure
Assumes process temperature up to 25 °C
Indoor use

4.3. Exposure estimation and reference to its source

4.4. Guidance to DU to evaluate whether he works inside the

boundaries set by the ES

Scaling method
The workers exposure have been evaluated using ECETOC TRA integrated tool version 3.0, ART 1.5 and Riskofderm and environmental emissions have been evaluated EUSES 2.1.2.
Health
Predicted exposures are not expected to exceed the DN(M)EL when the Risk Management Measures / Operational Conditions outlined in Section 2 are implemented. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.
Environment
Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination.

5. ES 5: Widespread use by professional workers

5.1. Title section

ES name: *GES4 - Professional end-use of washing and cleaning products*

Environment	
1: *GES4 - Professional end-use of washing and cleaning products (indoor use)*	ERC 8a
Worker	
2: *Professional Use of Laundry products ; Laundry detergent; Semi automatic process (AISE-P102); Use Phase - Professional Use of Laundry products ; Conditioner (softener/starch); Semi automatic process (AISE-P105); Use Phase - Professional Use of Laundry products ; Laundry aid (gasing); Semi automatic process (AISE-P108); Use Phase - Professional Use of Laundry products ; Laundry aid (non-gasing); Semi automatic process (AISE-P111); Use Phase - Professional Use of Dishwash products; Dishwash product; Semi-Automatic process (AISE-P203); Use Phase - Professional Use of Dishwash products; Rinse aid; Semi-Automatic process (AISE-P204); Use Phase - Professional Use of Medical Devices; Medical devices ; Semi-automatic process (AISE-P1101); Use Phase*	PROC 1
3: *Professional Use of Dishwash products; Dishwash and rinse aid product; Automatic process (AISE-P202); Use Phase*	PROC 2
4: *Professional Use of Laundry products ; Laundry aid (non-gasing); Manual process (AISE-P112); Use Phase*	PROC 4
5: *Professional Use of Vehicle cleaning Products; Car wash product; Semi-Automatic process (AISE-P701); Use Phase - Professional Use of Vehicle cleaning Products; Dewaxing product; Semi-Automatic process (AISE-P704); Use Phase*	PROC 4
6: *Professional Use of Laundry products ; Laundry detergent; Semi automatic process (AISE-P102); Preparatory Phase - Professional Use of Laundry products ; Conditioner (softener/starch); Semi automatic process (AISE-P105); Preparatory Phase - Professional Use of Laundry products ; Laundry aid (gasing); Semi automatic process (AISE-P108); Preparatory Phase - Professional Use of Laundry products ; Laundry aid (non-gasing); Semi automatic process (AISE-P111); Preparatory Phase - Professional Use of Laundry products ; Laundry aid (non-gasing); Manual process (AISE-P112); Preparatory Phase - Professional Use of Dishwash products; Dishwash product; Semi-Automatic process (AISE-P203); Preparatory Phase - Professional Use of Dishwash products; Rinse aid; Semi-Automatic process (AISE-P204); Preparatory Phase - Professional Use of General surface cleaning products; Periodic cleaning by dipping (AISE-P309); Preparatory Phase - Professional Use of Medical Devices; Medical devices ; Semi-automatic process (AISE-P1101); Preparatory Phase - Professional Use of Medical Devices; Medical devices ; Dipping process (AISE-P1102); Preparatory Phase*	PROC 8a
7: *Professional Use of Façade/surface Cleaning Products; Façade/surface cleaner; High pressure process (AISE-P901); Preparatory Phase - Professional Use of Façade/surface Cleaning Products; Façade/surface cleaner; Medium pressure process (AISE-P902); Preparatory Phase*	PROC 8a
8: *Professional Use of Dishwash products; Dishwash product; Manual process (AISE-P201); Preparatory Phase*	PROC 8a
9: *Professional Use of Floor care products; Floor cleaner; Manual process (AISE-P403); Preparatory Phase - Professional Use of General surface cleaning products; General purpose cleaner; Manual process (AISE-P301); Preparatory Phase - Professional Use of General surface cleaning products; General purpose cleaner; Spray and wipe; manual process (AISE-P302); Preparatory Phase - Professional Use of General surface cleaning products; Kitchen cleaner; Manual process (AISE-P303); Preparatory Phase - Professional Use of General surface cleaning products; Kitchen cleaner; Spray and wipe manual process (AISE-P304); Preparatory Phase - Professional Use of General surface cleaning products; Sanitary cleaner; Manual process (AISE-P305); Preparatory Phase - Professional Use of General surface*	PROC 8a

cleaning products; Sanitary cleaner; Spray and wipe manual process (AISE-P306); Preparatory Phase - Professional Use of General surface cleaning products; Glass cleaner; Manual process (AISE-P312); Preparatory Phase - Professional Use of Floor care products; Floor cleaner; Semi-Automatic process (AISE-P401); Preparatory Phase - Professional Use of Floor care products; Floor cleaner; Spray and wipe manual process (AISE-P402); Preparatory Phase - Professional Use of Floor care products; Carpet cleaner; Manual process (AISE-P409); Preparatory Phase - Professional Use of Floor care products; Carpet cleaner; Semi-Automatic process (AISE-P410); Preparatory Phase - Professional Use of pharmacos products; Animal care; Manual process (AISE-P808); Preparatory Phase - Professional Use of Medical Devices; Medical devices ; Spray and wipe process (AISE-P1104); Preparatory Phase	
10: *Professional Use of Vehicle cleaning Products; Car wash product; Semi-Automatic process (AISE-P701); Preparatory Phase - Professional Use of Vehicle cleaning Products; Car wash product; Spray - Manual process (AISE-P702); Preparatory Phase - Professional Use of Vehicle cleaning Products; Dewaxing product; Semi-Automatic process (AISE-P704); Preparatory Phase - Professional Use of Laundry products ; Laundry detergent; Manual process (AISE-P103); Preparatory Phase - Professional Use of General surface cleaning products; Descaling agent; Spray and rinse manual process (AISE-P308); Preparatory Phase - Professional Use of General surface cleaning products; Surface disinfectant; Manual process (AISE-P314); Preparatory Phase - Professional Use of General surface cleaning products; Surface disinfectant; Spray and rinse manual process (AISE-P315); Preparatory Phase - Professional Use of Floor care products; Floor stripper; Manual process (AISE-P404); Preparatory Phase - Professional Use of Floor care products; Floor stripper; Semi-Automatic process (AISE-P405); Preparatory Phase - Professional Use of Medical Devices; Medical devices ; Manual process (AISE-P1103); Preparatory Phase*	PROC 8a
11: *Professional Use of Vehicle cleaning Products; Car wash product; Spray and Wipe manual process (AISE-P703); Preparatory Phase - Professional Use of Vehicle cleaning Products; Boat cleaner; Manual process (AISE-P705); Preparatory Phase - Professional Use of Vehicle cleaning Products; Boat cleaner; Spray and wipe manual process (AISE-P706); Preparatory Phase*	PROC 8a
12: *Professional Use of Dishwash products; Dishwash and rinse aid product; Automatic process (AISE-P202); Preparatory Phase*	PROC 8b
13: *Professional Use of General surface cleaning products; Oven/Grill Cleaner; Manual process (AISE-P310); Use Phase*	PROC 10
14: *Professional Use of Laundry products ; Laundry detergent; Manual process (AISE-P103); Use Phase - Professional Use of Dishwash products; Dishwash product; Manual process (AISE-P201); Use Phase - Professional Use of General surface cleaning products; Wet wipes; Manual process (AISE-P317); Use Phase - Professional Use of Floor care products; Carpet pre-spotters; Brush manual process (AISE-P411); Use Phase*	PROC 10
15: *Professional Use of General surface cleaning products; Descaling agent; Manual process (AISE-P307); Use Phase*	PROC 10
16: *Professional Use of Floor care products; Floor cleaner; Manual process (AISE-P403); Use Phase - Professional Use of Laundry products ; Prespotter/Stain remover; Manual process (AISE-P113); Use Phase - Professional Use of General surface cleaning products; General purpose cleaner; Manual process (AISE-P301); Use Phase - Professional Use of General surface cleaning products; General purpose cleaner; Wipe; manual process (AISE-P302); Use Phase - Professional Use of General surface cleaning products; Kitchen cleaner; Manual process (AISE-P303); Use Phase - Professional Use of General surface cleaning products; Kitchen cleaner; Wipe manual process (AISE-P304); Use Phase - Professional Use of General surface cleaning products; Sanitary cleaner; Manual process (AISE-P305); Use Phase*	PROC 10
17: *Professional Use of General surface cleaning products; Sanitary cleaner; Wipe manual process (AISE-P306); Use Phase - Professional Use of General surface cleaning products; Glass cleaner; Manual process (AISE-P312); Use Phase - Professional Use of General surface cleaning products; Glass cleaner ; Wipe manual*	PROC 10

