



## SAFETY DATA SHEET NESSOL D40

### SECTION 1: Identification of the substance/mixture and of the company/undertaking

#### 1.1. Product identifier

<b>Product name</b>	NESSOL D40
<b>Chemical name</b>	Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, <2% aromatics
<b>Product number</b>	ID 10525
<b>Internal identification</b>	135157, 137311.
<b>Synonyms; trade names</b>	Previous product name: NESSOL LIAV 200. Previous product number: 752011.
<b>EU REACH registration number</b>	01-2119463258-33-0003

#### 1.2. Relevant identified uses of the substance or mixture and uses advised against

<b>Identified uses</b>	Manufacture of substance (ES01) Distribution of substance (ES01a) Formulation & (re)packing of substances and mixtures (ES02) Uses in coatings (ES03a) (ES03b) (ES03c) Use in cleaning agents (ES04a) (ES04b) (ES04c) Use in oil and gas field drilling and production operations (ES05b) Lubricants (ES06a) (ES06b) (ES06c) Metal working fluids/rolling oils (ES07a) (ES07b) Use as binders and release agents (ES10a) (ES10b) Use as a fuel (ES12a) (ES12b) (ES12c) Functional fluids (ES13a) (ES13b) (ES13c) Road and construction applications (ES15b) Other Consumer Uses (ES16c) Use in laboratories (ES17a) (ES17b) Explosives manufacture & use (ES18b) Water treatment chemicals (ES21a) (ES21b) (ES21c) Mining chemicals (ES22a) Polymer processing (ES23a) (ES23b)
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#### 1.3. Details of the supplier of the safety data sheet

<b>Supplier</b>	Neste Oyj Keilaranta 21, Espoo, P.O.B. 95, FIN-00095 NESTE, FINLAND Tel. +358 10 45811 SDS@neste.com (chemical safety)
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#### 1.4. Emergency telephone number

<b>Emergency telephone</b>	+61 2 9186 1132, Chemwatch: International Emergency Response Phone Number
<b>National emergency telephone number</b>	+358 800 147 111, +358 9 471 977, Poison Information Centre

### SECTION 2: Hazards identification

#### 2.1. Classification of the substance or mixture

##### Classification (SI 2019 No. 720)

<b>Physical hazards</b>	Flam. Liq. 3 - H226
<b>Health hazards</b>	STOT SE 3 - H336 Asp. Tox. 1 - H304
<b>Environmental hazards</b>	Not Classified

#### 2.2. Label elements

## NESSOL D40

### Hazard pictograms



### Signal word

Danger

### Hazard statements

H226 Flammable liquid and vapour.  
H336 May cause drowsiness or dizziness.  
H304 May be fatal if swallowed and enters airways.

### Precautionary statements

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.  
P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor.  
P331 Do NOT induce vomiting.  
P501 Dispose of contents/ container in accordance with national regulations.  
P102 Keep out of reach of children.

### Supplemental label information

EUH066 Repeated exposure may cause skin dryness or cracking.

### Contains

Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, <2% aromatics

### 2.3. Other hazards

#### Other hazards

Vapours may accumulate on the floor and in low-lying areas. Vapours may form explosive mixtures with air. Evaporates slowly. Vapours may irritate throat/respiratory system. Risk of soil and ground water contamination.

This product does not contain substances considered to have endocrine disrupting properties at levels of 0.1% or higher.

## SECTION 3: Composition/information on ingredients

### 3.1. Substances

Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, <2% aromatics	100 %
CAS number: —	

#### Classification

Flam. Liq. 3 - H226  
STOT SE 3 - H336  
Asp. Tox. 1 - H304

The Full Text for all R-Phrases and Hazard Statements are Displayed in Section 16.

#### Product name

NESSOL D40

#### Chemical name

Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, <2% aromatics

#### EU REACH registration number

01-2119463258-33-0003

#### Ingredient notes

Identity outside the EU (CAS number and name of the substance): 64742-48-9, Naphtha (petroleum), hydrotreated heavy Previous EC number: 265-150-3.

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

## NESSOL D40

<b>Inhalation</b>	Remove person to fresh air and keep comfortable for breathing. Get medical attention if symptoms are severe or persist.
<b>Ingestion</b>	Do not induce vomiting. Get medical attention immediately.
<b>Skin contact</b>	Rinse immediately contaminated clothing and skin with plenty of water before removing clothes. Wash skin thoroughly with soap and water. Get medical attention if irritation persists after washing.
<b>Eye contact</b>	Rinse immediately with plenty of water. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation persists after washing.

### 4.2. Most important symptoms and effects, both acute and delayed

<b>General information</b>	Vapours in high concentrations are narcotic. May cause nausea, headache, dizziness and intoxication. Entry into the lungs following ingestion or vomiting may cause chemical pneumonitis. Repeated exposure may cause skin dryness or cracking.
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### 4.3. Indication of any immediate medical attention and special treatment needed

<b>Notes for the doctor</b>	Treat symptomatically.
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## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

<b>Suitable extinguishing media</b>	Water spray, foam, dry powder or carbon dioxide.
<b>Unsuitable extinguishing media</b>	Do not use water jet as an extinguisher, as this will spread the fire.

### 5.2. Special hazards arising from the substance or mixture

<b>Specific hazards</b>	Flammable liquid and vapour. Containers can burst violently or explode when heated, due to excessive pressure build-up. Severe explosion hazard when vapours are exposed to flames.
<b>Hazardous combustion products</b>	Carbon dioxide (CO <sub>2</sub> ). Carbon monoxide (CO).

### 5.3. Advice for firefighters

<b>Protective actions during firefighting</b>	Cool containers exposed to heat with water spray and remove them from the fire area if it can be done without risk. Prevent fire extinguishing water from contaminating surface water or the ground water system.
<b>Special protective equipment for firefighters</b>	Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing.

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

<b>Personal precautions</b>	Keep upwind to avoid inhalation of gases, vapours, fumes and smoke. Avoid inhalation of vapours and contact with skin and eyes. Wear adequate protective equipment at all operations.
<b>For emergency responders</b>	Prevent unauthorized access. Vapours are heavier than air and may spread near ground and travel a considerable distance to a source of ignition and flash back. Use only in well-ventilated areas. Eliminate all ignition sources if safe to do so.

### 6.2. Environmental precautions

<b>Environmental precautions</b>	Avoid release to the environment. Stop leak if safe to do so. Avoid the spillage or runoff entering drains, sewers or watercourses. Inform the relevant authorities if environmental pollution occurs (sewers, waterways, soil or air). Risk of soil and ground water contamination.
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## NESSOL D40

### 6.3. Methods and material for containment and cleaning up

**Methods for cleaning up** Immediately start clean-up of the liquid and contaminated soil. Contain spillage with sand, earth or other suitable non-combustible material. Large spills should be collected mechanically (remove by pumping) for disposal. Pay attention to the fire and health hazards caused by the product.

### 6.4. Reference to other sections

**Reference to other sections** For personal protection, see Section 8.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

**Usage precautions** This material is a static accumulator. Avoid heat, flames and other sources of ignition. Take precautionary measures against static discharges. Use only in well-ventilated areas. Try to avoid product volatilization during handling and transferring. Avoid inhalation of vapours and contact with skin and eyes. Use personal protective equipment and/or local ventilation when needed. Do not eat, drink or smoke when using this product. Wash hands and any other contaminated areas of the body with soap and water before leaving the work site. During tank operations follow special instructions (risk of oxygen displacement and hydrocarbons).

### 7.2. Conditions for safe storage, including any incompatibilities

**Storage precautions** Flammable liquid storage. Store in accordance with local regulations. Keep container tightly closed, in a cool, well ventilated place. Keep away from food, drink and animal feeding stuffs. Store in a demarcated bunded area to prevent release to drains and/or watercourses. Suitable container materials: Stainless steel. Carbon steel. Polytetrafluoroethylene (PTFE, Teflon). Polypropylene Polyethylene. Unsuitable container materials: Butyl rubber. Rubber (natural, latex). EPDM (ethylene-propylene-diene monomer). Polystyrene

### 7.3. Specific end use(s)

**Specific end use(s)** Not known.

## SECTION 8: Exposure controls/Personal protection

### 8.1. Control parameters

**Ingredient comments** Solvent naphtha, group 1: 500 mg/m<sup>3</sup> (8h), HTP 2020/FIN. The individual limit values can be applied for the hydrocarbons.

**PNEC** Not available.

#### Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, <2% aromatics

#### **DNEL**

Workers - Inhalation; Long term systemic effects: 871 mg/m<sup>3</sup>  
 Workers - Dermal; Long term systemic effects: 208 mg/kg/day  
 Consumer - Inhalation; Long term systemic effects: 185 mg/m<sup>3</sup>  
 Consumer - Dermal; Long term systemic effects: 125 mg/kg/day  
 Consumer - Oral; Long term systemic effects: 125 mg/kg/day

### 8.2. Exposure controls

**Appropriate engineering controls** Provide adequate ventilation. Use personal protective equipment and/or local ventilation when needed. Handle in accordance with good industrial hygiene and safety practice.