process (AISE-P313); Use Phase - Professional Use of General surface cleaning products; Surface disinfectant; Manual process (AISE-P314); Use Phase - Professional Use of General surface cleaning products; Surface disinfectant; Rinse manual process (AISE-P315); Use Phase - Professional Use of General surface cleaning products; Metal cleaning agent (including silver and copper polishes); Manual process (AISE-P316); Use Phase - Professional Use of Floor care products; Floor cleaner; Semi-Automatic process (AISE-P401); Use Phase - Professional Use of Floor care products; Floor cleaner; Wipe manual process (AISE-P402); Use Phase - Professional Use of Floor care products; Floor stripper; Semi-Automatic process (AISE-P405); Use Phase - Professional Use of Floor care products; Carpet cleaner; Manual process (AISE-P409); Use Phase - Professional Use of Floor care products; Carpet cleaner; Semi-Automatic process (AISE-P410); Use Phase - Professional Use of pharmacos products; Animal care; Manual process (AISE-P808); Use Phase - Professional Use of Medical Devices; Medical devices ; Manual process (AISE-P1103); Use Phase - Professional Use of Medical Devices; Medical devices ; Wipe process (AISE-P1104); Use Phase	
18: *Professional Use of General surface cleaning products; Descaling agent; Rinse manual process (AISE-P308); Use Phase - Professional Use of General surface cleaning products; Oven/Grill Cleaner; Wipe manual process (AISE-P311); Use Phase - Professional Use of Floor care products; Floor stripper; Manual process (AISE-P404); Use Phase*	PROC 10
19: *Professional Use of Vehicle cleaning Products; Car wash product; Wipe manual process (AISE-P703); Use Phase - Professional Use of Vehicle cleaning Products; Boat cleaner; Manual process (AISE-P705); Use Phase - Professional Use of Vehicle cleaning Products; Boat cleaner; Wipe manual process (AISE-P706); Use Phase*	PROC 10
20: *Professional Use of Façade/surface Cleaning Products; Façade/surface cleaner; Medium pressure process (AISE-P902); Use Phase*	PROC 10
21: *Professional Use of Vehicle cleaning Products; Car wash product; Spray - Manual process (AISE-P702); Use Phase - Professional Use of Laundry products ; Prespotter/Stain remover; Manual process (AISE-P113); Use Phase - Professional Use of General surface cleaning products; General purpose cleaner; Spray manual process (AISE-P302); Use Phase - Professional Use of General surface cleaning products; Kitchen cleaner; Spray manual process (AISE-P304); Use Phase - Professional Use of General surface cleaning products; Sanitary cleaner; Spray manual process (AISE-P306); Use Phase - Professional Use of General surface cleaning products; Glass cleaner; Spray manual process (AISE-P313); Use Phase - Professional Use of General surface cleaning products; Surface disinfectant; Spray manual process (AISE-P315); Use Phase - Professional Use of Floor care products; Floor cleaner; Spray manual process (AISE-P402); Use Phase - Professional Use of Floor care products; Carpet pre-spotters; Spray manual process (AISE-P411); Use Phase - Professional Use of Medical Devices; Medical devices ; Spray process (AISE-P1104); Use Phase*	PROC 11
22: *Professional Use of General surface cleaning products; Descaling agent; Spray manual process (AISE-P308); Use Phase - Professional Use of General surface cleaning products; Oven/Grill Cleaner; Spray manual process (AISE-P311); Use Phase*	PROC 11
23: *Professional Use of Vehicle cleaning Products; Car wash product; Spray manual process (AISE-P703); Use Phase - Professional Use of Vehicle cleaning Products; Boat cleaner; Spray manual process (AISE-P706); Use Phase*	PROC 11
24: *Professional Use of Façade/surface Cleaning Products; Façade/surface cleaner; Medium pressure process (AISE-P902); Use Phase*	PROC 11
25: *Professional Use of Façade/surface Cleaning Products; Façade/surface cleaner; High pressure process (AISE-P901); Use Phase*	PROC 11
26: *Professional Use of Maintenance Products; Drain unblocker; Manual process (AISE-P606); Use Phase - Professional Use of Maintenance Products; Drain cleaner; Manual process (AISE-P607); Use Phase*	PROC 13
27: *Professional Use of General surface cleaning products; Periodic cleaning by dipping (AISE-P309); Use Phase - Professional Use of Medical Devices; Medical devices ; Dipping process (AISE-P1102); Use Phase*	PROC 13

5.2. Conditions of use affecting exposure

5.2.1. Control of environmental exposure: *GES4 - Professional end-use of washing and cleaning products (indoor use)* (ERC 8a)

Technical and organisational conditions and measures
Product applied in aqueous process solution with negligible volatilization.
Conditions and measures related to biological sewage treatment plant
Municipal sewage treatment plant is assumed.
Conditions and measures related to external treatment of waste (including article waste)
Dispose of waste product or used containers according to local regulations.
Other conditions affecting environmental exposure
Spent process fluid discharged to wastewater for subsequent treatment.

5.2.2. Control of worker exposure: *Professional Use of Laundry products ; Laundry detergent; Semi automatic process (AISE-P102); Use Phase - Professional Use of Laundry products ; Conditioner (softener/starch); Semi automatic process (AISE-P105); Use Phase - Professional Use of Laundry products ; Laundry aid (gasing); Semi automatic process (AISE-P108); Use Phase - Professional Use of Laundry products ; Laundry aid (non-gasing); Semi automatic process (AISE-P111); Use Phase - Professional Use of Dishwash products; Dishwash product; Semi-Automatic process (AISE-P203); Use Phase - Professional Use of Dishwash products; Rinse aid; Semi-Automatic process (AISE-P204); Use Phase - Professional Use of Medical Devices; Medical devices ; Semi-automatic process (AISE-P1101); Use Phase* (PROC 1)

Product (article) characteristics
Covers concentrations up to 1 %
Amount used (or contained in articles), frequency and duration of use/exposure
Covers use up to 8 h/day
Technical and organisational conditions and measures
Provide a basic standard of general ventilation (1 to 3 air changes per hour).
Other conditions affecting workers exposure
Assumes process temperature up to 25 °C
Indoor use

5.2.3. Control of worker exposure: *Professional Use of Dishwash products; Dishwash and rinse aid product; Automatic process (AISE-P202); Use Phase* (PROC 2)

Product (article) characteristics
Covers concentrations up to 1 %
Amount used (or contained in articles), frequency and duration of use/exposure
Covers use up to 8 h/day
Technical and organisational conditions and measures
Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour).
Other conditions affecting workers exposure

Assumes process temperature up to 25 °C
Indoor use

5.2.4. Control of worker exposure: *Professional Use of Laundry products ; Laundry aid (non-gasing); Manual process (AISE-P112); Use Phase* (PROC 4)

Product (article) characteristics
Covers concentrations up to 1 %
Amount used (or contained in articles), frequency and duration of use/exposure
Covers use up to 0.25 h/day
Technical and organisational conditions and measures
Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour).
Conditions and measures related to personal protection, hygiene and health evaluation
Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training.; If skin contamination is expected to extend to other parts of the body, then these body parts should also be protected with impervious garments in a manner equivalent to those described for the hands.; For further specification, refer to section 8 of the SDS.
Other conditions affecting workers exposure
Assumes process temperature up to 25 °C
Indoor use

5.2.5. Control of worker exposure: *Professional Use of Vehicle cleaning Products; Car wash product; Semi-Automatic process (AISE-P701); Use Phase - Professional Use of Vehicle cleaning Products; Dewaxing product; Semi-Automatic process (AISE-P704); Use Phase* (PROC 4)

Product (article) characteristics
Covers concentrations up to 1 %
Amount used (or contained in articles), frequency and duration of use/exposure
Covers use up to 4 h/day
Technical and organisational conditions and measures
Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour).
Conditions and measures related to personal protection, hygiene and health evaluation
Wear suitable gloves tested to EN374.; If skin contamination is expected to extend to other parts of the body, then these body parts should also be protected with impervious garments in a manner equivalent to those described for the hands.; For further specification, refer to section 8 of the SDS.
Other conditions affecting workers exposure
Assumes process temperature up to 25 °C
Indoor use

5.2.6. Control of worker exposure: *Professional Use of Laundry products ; Laundry detergent; Semi automatic process (AISE-P102); Preparatory Phase - Professional Use of Laundry products ; Conditioner (softener/starch); Semi automatic process (AISE-P105); Preparatory Phase - Professional Use of Laundry products ; Laundry aid (gasing); Semi automatic process (AISE-P108); Preparatory Phase - Professional Use of Laundry products ; Laundry aid (non-gasing); Semi automatic process (AISE-P111); Preparatory Phase -*

Professional Use of Laundry products ; Laundry aid (non-gasing); Manual process (AISE-P112); Preparatory Phase - Professional Use of Dishwash products; Dishwash product; Semi-Automatic process (AISE-P203); Preparatory Phase - Professional Use of Dishwash products; Rinse aid; Semi-Automatic process (AISE-P204); Preparatory Phase - Professional Use of General surface cleaning products; Periodic cleaning by dipping (AISE-P309); Preparatory Phase - Professional Use of Medical Devices; Medical devices ; Semi-automatic process (AISE-P1101); Preparatory Phase - Professional Use of Medical Devices; Medical devices ; Dipping process (AISE-P1102); Preparatory Phase **(PROC 8a)**

Product (article) characteristics
Covers concentrations up to 1 %
Amount used (or contained in articles), frequency and duration of use/exposure
Covers use up to 0.25 h/day
Technical and organisational conditions and measures
Provide a basic standard of general ventilation (1 to 3 air changes per hour).
Conditions and measures related to personal protection, hygiene and health evaluation
Wear chemically resistant gloves (tested to EN374) in combination with ‘basic’ employee training.; If skin contamination is expected to extend to other parts of the body, then these body parts should also be protected with impervious garments in a manner equivalent to those described for the hands.; For further specification, refer to section 8 of the SDS.
Other conditions affecting workers exposure
Assumes process temperature up to 25 °C
Indoor use

5.2.7. Control of worker exposure: *Professional Use of Façade/surface Cleaning Products; Façade/surface cleaner; High pressure process (AISE-P901); Preparatory Phase - Professional Use of Façade/surface Cleaning Products; Façade/surface cleaner; Medium pressure process (AISE-P902); Preparatory Phase* (PROC 8a)

Product (article) characteristics
Covers concentrations up to 1 %
Amount used (or contained in articles), frequency and duration of use/exposure
Covers use up to 0.25 h/day
Technical and organisational conditions and measures
Provide a basic standard of general ventilation (1 to 3 air changes per hour).
Conditions and measures related to personal protection, hygiene and health evaluation
Wear chemically resistant gloves (tested to EN374) in combination with ‘basic’ employee training.; If skin contamination is expected to extend to other parts of the body, then these body parts should also be protected with impervious garments in a manner equivalent to those described for the hands.; For further specification, refer to section 8 of the SDS.
Wear suitable respiratory protection.; Inhalation - minimum efficiency of 90 %; For further specification, refer to section 8 of the SDS.
Other conditions affecting workers exposure
Assumes process temperature up to 25 °C

Indoor use

5.2.8. Control of worker exposure: *Professional Use of Dishwash products; Dishwash product; Manual process (AISE-P201); Preparatory Phase* (PROC 8a)

Product (article) characteristics
Covers concentrations up to 1 %
Amount used (or contained in articles), frequency and duration of use/exposure
Covers use up to 0.25 h/day
Technical and organisational conditions and measures
Provide a basic standard of general ventilation (1 to 3 air changes per hour).
Conditions and measures related to personal protection, hygiene and health evaluation
Wear suitable gloves tested to EN374.; If skin contamination is expected to extend to other parts of the body, then these body parts should also be protected with impervious garments in a manner equivalent to those described for the hands.; For further specification, refer to section 8 of the SDS.
Other conditions affecting workers exposure
Assumes process temperature up to 25 °C
Indoor use

5.2.9. Control of worker exposure: *Professional Use of Floor care products; Floor cleaner; Manual process (AISE-P403); Preparatory Phase - Professional Use of General surface cleaning products; General purpose cleaner; Manual process (AISE-P301); Preparatory Phase - Professional Use of General surface cleaning products; General purpose cleaner; Spray and wipe; manual process (AISE-P302); Preparatory Phase - Professional Use of General surface cleaning products; Kitchen cleaner; Manual process (AISE-P303); Preparatory Phase - Professional Use of General surface cleaning products; Kitchen cleaner; Spray and wipe manual process (AISE-P304); Preparatory Phase - Professional Use of General surface cleaning products; Sanitary cleaner; Manual process (AISE-P305); Preparatory Phase - Professional Use of General surface cleaning products; Sanitary cleaner; Spray and wipe manual process (AISE-P306); Preparatory Phase - Professional Use of General surface cleaning products; Glass cleaner; Manual process (AISE-P312); Preparatory Phase - Professional Use of Floor care products; Floor cleaner; Semi-Automatic process (AISE-P401); Preparatory Phase - Professional Use of Floor care products; Floor cleaner; Spray and wipe manual process (AISE-P402); Preparatory Phase - Professional Use of Floor care products; Carpet cleaner; Manual process (AISE-P409); Preparatory Phase - Professional Use of Floor care products; Carpet cleaner; Semi-Automatic process (AISE-P410); Preparatory Phase - Professional Use of pharmacos products; Animal care; Manual process (AISE-P808); Preparatory Phase - Professional Use of Medical Devices; Medical devices ; Spray and wipe process (AISE-P1104); Preparatory Phase* (PROC 8a)

Product (article) characteristics

Covers concentrations up to 1 %
Amount used (or contained in articles), frequency and duration of use/exposure
Covers use up to 1 h/day
Technical and organisational conditions and measures
Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour).
Conditions and measures related to personal protection, hygiene and health evaluation
Wear suitable gloves tested to EN374.; If skin contamination is expected to extend to other parts of the body, then these body parts should also be protected with impervious garments in a manner equivalent to those described for the hands.; For further specification, refer to section 8 of the SDS.
Other conditions affecting workers exposure
Assumes process temperature up to 25 °C
Indoor use

5.2.10. Control of worker exposure: *Professional Use of Vehicle cleaning Products; Car wash product; Semi-Automatic process (AISE-P701); Preparatory Phase - Professional Use of Vehicle cleaning Products; Car wash product; Spray - Manual process (AISE-P702); Preparatory Phase - Professional Use of Vehicle cleaning Products; Dewaxing product; Semi-Automatic process (AISE-P704); Preparatory Phase - Professional Use of Laundry products ; Laundry detergent; Manual process (AISE-P103); Preparatory Phase - Professional Use of General surface cleaning products; Descaling agent; Spray and rinse manual process (AISE-P308); Preparatory Phase - Professional Use of General surface cleaning products; Surface disinfectant; Manual process (AISE-P314); Preparatory Phase - Professional Use of General surface cleaning products; Surface disinfectant; Spray and rinse manual process (AISE-P315); Preparatory Phase - Professional Use of Floor care products; Floor stripper; Manual process (AISE-P404); Preparatory Phase - Professional Use of Floor care products; Floor stripper; Semi-Automatic process (AISE-P405); Preparatory Phase - Professional Use of Medical Devices; Medical devices ; Manual process (AISE-P1103); Preparatory Phase* (PROC 8a)

Product (article) characteristics
Covers concentrations up to 1 %
Amount used (or contained in articles), frequency and duration of use/exposure
Covers use up to 1 h/day
Technical and organisational conditions and measures
Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour).
Conditions and measures related to personal protection, hygiene and health evaluation
Wear chemically resistant gloves (tested to EN374) in combination with ‘basic’ employee training.; If skin contamination is expected to extend to other parts of the body, then these body parts should also be protected with impervious garments in a manner equivalent to those described for the hands.; For further specification, refer to section 8 of the SDS.
Other conditions affecting workers exposure
Assumes process temperature up to 25 °C
Indoor use

5.2.11. Control of worker exposure: *Professional Use of Vehicle cleaning Products; Car wash product; Spray and Wipe manual process (AISE-P703); Preparatory Phase - Professional Use of Vehicle cleaning Products; Boat cleaner; Manual process (AISE-P705); Preparatory Phase - Professional Use of Vehicle cleaning Products; Boat cleaner; Spray and wipe manual process (AISE-P706); Preparatory Phase* (PROC 8a)

Product (article) characteristics
Covers concentrations up to 1 %
Amount used (or contained in articles), frequency and duration of use/exposure
Covers use up to 1 h/day
Conditions and measures related to personal protection, hygiene and health evaluation
Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training.; If skin contamination is expected to extend to other parts of the body, then these body parts should also be protected with impervious garments in a manner equivalent to those described for the hands.; For further specification, refer to section 8 of the SDS.
Other conditions affecting workers exposure
Assumes process temperature up to 25 °C
Outdoor use

5.2.12. Control of worker exposure: *Professional Use of Dishwash products; Dishwash and rinse aid product; Automatic process (AISE-P202); Preparatory Phase* (PROC 8b)

Product (article) characteristics
Covers concentrations up to 1 %
Amount used (or contained in articles), frequency and duration of use/exposure
Covers use up to 0.25 h/day
Technical and organisational conditions and measures
Provide a basic standard of general ventilation (1 to 3 air changes per hour).
Conditions and measures related to personal protection, hygiene and health evaluation
Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training.; If skin contamination is expected to extend to other parts of the body, then these body parts should also be protected with impervious garments in a manner equivalent to those described for the hands.; For further specification, refer to section 8 of the SDS.
Other conditions affecting workers exposure
Assumes process temperature up to 25 °C
Indoor use

5.2.13. Control of worker exposure: *Professional Use of General surface cleaning products; Oven/Grill Cleaner; Manual process (AISE-P310); Use Phase* (PROC 10)

Product (article) characteristics
Covers concentrations up to 1 %
Amount used (or contained in articles), frequency and duration of use/exposure
Covers use up to 1 h/day
Technical and organisational conditions and measures
Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour).