**Eye/face protection** Spectacles.

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<b>Hand protection</b>	Wear protective gloves. It is recommended that gloves are made of the following material: Nitrile rubber. The selected gloves should have a breakthrough time of at least 4 hours. Protection class 5. Protective gloves according to standard EN 374. Change protective gloves regularly.
<b>Other skin and body protection</b>	Protective clothing when needed. Wear anti-static protective clothing if there is a risk of ignition from static electricity.
<b>Respiratory protection</b>	Respiratory protection must be used if the airborne contamination exceeds the recommended occupational exposure limit. Wear a respirator fitted with the following cartridge: Gas filter, type A2. Gas and combination filter cartridges suitable for intended use should be used. Filter must be changed often enough. At high concentrations a breathing apparatus must be used (self-contained or fresh air hose breathing apparatus).
<b>Environmental exposure controls</b>	Store in a demarcated bunded area to prevent release to drains and/or watercourses.

### SECTION 9: Physical and chemical properties

#### 9.1. Information on basic physical and chemical properties

<b>Appearance</b>	Mobile liquid.
<b>Colour</b>	Clear.
<b>Odour</b>	Hydrocarbons. Mild.
<b>Odour threshold</b>	-
<b>pH</b>	-
<b>Melting point</b>	(Melting/pour point) < -15°C
<b>Initial boiling point and range</b>	150...200°C (EN ISO 3405)
<b>Flash point</b>	≥ 38°C (DIN 51755)
<b>Upper/lower flammability or explosive limits</b>	Lower flammable/explosive limit: 0,6 % Estimated value. Upper flammable/explosive limit: 7 % Estimated value.
<b>Vapour pressure</b>	~ 0,3 kPa @ 20°C ~ 2,5 kPa @ 50°C
<b>Vapour density</b>	> 3 (Air = 1.0)
<b>Relative density</b>	0,74 - 0,85 @ 15°C
<b>Solubility(ies)</b>	The product has poor water-solubility.
<b>Partition coefficient</b>	log Kow: 2...7
<b>Auto-ignition temperature</b>	~ 250°C Estimated value.
<b>Decomposition Temperature</b>	-
<b>Viscosity</b>	Kinematic viscosity < 2 mm <sup>2</sup> /s @ 40°C (EN ISO 3104) Dynamic viscosity < 50 mPa s @ > -30°C
<b>Explosive properties</b>	Not considered to be explosive.
<b>Oxidising properties</b>	Does not meet the criteria for classification as oxidising.
<b>9.2. Other information</b>	
<b>Other information</b>	Surface tension 22-27 mN/m @ 25 °C

### SECTION 10: Stability and reactivity

## NESSOL D40

### 10.1. Reactivity

**Reactivity** There are no known reactivity hazards associated with this product.

### 10.2. Chemical stability

**Stability** Stable at normal ambient temperatures and when used as recommended.

### 10.3. Possibility of hazardous reactions

**Possibility of hazardous reactions** No potentially hazardous reactions known.

### 10.4. Conditions to avoid

**Conditions to avoid** Keep away from heat, sparks and open flame. Take precautionary measures against static discharges.

### 10.5. Incompatible materials

**Materials to avoid** Oxidising agents.

### 10.6. Hazardous decomposition products

**Hazardous decomposition products** None known.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

**Toxicological effects** Based on available data the classification criteria are not met.

#### Skin corrosion/irritation

**Skin corrosion/irritation** Based on available data the classification criteria are not met. (OECD 404, HRIPT = Human Repeated Insult Patch Test) Repeated exposure may cause skin dryness or cracking.

#### Serious eye damage/irritation

**Serious eye damage/irritation** Based on available data the classification criteria are not met. (OECD 405).

#### Skin sensitisation

**Skin sensitisation** Based on available data the classification criteria are not met. (OECD 406, HRIPT).

#### Germ cell mutagenicity

**Genotoxicity - in vitro** Based on available data the classification criteria are not met. (OECD 471, 473, 476, 479).

**Genotoxicity - in vivo** Based on available data the classification criteria are not met. (OECD 474, 478)

#### Carcinogenicity

**Carcinogenicity** Based on available data the classification criteria are not met. (OECD 453)

#### Reproductive toxicity

**Reproductive toxicity - fertility** Based on available data the classification criteria are not met. (OECD 421, 422)

**Reproductive toxicity - development** Based on available data the classification criteria are not met. (OECD 414)

#### Specific target organ toxicity - single exposure

**STOT - single exposure** May cause nausea, headache, dizziness and intoxication. Anaesthetic in high concentrations.

#### Specific target organ toxicity - repeated exposure

**STOT - repeated exposure** Based on available data the classification criteria are not met. (OECD 408, 413, 422)

#### Aspiration hazard

## NESSOL D40

**Aspiration hazard** May be fatal if swallowed and enters airways. Entry into the lungs following ingestion or vomiting may cause chemical pneumonitis.

**General information** This product does not contain substances considered to have endocrine disrupting properties at levels of 0.1% or higher.

### Toxicological information on ingredients.

#### Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, <2% aromatics

##### Acute toxicity - oral

**Notes (oral LD<sub>50</sub>)** LD<sub>50</sub> > 5000 mg/kg, Oral, Rat (OECD 401, 423)

##### Acute toxicity - dermal

**Notes (dermal LD<sub>50</sub>)** LD<sub>50</sub> > 2000 mg/kg, Dermal, Rabbit (OECD 402)

##### Acute toxicity - inhalation

**Notes (inhalation LC<sub>50</sub>)** LC<sub>50</sub> > 4,95 mg/l, Inhalation, Rat (4h) Air. (OECD 403)

### SECTION 12: Ecological information

#### 12.1. Toxicity

**Toxicity** Based on available data the classification criteria are not met.

#### Ecological information on ingredients.

#### Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, <2% aromatics

##### Acute aquatic toxicity

**Acute toxicity - fish** LL<sub>50</sub>, 96 hours: > 1000 mg/l,  
LL0, 96 hours: 100 mg/l,  
(OECD 203)

**Acute toxicity - aquatic invertebrates** EL50, 48 hours: > 1000 mg/l,  
EL0, 48 hours: 1000 mg/l,  
(OECD 202)

**Acute toxicity - aquatic plants** EL50, 72 hours: > 1000 mg/l, Algae  
NOELR, 72 hours: 3 - 100 mg/l, Algae  
(OECD 201)

##### Chronic aquatic toxicity

**Chronic toxicity - fish early life stage** NOELR, 28 days: 0,13 mg/l,  
(QSAR)

**Chronic toxicity - aquatic invertebrates** NOELR, 21 days: 0,23 mg/l,  
(QSAR)

#### 12.2. Persistence and degradability

**Phototransformation** The product contains volatile substances which may spread in the atmosphere.  
Can be photodegraded in the atmosphere.

**Stability (hydrolysis)** No significant reaction in water.

#### Ecological information on ingredients.

#### Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, <2% aromatics

## NESSOL D40

**Biodegradation** Rapidly degradable  
(OECD 301F)

### 12.3. Bioaccumulative potential

**Bioaccumulative potential** No data available.

**Partition coefficient** log Kow: 2...7

### 12.4. Mobility in soil

**Mobility** Volatile. Volatilization is the fastest and most dominant elimination process in surface water and soil. Product can penetrate soil until reaching the surface of ground water. The product contains substances which are bound to particulate matter and are retained in soil.

### 12.5. Results of PBT and vPvB assessment

**Results of PBT and vPvB assessment** This product does not contain any substances classified as PBT or vPvB.

### 12.6. Other adverse effects

**Other adverse effects** Not known.

**Endocrine-disrupting properties** This product does not contain substances considered to have endocrine disrupting properties at levels of 0.1% or higher.

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

**General information** Waste is classified as hazardous waste.

**Disposal methods** Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority. When handling waste, the safety precautions applying to handling of the product should be considered. Care should be taken when handling emptied containers that have not been thoroughly cleaned or rinsed out. Product residues retained in emptied containers can be hazardous. Waste packaging should be collected for reuse or recycling.

## SECTION 14: Transport information

### 14.1. UN number

**UN No. (ADR/RID)** 3295

### 14.2. UN proper shipping name

**Proper shipping name (ADR/RID)** UN 3295 HYDROCARBONS, LIQUID, N.O.S.

### 14.3. Transport hazard class(es)

**ADR/RID class** 3

### 14.4. Packing group

**ADR/RID packing group** III

### 14.5. Environmental hazards

**Environmentally hazardous substance/marine pollutant**  
No.

### 14.6. Special precautions for user



## NESSOL D40

**Hazard Identification Number** 30  
(ADR/RID)

**Tunnel restriction code** (D/E)

### 14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code** Not applicable. MARPOL Annex I cargo.

## SECTION 15: Regulatory information

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

#### **National regulations**

UK REACH registration number: UK-01-2791046891-0-0008.  
Only Representative UK: Penman Consulting Limited 40, Aspect House, Waylands Avenue, Grove Business Park, Wantage, Oxon, OX12 9FF, United Kingdom; Telephone: 01367 718474, Email: pcltd40@penmanconsulting.com.  
Location of manufacture: Neste Porvoo Refinery, Finland.