Conditions and measures related to personal protection, hygiene and health evaluation
Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training.; If skin contamination is expected to extend to other parts of the body, then these body parts should also be protected with impervious garments in a manner equivalent to those described for the hands.; For further specification, refer to section 8 of the SDS.
Other conditions affecting workers exposure
Assumes process temperature up to 25 °C
Indoor use

5.2.14. Control of worker exposure: *Professional Use of Laundry products ; Laundry detergent; Manual process (AISE-P103); Use Phase - Professional Use of Dishwash products; Dishwash product; Manual process (AISE-P201); Use Phase - Professional Use of General surface cleaning products; Wet wipes; Manual process (AISE-P317); Use Phase - Professional Use of Floor care products; Carpet pre-spotters; Brush manual process (AISE-P411); Use Phase* (PROC 10)

Product (article) characteristics
Covers concentrations up to 1 %
Amount used (or contained in articles), frequency and duration of use/exposure
Covers use up to 4 h/day
Technical and organisational conditions and measures
Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour).
Conditions and measures related to personal protection, hygiene and health evaluation
Wear suitable gloves tested to EN374.; If skin contamination is expected to extend to other parts of the body, then these body parts should also be protected with impervious garments in a manner equivalent to those described for the hands.; For further specification, refer to section 8 of the SDS.
Other conditions affecting workers exposure
Assumes process temperature up to 25 °C
Indoor use

5.2.15. Control of worker exposure: *Professional Use of General surface cleaning products; Descaling agent; Manual process (AISE-P307); Use Phase* (PROC 10)

Product (article) characteristics
Covers concentrations up to 1 %
Amount used (or contained in articles), frequency and duration of use/exposure
Covers use up to 4 h/day
Technical and organisational conditions and measures
Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour).
Conditions and measures related to personal protection, hygiene and health evaluation
Wear suitable gloves tested to EN374.; If skin contamination is expected to extend to other parts of the body, then these body parts should also be protected with impervious garments in a manner equivalent to those described for the hands.; For further specification, refer to section 8 of the SDS.
Other conditions affecting workers exposure
Assumes process temperature up to 25 °C
Indoor use

5.2.16. Control of worker exposure: *Professional Use of Floor care products; Floor cleaner; Manual process (AISE-P403); Use Phase - Professional Use of Laundry products ; Prespotter/Stain remover; Manual process (AISE-P113); Use Phase - Professional Use of General surface cleaning products; General purpose cleaner; Manual process (AISE-P301); Use Phase - Professional Use of General surface cleaning products; General purpose cleaner; Wipe; manual process (AISE-P302); Use Phase - Professional Use of General surface cleaning products; Kitchen cleaner; Manual process (AISE-P303); Use Phase - Professional Use of General surface cleaning products; Kitchen cleaner; Wipe manual process (AISE-P304); Use Phase - Professional Use of General surface cleaning products; Sanitary cleaner; Manual process (AISE-P305); Use Phase* (PROC 10)

Product (article) characteristics
Covers concentrations up to 1 %
Amount used (or contained in articles), frequency and duration of use/exposure
Covers use up to 8 h/day
Technical and organisational conditions and measures
Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour).
Conditions and measures related to personal protection, hygiene and health evaluation
Wear suitable gloves tested to EN374.; If skin contamination is expected to extend to other parts of the body, then these body parts should also be protected with impervious garments in a manner equivalent to those described for the hands.; For further specification, refer to section 8 of the SDS.
Other conditions affecting workers exposure
Assumes process temperature up to 25 °C
Indoor use

5.2.17. Control of worker exposure: *Professional Use of General surface cleaning products; Sanitary cleaner; Wipe manual process (AISE-P306); Use Phase - Professional Use of General surface cleaning products; Glass cleaner; Manual process (AISE-P312); Use Phase - Professional Use of General surface cleaning products; Glass cleaner ; Wipe manual process (AISE-P313); Use Phase - Professional Use of General surface cleaning products; Surface disinfectant; Manual process (AISE-P314); Use Phase - Professional Use of General surface cleaning products; Surface disinfectant; Rinse manual process (AISE-P315); Use Phase - Professional Use of General surface cleaning products; Metal cleaning agent (including silver and copper polishes); Manual process (AISE-P316); Use Phase - Professional Use of Floor care products; Floor cleaner; Semi-Automatic process (AISE-P401); Use Phase - Professional Use of Floor care products; Floor cleaner; Wipe manual process (AISE-P402); Use Phase - Professional Use of Floor care products; Floor stripper; Semi-Automatic process (AISE-P405); Use Phase - Professional Use of Floor care products; Carpet cleaner; Manual process (AISE-P409); Use Phase - Professional Use of Floor care products; Carpet cleaner; Semi-Automatic process (AISE-P410); Use Phase - Professional Use*

of pharmacos products; Animal care; Manual process (AISE-P808); Use Phase - Professional Use of Medical Devices; Medical devices ; Manual process (AISE-P1103); Use Phase - Professional Use of Medical Devices; Medical devices ; Wipe process (AISE-P1104); Use Phase (PROC 10)

Product (article) characteristics
Covers concentrations up to 1 %
Amount used (or contained in articles), frequency and duration of use/exposure
Covers use up to 8 h/day
Technical and organisational conditions and measures
Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour).
Conditions and measures related to personal protection, hygiene and health evaluation
Wear suitable gloves tested to EN374.; If skin contamination is expected to extend to other parts of the body, then these body parts should also be protected with impervious garments in a manner equivalent to those described for the hands.; For further specification, refer to section 8 of the SDS.
Other conditions affecting workers exposure
Assumes process temperature up to 25 °C
Indoor use

5.2.18. Control of worker exposure: *Professional Use of General surface cleaning products; Descaling agent; Rinse manual process (AISE-P308); Use Phase - Professional Use of General surface cleaning products; Oven/Grill Cleaner; Wipe manual process (AISE-P311); Use Phase - Professional Use of Floor care products; Floor stripper; Manual process (AISE-P404); Use Phase* (PROC 10)

Product (article) characteristics
Covers concentrations up to 1 %
Amount used (or contained in articles), frequency and duration of use/exposure
Covers use up to 8 h/day
Technical and organisational conditions and measures
Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour).
Conditions and measures related to personal protection, hygiene and health evaluation
Wear suitable gloves tested to EN374.; If skin contamination is expected to extend to other parts of the body, then these body parts should also be protected with impervious garments in a manner equivalent to those described for the hands.; For further specification, refer to section 8 of the SDS.
Other conditions affecting workers exposure
Assumes process temperature up to 25 °C
Indoor use

5.2.19. Control of worker exposure: *Professional Use of Vehicle cleaning Products; Car wash product; Wipe manual process (AISE-P703); Use Phase - Professional Use of Vehicle cleaning Products; Boat cleaner; Manual process (AISE-P705); Use Phase - Professional Use of Vehicle cleaning Products; Boat cleaner; Wipe manual process (AISE-P706); Use Phase* (PROC 10)

Product (article) characteristics
Covers concentrations up to 1 %

Amount used (or contained in articles), frequency and duration of use/exposure
Covers use up to 8 h/day
Conditions and measures related to personal protection, hygiene and health evaluation
Wear suitable gloves tested to EN374.; If skin contamination is expected to extend to other parts of the body, then these body parts should also be protected with impervious garments in a manner equivalent to those described for the hands.; For further specification, refer to section 8 of the SDS.
Other conditions affecting workers exposure
Assumes process temperature up to 25 °C
Outdoor use

5.2.20. Control of worker exposure: *Professional Use of Façade/surface Cleaning Products; Façade/surface cleaner; Medium pressure process (AISE-P902); Use Phase* (PROC 10)

Product (article) characteristics
Covers concentrations up to 1 %
Amount used (or contained in articles), frequency and duration of use/exposure
Covers use up to 8 h/day
Technical and organisational conditions and measures
Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour).
Conditions and measures related to personal protection, hygiene and health evaluation
Wear suitable respiratory protection.; Inhalation - minimum efficiency of 90 %; For further specification, refer to section 8 of the SDS.
Wear suitable gloves tested to EN374.; If skin contamination is expected to extend to other parts of the body, then these body parts should also be protected with impervious garments in a manner equivalent to those described for the hands.; For further specification, refer to section 8 of the SDS.
Other conditions affecting workers exposure
Assumes process temperature up to 25 °C
Indoor use

5.2.21. Control of worker exposure: *Professional Use of Vehicle cleaning Products; Car wash product; Spray - Manual process (AISE-P702); Use Phase - Professional Use of Laundry products ; Prespotter/Stain remover; Manual process (AISE-P113); Use Phase - Professional Use of General surface cleaning products; General purpose cleaner; Spray manual process (AISE-P302); Use Phase - Professional Use of General surface cleaning products; Kitchen cleaner; Spray manual process (AISE-P304); Use Phase - Professional Use of General surface cleaning products; Sanitary cleaner; Spray manual process (AISE-P306); Use Phase - Professional Use of General surface cleaning products; Glass cleaner; Spray manual process (AISE-P313); Use Phase - Professional Use of General surface cleaning products; Surface disinfectant; Spray manual process (AISE-P315); Use Phase - Professional Use of Floor care products; Floor cleaner; Spray manual process (AISE-P402); Use Phase - Professional Use of Floor care products; Carpet pre-spotters; Spray manual process (AISE-P411); Use Phase - Professional Use of Medical Devices; Medical devices ; Spray process (AISE-P1104); Use Phase* (PROC 11)

Product (article) characteristics
Covers concentrations up to 1 %
Amount used (or contained in articles), frequency and duration of use/exposure
Covers use up to 1 h/day
Moderate application rate (0.3 - 3 l/minute)
Technical and organisational conditions and measures
Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour).
Spraying with no or low compressed air use
Conditions and measures related to personal protection, hygiene and health evaluation
Wear suitable respiratory protection.; Inhalation - minimum efficiency of 90 %; For further specification, refer to section 8 of the SDS.
Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training.; If skin contamination is expected to extend to other parts of the body, then these body parts should also be protected with impervious garments in a manner equivalent to those described for the hands.; For further specification, refer to section 8 of the SDS.
Other conditions affecting workers exposure
Assumes process temperature up to 25 °C
Indoor use

5.2.22. Control of worker exposure: *Professional Use of General surface cleaning products; Descaling agent; Spray manual process (AISE-P308); Use Phase - Professional Use of General surface cleaning products; Oven/Grill Cleaner; Spray manual process (AISE-P311); Use Phase* (PROC 11)

Product (article) characteristics
Covers concentrations up to 1 %
Amount used (or contained in articles), frequency and duration of use/exposure
Covers use up to 1 h/day
Moderate application rate (0.3 - 3 l/minute)
Technical and organisational conditions and measures
Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour).
Spraying with no or low compressed air use
Conditions and measures related to personal protection, hygiene and health evaluation
Wear suitable respiratory protection.; Inhalation - minimum efficiency of 90 %; For further specification, refer to section 8 of the SDS.
Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training.; If skin contamination is expected to extend to other parts of the body, then these body parts should also be protected with impervious garments in a manner equivalent to those described for the hands.; For further specification, refer to section 8 of the SDS.
Other conditions affecting workers exposure
Assumes process temperature up to 25 °C
Indoor use

5.2.23. Control of worker exposure: *Professional Use of Vehicle cleaning Products; Car wash product; Spray manual process (AISE-P703); Use Phase - Professional Use of Vehicle cleaning Products; Boat cleaner; Spray manual process (AISE-P706); Use Phase* (PROC 11)

Product (article) characteristics
Covers concentrations up to 1 %
Amount used (or contained in articles), frequency and duration of use/exposure
Covers use up to 1 h/day
Moderate application rate (0.3 - 3 l/minute)
Technical and organisational conditions and measures
Spraying with no or low compressed air use
Conditions and measures related to personal protection, hygiene and health evaluation
Wear suitable respiratory protection.; Inhalation - minimum efficiency of 90 %; For further specification, refer to section 8 of the SDS.
Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training.; If skin contamination is expected to extend to other parts of the body, then these body parts should also be protected with impervious garments in a manner equivalent to those described for the hands.; For further specification, refer to section 8 of the SDS.
Other conditions affecting workers exposure
Assumes process temperature up to 25 °C
Outdoor use

5.2.24. Control of worker exposure: *Professional Use of Façade/surface Cleaning Products; Façade/surface cleaner; Medium pressure process (AISE-P902); Use Phase* (PROC 11)

Product (article) characteristics
Covers concentrations up to 1 %
Amount used (or contained in articles), frequency and duration of use/exposure
Covers use up to 1 h/day
Technical and organisational conditions and measures
Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour).
Conditions and measures related to personal protection, hygiene and health evaluation
Wear suitable respiratory protection.; Inhalation - minimum efficiency of 90 %; For further specification, refer to section 8 of the SDS.
Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training.; If skin contamination is expected to extend to other parts of the body, then these body parts should also be protected with impervious garments in a manner equivalent to those described for the hands.; For further specification, refer to section 8 of the SDS.
Other conditions affecting workers exposure
Assumes process temperature up to 25 °C
Indoor use

5.2.25. Control of worker exposure: *Professional Use of Façade/surface Cleaning Products; Façade/surface cleaner; High pressure process (AISE-P901); Use Phase* (PROC 11)

Product (article) characteristics
Covers concentrations up to 1 %
Amount used (or contained in articles), frequency and duration of use/exposure
Covers use up to 8 h/day
Technical and organisational conditions and measures

Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour).
Conditions and measures related to personal protection, hygiene and health evaluation
Wear suitable respiratory protection.; Inhalation - minimum efficiency of 90 %; For further specification, refer to section 8 of the SDS.
Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training.; If skin contamination is expected to extend to other parts of the body, then these body parts should also be protected with impervious garments in a manner equivalent to those described for the hands.; For further specification, refer to section 8 of the SDS.
Other conditions affecting workers exposure
Assumes process temperature up to 25 °C
Indoor use

5.2.26. Control of worker exposure: *Professional Use of Maintenance Products; Drain unblocker; Manual process (AISE-P606); Use Phase - Professional Use of Maintenance Products; Drain cleaner; Manual process (AISE-P607); Use Phase* (PROC 13)

Product (article) characteristics
Covers concentrations up to 1 %
Amount used (or contained in articles), frequency and duration of use/exposure
Covers use up to 0.25 h/day
Technical and organisational conditions and measures
Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour).
Conditions and measures related to personal protection, hygiene and health evaluation
Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training.; If skin contamination is expected to extend to other parts of the body, then these body parts should also be protected with impervious garments in a manner equivalent to those described for the hands.; For further specification, refer to section 8 of the SDS.
Other conditions affecting workers exposure
Assumes process temperature up to 25 °C
Indoor use

5.2.27. Control of worker exposure: *Professional Use of General surface cleaning products; Periodic cleaning by dipping (AISE-P309); Use Phase - Professional Use of Medical Devices; Medical devices ; Dipping process (AISE-P1102); Use Phase* (PROC 13)

Product (article) characteristics
Covers concentrations up to 1 %
Amount used (or contained in articles), frequency and duration of use/exposure
Covers use up to 1 h/day
Technical and organisational conditions and measures
Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour).
Conditions and measures related to personal protection, hygiene and health evaluation
Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training.; If skin contamination is expected to extend to other parts of the body, then these body parts should also be protected with impervious garments in a manner equivalent to those described for the hands.; For further specification, refer to section 8 of the SDS.
Other conditions affecting workers exposure

Assumes process temperature up to 25 °C
Indoor use

5.3. Exposure estimation and reference to its source

5.4. Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Scaling method
The workers exposure have been evaluated using ECETOC TRA integrated tool version 3.0, ART 1.5 and Riskofderm and environmental emissions have been evaluated EUSES 2.1.2.
Health
Predicted exposures are not expected to exceed the DN(M)EL when the Risk Management Measures / Operational Conditions outlined in Section 2 are implemented. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.
Environment
Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination.

6. ES 6: Widespread use by professional workers

6.1. Title section

ES name: *GES5 - Professional end-use of polishes and wax blends*

Environment	
1: *GES5 - Professional end-use of polishes and wax blends*	ERC 8a
Worker	
2: *Professional Use of Maintenance Products; Leather care product; Semi-Automatic process (AISE-P605); Use Phase*	PROC 2
3: *Professional Use of Maintenance Products; Leather care product; Semi-Automatic process (AISE-P605); Preparatory Phase*	PROC 8b
4: *Professional Use of Maintenance Products; Wooden Furniture care product; Manual process (AISE-P601); Use Phase - Professional Use of Maintenance Products; Wooden Furniture care product; Wipe manual process (AISE-P602); Use Phase - Professional Use of Maintenance Products; Leather care product; Manual process (AISE-P603); Use Phase - Professional Use of Maintenance Products; Leather care product; Wipe manual process (AISE-P604); Use Phase - Professional Use of Maintenance Products; Stainless steel care; Wipe manual process (AISE-P609); Use Phase*	PROC 10
5: *Professional Use of Floor care products; Polish / impregnating agent; Manual process (AISE-P406); Use Phase - Professional Use of Floor care products; Polish / impregnating agent; Semi-Automatic process (AISE-P407); Use Phase - Professional Use of Floor care products; Polish / impregnating agent; Wipe manual process (AISE-P408); Use Phase - Professional Use of Maintenance Products; Stainless steel care ; Manual process (AISE-P608); Use Phase*	PROC 10
6: *Professional Use of Maintenance Products; Wooden Furniture care product; Spray manual process (AISE-P602); Use Phase - Professional Use of Maintenance Products; Leather care product; Spray manual process (AISE-P604); Use Phase - Professional Use of Maintenance Products; Stainless steel care; Spray manual process (AISE-P609); Use Phase*	PROC 11
7: *Professional Use of Floor care products; Polish / impregnating agent; Spray manual process (AISE-P408); Use Phase*	PROC 11

6.2. Conditions of use affecting exposure

6.2.1. Control of environmental exposure: *GES5 - Professional end-use of polishes and wax blends* (ERC 8a)

Technical and organisational conditions and measures
Spraying of involatile solids, which finally are disposed off via wastewater.
Conditions and measures related to biological sewage treatment plant
Municipal sewage treatment plant is assumed.
Conditions and measures related to external treatment of waste (including article waste)
Dispose of waste product or used containers according to local regulations.