EU regulatory references for the safety data sheet:

Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) (as amended)

Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures (as amended)

#### **Restrictions (SI 2020 No. 1577 Annex XVII)**

Entry number: 3 (lamp oils and grill lighter fluids)

### 15.2. Chemical safety assessment

A chemical safety assessment has been carried out.

#### Inventories

##### **Canada - DSL/NDSL**

Yes  
DSL

##### **US - TSCA**

Yes

##### **Australia - AIC**

Yes

##### **Korea - KECI**

Yes

##### **China - IECSC**

Yes

##### **Philippines – PICCS**

Yes

##### **New Zealand - NZIOC**

Yes

#### **Other**

Mexico - INSQ

## NESSOL D40

### SECTION 16: Other information

<b>Key literature references and sources for data</b>	Regulations, databases, literature, own research. Chemical Safety Report Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, <2% aromatics, 2012.
<b>Revision comments</b>	Updated, sections: 1.4, 2.3, 11, 12.6, 14.7. NOTE: Lines within the margin indicate significant changes from the previous revision.
<b>Revision date</b>	01/01/2023
<b>Supersedes date</b>	09/06/2022
<b>SDS number</b>	5695
<b>Hazard statements in full</b>	H226 Flammable liquid and vapour. H304 May be fatal if swallowed and enters airways. H336 May cause drowsiness or dizziness.

## Exposure scenario

### Distribution of Substance - Industrial

#### Identification

<b>Product name</b>	Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, aromatics < 2%
<b>EU REACH registration number</b>	01-2119463258-33-0003
<b>Version number</b>	2021
<b>Es reference</b>	ES01a

#### 1. Title of exposure scenario

<b>Main title</b>	Distribution of Substance - Industrial
<b>Process scope</b>	Loading (including marine vessel/barge, rail/road car and IBC loading) and repacking (including drums and small packs) of substance, including its sampling, storage, unloading distribution and associated laboratory activities.

#### Environment

<b>Environmental release category</b>	ERC1 Manufacture of the substance ERC2 Formulation into mixture ERC3 Formulation into solid matrix ERC4 Use of non-reactive processing aid at industrial site (no inclusion into or onto article) ERC5 Use at industrial site leading to inclusion into/onto article ERC6a Use of intermediate ERC6b Use of reactive processing aid at industrial site (no inclusion into or onto article) ERC6c Use of monomer in polymerisation processes at industrial site (inclusion or not into/onto article) ERC6d Use of reactive process regulators in polymerisation processes at industrial site (inclusion or not into/onto article) ERC7 Use of functional fluid at industrial site
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<b>SPERC</b>	ESVOC SPERC 1.1b.v1
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#### Worker

<b>Process category</b>	PROC1 Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions PROC3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition PROC4 Chemical production where opportunity for exposure arises PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities PROC9 Transfer of substance or mixture into small containers (dedicated filling line, including weighing) PROC15 Use as laboratory reagent.
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#### 2. Conditions of use affecting exposure (Industrial - Environment 1)

##### Control of environmental exposure

No exposure assessment presented for the environment.

#### 2. Conditions of use affecting exposure (Workers - Health 1)

## Distribution of Substance - Industrial

### Product characteristics

<b>Physical state</b>	Liquid
<b>Vapour pressure</b>	Vapour pressure < 0.5 kPa at STP.
<b>Concentration details</b>	Covers percentage substance in the product up to 100% (unless stated differently).

### Frequency and duration of use

Covers daily exposures up to 8 hours (unless stated differently).

### Other given operational conditions affecting workers exposure

<b>Setting</b>	Assumes a good basic standard of occupational hygiene is implemented.
<b>Temperature</b>	Assumes use at not more than 20°C above ambient temperature, unless stated differently.

### Risk management measures

General exposures (closed systems)  
Handle substance within a closed system.  
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General exposures (open systems)  
No other specific measures identified.  
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Process sampling  
No other specific measures identified.  
.

Laboratory activities  
No other specific measures identified.  
.

Bulk transfers  
(closed systems)  
No other specific measures identified.  
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Bulk transfers  
(open systems)  
No other specific measures identified.  
.

Drum and small package filling  
No other specific measures identified.  
.

Equipment cleaning and maintenance  