6.2.2. Control of worker exposure: *Professional Use of Maintenance Products; Leather care product; Semi-Automatic process (AISE-P605); Use Phase* (PROC 2)

Product (article) characteristics
Covers concentrations up to 1 %
Amount used (or contained in articles), frequency and duration of use/exposure
Covers use up to 8 h/day

Technical and organisational conditions and measures
Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour).
Other conditions affecting workers exposure
Assumes process temperature up to 25 °C
Indoor use

6.2.3. Control of worker exposure: *Professional Use of Maintenance Products; Leather care product; Semi-Automatic process (AISE-P605); Preparatory Phase* (PROC 8b)

Product (article) characteristics
Covers concentrations up to 1 %
Amount used (or contained in articles), frequency and duration of use/exposure
Covers use up to 1 h/day
Technical and organisational conditions and measures
Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour).
Conditions and measures related to personal protection, hygiene and health evaluation
Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training.; If skin contamination is expected to extend to other parts of the body, then these body parts should also be protected with impervious garments in a manner equivalent to those described for the hands.; For further specification, refer to section 8 of the SDS.
Other conditions affecting workers exposure
Assumes process temperature up to 25 °C
Indoor use

6.2.4. Control of worker exposure: *Professional Use of Maintenance Products; Wooden Furniture care product; Manual process (AISE-P601); Use Phase - Professional Use of Maintenance Products; Wooden Furniture care product; Wipe manual process (AISE-P602); Use Phase - Professional Use of Maintenance Products; Leather care product; Manual process (AISE-P603); Use Phase - Professional Use of Maintenance Products; Leather care product; Wipe manual process (AISE-P604); Use Phase - Professional Use of Maintenance Products; Stainless steel care; Wipe manual process (AISE-P609); Use Phase* (PROC 10)

Product (article) characteristics
Covers concentrations up to 1 %
Amount used (or contained in articles), frequency and duration of use/exposure
Covers use up to 4 h/day
Technical and organisational conditions and measures
Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour).
Conditions and measures related to personal protection, hygiene and health evaluation
Wear suitable gloves tested to EN374.; If skin contamination is expected to extend to other parts of the body, then these body parts should also be protected with impervious garments in a manner equivalent to those described for the hands.; For further specification, refer to section 8 of the SDS.
Other conditions affecting workers exposure
Assumes process temperature up to 25 °C
Indoor use

6.2.5. Control of worker exposure: *Professional Use of Floor care products; Polish / impregnating agent; Manual process (AISE-P406); Use Phase - Professional Use of Floor care products; Polish / impregnating agent; Semi-Automatic process (AISE-P407); Use Phase - Professional Use of Floor care products; Polish / impregnating agent; Wipe manual process (AISE-P408); Use Phase - Professional Use of Maintenance Products; Stainless steel care ; Manual process (AISE-P608); Use Phase* (PROC 10)

Product (article) characteristics
Covers concentrations up to 1 %
Amount used (or contained in articles), frequency and duration of use/exposure
Covers use up to 8 h/day
Technical and organisational conditions and measures
Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour).
Conditions and measures related to personal protection, hygiene and health evaluation
Wear suitable gloves tested to EN374.; If skin contamination is expected to extend to other parts of the body, then these body parts should also be protected with impervious garments in a manner equivalent to those described for the hands.; For further specification, refer to section 8 of the SDS.
Other conditions affecting workers exposure
Assumes process temperature up to 25 °C
Indoor use

6.2.6. Control of worker exposure: *Professional Use of Maintenance Products; Wooden Furniture care product; Spray manual process (AISE-P602); Use Phase - Professional Use of Maintenance Products; Leather care product; Spray manual process (AISE-P604); Use Phase - Professional Use of Maintenance Products; Stainless steel care; Spray manual process (AISE-P609); Use Phase* (PROC 11)

Product (article) characteristics
Covers concentrations up to 1 %
Amount used (or contained in articles), frequency and duration of use/exposure
Covers use up to 0.25 h/day
Moderate application rate (0.3 - 3 l/minute)
Technical and organisational conditions and measures
Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour).
Spraying with no or low compressed air use
Conditions and measures related to personal protection, hygiene and health evaluation
Wear suitable respiratory protection.; Inhalation - minimum efficiency of 90 %; For further specification, refer to section 8 of the SDS.
Wear chemically resistant gloves (tested to EN374) in combination with ‘basic’ employee training.; If skin contamination is expected to extend to other parts of the body, then these body parts should also be protected with impervious garments in a manner equivalent to those described for the hands.; For further specification, refer to section 8 of the SDS.
Other conditions affecting workers exposure
Assumes process temperature up to 25 °C
Indoor use

6.2.7. Control of worker exposure: *Professional Use of Floor care products; Polish / impregnating agent; Spray manual process (AISE-P408); Use Phase* (PROC 11)

Product (article) characteristics
Covers concentrations up to 1 %
Amount used (or contained in articles), frequency and duration of use/exposure
Covers use up to 1 h/day
Moderate application rate (0.3 - 3 l/minute)
Technical and organisational conditions and measures
Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour).
Spraying with no or low compressed air use
Conditions and measures related to personal protection, hygiene and health evaluation
Wear suitable respiratory protection.; Inhalation - minimum efficiency of 90 %; For further specification, refer to section 8 of the SDS.
Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training.; If skin contamination is expected to extend to other parts of the body, then these body parts should also be protected with impervious garments in a manner equivalent to those described for the hands.; For further specification, refer to section 8 of the SDS.
Other conditions affecting workers exposure
Assumes process temperature up to 25 °C
Indoor use

6.3. Exposure estimation and reference to its source

6.4. Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Scaling method
The workers exposure have been evaluated using ECETOC TRA integrated tool version 3.0, ART 1.5 and Riskofderm and environmental emissions have been evaluated EUSES 2.1.2.
Health
Predicted exposures are not expected to exceed the DN(M)EL when the Risk Management Measures / Operational Conditions outlined in Section 2 are implemented. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.
Environment
Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination.

7. ES 7: Consumer use; Washing and Cleaning Products

7.1. Title section

ES name: *GES6 - Consumer end-use of washing and cleaning products*
Product category: Washing and Cleaning Products (PC 35)

Environment	
1: *GES6 - Consumer end-use of washing and cleaning products (indoor and outdoor use)*	ERC 8d, ERC 8a
Consumer	
2: *CS1 Laundry and dish washing products [a) laundry regular AISE C1; b) laundry compact AISE C2; d) Laundry additives AISE C4*	PC 35
3: *CS1 Laundry and dish washing products [e) Hand diswashing AISE C5]*	PC 35
4: *CS1 Laundry and dish washing products [f) Machine diswashing AISE C6]*	PC 35
5: *CS1 Laundry and dish washing products [g) Laundry aids AISE C12]*	PC 35
6: *CS1 Laundry and dish washing products [c) fabric conditioners AISE C3]*	PC 35
7: *CS2 Cleaners, liquids [c) Carpet cleaners AISE C11]*	PC 35
8: *CS2 Cleaners, liquids [a) Surface cleaners (liquid, powder, gel neat) AISE C7]*	PC 35
9: *CS2 Cleaners, liquids [b) Toilet cleaners (powder, liquid, gel, tablet) AISE C8]*	PC 35
10: *CS2 Cleaners, liquids [d) Wipes AISE C15]*	PC 35
11: *CS2 Cleaners, liquids [e) High pressure washers/cleaners (liquid) AISE C21]*	PC 35
12: *CS2 Cleaners, liquids [f) Automotive care (liquid) AISE C22]*	PC 35
13: *CS3 Cleaners, trigger sprays (all purpose cleaners, sanitary products, glass cleaners) [a) Surface cleaners (spray neat) AISE C7]*	PC 35
14: *CS3 Cleaners, trigger sprays (all purpose cleaners, sanitary products, glass cleaners) [b) Oven cleaners (trigger spray) AISE C10]*	PC 35
15: *CS3 Cleaners, trigger sprays (all purpose cleaners, sanitary products, glass cleaners) [c) Carpet cleaners (spray) AISE C11]*	PC 35
16: *CS3 Cleaners, trigger sprays [d) Automotive care (spray) AISE C22]*	PC 35

7.2. Conditions of use affecting exposure

7.2.1. Control of environmental exposure: *GES6 - Consumer end-use of washing and cleaning products (indoor and outdoor use)* (ERC 8d, ERC 8a)

Amount used, frequency and duration of use (or from service life)
Emission days
Conditions and measures related to external treatment of waste (including article waste)
Dispose of waste product or used containers according to local regulations.

7.2.2. Control of consumer exposure: *CS1 Laundry and dish washing products [a) laundry regular AISE C1; b) laundry compact AISE C2; d) Laundry additives AISE C4* (PC 35)

Product (article) characteristics
Covers concentrations up to 0.05 %
Amount used (or contained in articles), frequency and duration of use/exposure
Exposure duration = 0.167 h/event
Covers use up to 1 event(s)/day
Other conditions affecting consumers exposure

Assumes that potential dermal contact is limited to hands.

7.2.3. Control of consumer exposure: *CS1 Laundry and dish washing products [e) Hand diswashing AISE C5]* (PC 35)

Product (article) characteristics
Covers concentrations up to 0.05 %
Amount used (or contained in articles), frequency and duration of use/exposure
Exposure duration = 0.75 h/event
Covers use up to 1 event(s)/day
Other conditions affecting consumers exposure
Assumes that potential dermal contact is limited to hands.

7.2.4. Control of consumer exposure: *CS1 Laundry and dish washing products [f) Machine diswashing AISE C6]* (PC 35)

Product (article) characteristics
Covers concentrations up to 0.05 %
Amount used (or contained in articles), frequency and duration of use/exposure
Covers use up to 1 event(s)/day

7.2.5. Control of consumer exposure: *CS1 Laundry and dish washing products [g) Laundry aids AISE C12]* (PC 35)

Product (article) characteristics
Covers concentrations up to 0.025 %
Amount used (or contained in articles), frequency and duration of use/exposure
Exposure duration = 1 h/event
Covers use up to 1 event(s)/day
Other conditions affecting consumers exposure
Assumes that potential dermal contact is limited to hands.

7.2.6. Control of consumer exposure: *CS1 Laundry and dish washing products [c) fabric conditioners AISE C3]* (PC 35)

Product (article) characteristics
Covers concentrations up to 0.1 %
Amount used (or contained in articles), frequency and duration of use/exposure
Exposure duration = 0.167 h/event
Covers use up to 1 event(s)/day
Other conditions affecting consumers exposure
Assumes that potential dermal contact is limited to hands.

7.2.7. Control of consumer exposure: *CS2 Cleaners, liquids [c) Carpet cleaners AISE C11]* (PC 35)

Product (article) characteristics
Covers concentrations up to 0.1 %
No spraying
Amount used (or contained in articles), frequency and duration of use/exposure
Covers use up to 1 events per day

Assumes product amount in contact to skin
For each use event, covers use amounts up to 1E4 g/event
Application duration <= 110 min
Exposure duration = h/event
Other conditions affecting consumers exposure
Covers skin contact area up to 860 cm²
Covers use in room size of 58 m3
Ventilation rate >= 0.5 ach (air changes per hour)
Release area <= 22 m2

7.2.8. Control of consumer exposure: *CS2 Cleaners, liquids [a) Surface cleaners (liquid, powder, gel neat) AISE C7]* (PC 35)

Product (article) characteristics
Covers concentrations up to 0.1 %
Amount used (or contained in articles), frequency and duration of use/exposure
Covers use up to 1 events per day
Assumes product amount in contact to skin
For each use event, covers use amounts up to 400 g/event
Application duration <= 20 min
Other conditions affecting consumers exposure
Covers skin contact area up to 1.9E3 cm²
Covers use in room size of 58 m3
Ventilation rate >= 0.5 ach (air changes per hour)
Release area <= 10 m2

7.2.9. Control of consumer exposure: *CS2 Cleaners, liquids [b) Toilet cleaners (powder, liquid, gel, tablet) AISE C8]* (PC 35)

Product (article) characteristics
Covers concentrations up to 0.1 %
Amount used (or contained in articles), frequency and duration of use/exposure
Covers use up to 1 events per day
Assumes product amount in contact to skin
For each use event, covers use amounts up to 1E3 g/event
Other conditions affecting consumers exposure
Covers skin contact area up to 215 cm²
Covers use in room size of 2.5 m3
Ventilation rate >= 2 ach (air changes per hour)
Release area <= 0.075 m2

7.2.10. Control of consumer exposure: *CS2 Cleaners, liquids [d) Wipes AISE C15]* (PC 35)

Product (article) characteristics
Covers concentrations up to 0.1 %
Amount used (or contained in articles), frequency and duration of use/exposure
Covers use up to 1 events per day

Assumes product amount in contact to skin
For each use event, covers use amounts up to 3.42 g/event
Application duration <= 2 min
Other conditions affecting consumers exposure
Covers skin contact area up to 215 cm²
Covers use in room size of 20 m3
Ventilation rate >= 0.6 ach (air changes per hour)
Release area <= 2 m2

7.2.11. Control of consumer exposure: *CS2 Cleaners, liquids [e) High pressure washers/cleaners (liquid) AISE C21]* (PC 35)

Product (article) characteristics
Covers concentrations up to 0.1 %
No spraying
Oral exposure is considered to be not relevant.
Amount used (or contained in articles), frequency and duration of use/exposure
Exposure duration = 5 h/event
Covers use up to 1 events per day
For each use event, covers use amounts up to 50 g/event
Other conditions affecting consumers exposure
Assumes that potential dermal contact is limited to hands.

7.2.12. Control of consumer exposure: *CS2 Cleaners, liquids [f) Automotive care (liquid) AISE C22]* (PC 35)

Product (article) characteristics
Covers concentrations up to 0.25 %
No spraying
Oral exposure is considered to be not relevant.
Amount used (or contained in articles), frequency and duration of use/exposure
Exposure duration = 5 h/event
Covers use up to 1 events per day
For each use event, covers use amounts up to 400 g/event
Covers infrequent uses, up to 2 weeks per year
For each use event, covers use amounts up to 63 g
Assumes product amount in contact to skin
Application duration <= 20 min
Other conditions affecting consumers exposure
Assumes that potential dermal contact is limited to hands.
Covers skin contact area up to 215 cm2
Covers skin contact area up to 1.9E3 cm²
Covers use in room size of 4 m3
Ventilation rate >= 2.5 ach (air changes per hour)
Release area <= 10 m2

7.2.13. Control of consumer exposure: *CS3 Cleaners, trigger sprays (all*

***purpose cleaners, sanitary products, glass cleaners) [a) Surface cleaners (spray neat) AISE C7]* (PC 35)**

Product (article) characteristics
Covers concentrations up to 0.1 %
Amount used (or contained in articles), frequency and duration of use/exposure
Covers use up to 1 events per day
Application duration <= 0.41 min
Assumes product amount in contact to skin
For each use event, covers use amounts up to 16.2 g/event
Other conditions affecting consumers exposure
Covers skin contact area up to 215 cm²
Covers use in room size of 15 m3
Ventilation rate >= 2.5 ach (air changes per hour)
Release area <= 1.71 m2

7.2.14. Control of consumer exposure: *CS3 Cleaners, trigger sprays (all purpose cleaners, sanitary products, glass cleaners) [b) Oven cleaners (trigger spray) AISE C10]* (PC 35)

Product (article) characteristics
Covers concentrations up to 0.1 %
Amount used (or contained in articles), frequency and duration of use/exposure
Covers use up to 1 events per day
Application duration <= 0.5 min
Assumes product amount in contact to skin
Other conditions affecting consumers exposure
Covers skin contact area up to 430 cm²
Covers use in room size of 15 m3
Ventilation rate >= 2.5 ach (air changes per hour)

7.2.15. Control of consumer exposure: *CS3 Cleaners, trigger sprays (all purpose cleaners, sanitary products, glass cleaners) [c) Carpet cleaners (spray) AISE C11]* (PC 35)

Product (article) characteristics
Covers concentrations up to 0.1 %
Amount used (or contained in articles), frequency and duration of use/exposure
Covers use up to 1 events per day
Assumes product amount in contact to skin
Other conditions affecting consumers exposure
Covers skin contact area up to 215 cm²

7.2.16. Control of consumer exposure: *CS3 Cleaners, trigger sprays [d) Automotive care (spray) AISE C22]* (PC 35)

Product (article) characteristics
Covers concentrations up to 0.25 %
Oral exposure is considered to be not relevant.

Amount used (or contained in articles), frequency and duration of use/exposure
For each use event, covers use amounts up to 170 g/event
Covers use up to 1 events per day
Exposure duration = 1 h/event
Covers infrequent uses, up to 2 weeks per year
Application duration <= 0.41 min
Assumes product amount in contact to skin
Other conditions affecting consumers exposure
Assumes that potential dermal contact is limited to hands.
Covers use in room size of 4 m3
Covers skin contact area up to 215 cm²
Covers use in room size of 4 m3
Ventilation rate >= 2.5 ach (air changes per hour)
Release area <= 10 m2

7.3. Exposure estimation and reference to its source

7.4. Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Scaling method
The consumers exposure have been evaluated using ECETOC TRA consumers version 3.1 and Consexpo 5.0 and environmental emissions have been evaluated EUSES 2.1.2.
Health
Predicted exposures are not expected to exceed the DN(M)EL when the Risk Management Measures / Operational Conditions outlined in Section 2 are implemented. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.
Environment
Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination.

8. ES 8: Consumer use; Air care products

8.1. Title section

ES name: *GES7 - Consumer end-use of air care products*
Product category: Air care products (PC 3)

Environment	
1: *GES7 - Consumer end-use of air care products*	ERC 8a
Consumer	
2: *CS1 Air fresheners aerosol : aqueous, non-aqueous, concentrated (mini-aerosol, Timed release aerosol) ; AISE C17*	PC 3
3: *CS2 Air fresheners non aerosol [a) perfume in/on solid substrate (gel), diffusers (heated) AISE C18]*	PC 3
4: *CS2 Air fresheners non aerosol [b) candles AISE C18]*	PC 3

8.2. Conditions of use affecting exposure

8.2.1. Control of environmental exposure: *GES7 - Consumer end-use of air care products* (ERC 8a)

Amount used, frequency and duration of use (or from service life)
Daily wide dispersive use: <= 1.375E-5 tonnes/day
Emission days
Conditions and measures related to external treatment of waste (including article waste)
Dispose of waste product or used containers according to local regulations.
Other conditions affecting environmental exposure
Municipal sewage treatment plant is assumed.

8.2.2. Control of consumer exposure: *CS1 Air fresheners aerosol : aqueous, non-aqueous, concentrated (mini-aerosol, Timed release aerosol) ; AISE C17* (PC 3)

Product (article) characteristics
Covers concentrations up to 0.25 %
Amount used (or contained in articles), frequency and duration of use/exposure
Exposure duration = 0.25 h/event
Covers use up to 1 event(s)/day

8.2.3. Control of consumer exposure: *CS2 Air fresheners non aerosol [a) perfume in/on solid substrate (gel), diffusers (heated) AISE C18]* (PC 3)

Product (article) characteristics
Covers concentrations up to 0.99 %
Amount used (or contained in articles), frequency and duration of use/exposure
Exposure duration = 0.25 h/event
Covers use up to 1 event(s)/day

8.2.4. Control of consumer exposure: *CS2 Air fresheners non aerosol [b) candles AISE C18]* (PC 3)

Product (article) characteristics
Covers concentrations up to 0.5 %

No spraying
Oral exposure is considered to be not relevant.
Amount used (or contained in articles), frequency and duration of use/exposure
Exposure duration = 4 h/event
Covers use up to 1 events per day
For each use event, covers use amounts up to 0.42 g/event
Other conditions affecting consumers exposure
Assumes that potential dermal contact is limited to fingertips.

8.3. Exposure estimation and reference to its source

8.4. Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Scaling method
The consumers exposure have been evaluated using ECETOC TRA consumers version 3.1 and Consexpo 5.0 and environmental emissions have been evaluated EUSES 2.1.2.
Health
Predicted exposures are not expected to exceed the DN(M)EL when the Risk Management Measures / Operational Conditions outlined in Section 2 are implemented. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.
Environment
Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination.

9. ES 9: Consumer use; Biocidal Products

9.1. Title section

ES name: *GES8 - Consumer end-use of biocides*
Product category: Biocidal Products (PC 8)

Environment	
1: *GES8 - Consumer end-use of biocides (indoor and outdoor use)*	ERC 8d, ERC 8a
Consumer	
2: *CS1 Insecticides, spray neat, AISE C19*	PC 8
3: *CS1 Insecticides, liquid electric, AISE C19*	PC 8
4: *CS2 Repellents; AISE C19*	PC 8

9.2. Conditions of use affecting exposure

9.2.1. Control of environmental exposure: *GES8 - Consumer end-use of biocides (indoor and outdoor use)* (ERC 8d, ERC 8a)

Amount used, frequency and duration of use (or from service life)
Emission days
Conditions and measures related to external treatment of waste (including article waste)
Dispose of waste product or used containers according to local regulations.
Other conditions affecting environmental exposure
Municipal sewage treatment plant is assumed.

9.2.2. Control of consumer exposure: *CS1 Insecticides, spray neat, AISE C19* (PC 8)

Product (article) characteristics
Covers concentrations up to 0.99 %
No spraying
Amount used (or contained in articles), frequency and duration of use/exposure
Exposure duration = 0.25 h/event
Covers use up to 1 event(s)/day
For each use event, covers use amounts up to g/event
Covers use up to 1 events per day

9.2.3. Control of consumer exposure: *CS1 Insecticides, liquid electric, AISE C19* (PC 8)

Product (article) characteristics
Covers concentrations up to 0.99 %
Amount used (or contained in articles), frequency and duration of use/exposure
Exposure duration = 0.25 h/event
Covers use up to 1 event(s)/day

9.2.4. Control of consumer exposure: *CS2 Repellents; AISE C19* (PC 8)

Product (article) characteristics
Covers concentrations up to 0.5 %
Amount used (or contained in articles), frequency and duration of use/exposure
Covers use up to 1 events per day

Assumes product amount in contact to skin
Other conditions affecting consumers exposure
Covers skin contact area up to 1.12E4 cm²

9.3. Exposure estimation and reference to its source

9.4. Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Scaling method
The consumers exposure have been evaluated using ECETOC TRA consumers version 3.1 and Consexpo 5.0 and environmental emissions have been evaluated EUSES 2.1.2.
Health
Predicted exposures are not expected to exceed the DN(M)EL when the Risk Management Measures / Operational Conditions outlined in Section 2 are implemented. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.
Environment
Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination.

10. ES 10: Consumer use; Polishes and Wax Blends

10.1. Title section

ES name: *GES9 - Consumer end-use of polishes and wax blend*
Product category: Polishes and Wax Blends (PC 31)

Environment	
1: *GES9 - consumer end-use of polishes and wax blend*	ERC 8a
Consumer	
2: *CS1 Furniture, floor & leather care: wax/cream; (floor, furniture, shoes) ; AISE C20*	PC 31
3: *CS2 Furniture, floor & leather care: spray; (furniture, shoes) ; AISE C20*	PC 31

10.2. Conditions of use affecting exposure

10.2.1. Control of environmental exposure: *GES9 - consumer end-use of polishes and wax blend* (ERC 8a)

Amount used, frequency and duration of use (or from service life)
Emission days
Conditions and measures related to external treatment of waste (including article waste)
Dispose of waste product or used containers according to local regulations.
Other conditions affecting environmental exposure
Municipal sewage treatment plant is assumed.

10.2.2. Control of consumer exposure: *CS1 Furniture, floor & leather care: wax/cream; (floor, furniture, shoes) ; AISE C20* (PC 31)

Product (article) characteristics
No spraying
Covers concentrations up to 0.03 %
Amount used (or contained in articles), frequency and duration of use/exposure
Exposure duration = h/event
Covers use up to 1 events per day
Assumes product amount in contact to skin
For each use event, covers use amounts up to 550 g/event
Application duration <= 90 min
Other conditions affecting consumers exposure
Covers skin contact area up to 215 cm²
Covers use in room size of 58 m3
Ventilation rate >= 0.5 ach (air changes per hour)
Release area <= 22 m2

10.2.3. Control of consumer exposure: *CS2 Furniture, floor & leather care: spray; (furniture, shoes) ; AISE C20* (PC 31)

Product (article) characteristics
Covers concentrations up to 0.1 %
Amount used (or contained in articles), frequency and duration of use/exposure
For each use event, covers use amounts up to g/event
Exposure duration = h/event

Covers use up to 1 events per day
Application duration <= 1.2 min
Other conditions affecting consumers exposure
For each use, avoid using for more than 1 Hour(s)
Covers use in room size of 34 m3
Ventilation rate >= 1.5 ach (air changes per hour)

10.3. Exposure estimation and reference to its source

Exposure calculation information is available under request. Please contact supplier for such information.

10.4. Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Scaling method
The consumers exposure have been evaluated using ECETOC TRA consumers version 3.1 and Consexpo 5.0 and environmental emissions have been evaluated EUSES 2.1.2.
Health
Predicted exposures are not expected to exceed the DN(M)EL when the Risk Management Measures / Operational Conditions outlined in Section 2 are implemented. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.
Environment
Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination.

11. ES 11: Consumer use; Various products

11.1. Title section

ES name: *GES10 - Consumer end-use of cosmetics*

Product category: Cosmetics, personal care products (PC 39), Perfumes, Fragrances (PC 28)

Environment	
CS 1: GES10 - Consumer end-use of cosmetics	ERC 8a
Consumer	
CS 2: cosmetics, personal care products	PC 39
CS 3: perfumes, fragrances	PC 28

11.2. Conditions of use affecting exposure

11.2.1. Control of environmental exposure: *GES10 - Consumer end-use of cosmetics* (ERC 8a)

Amount used, frequency and duration of use (or from service life)
Emission days
Conditions and measures related to external treatment of waste (including article waste)
Dispose of waste product or used containers according to local regulations.
Other conditions affecting environmental exposure
Municipal sewage treatment plant is assumed.

11.3. Exposure estimation and reference to its source

11.4. Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Scaling method
The environmental emissions have been evaluated EUSES 2.1.2.
Health
N.A.
Environment
Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination.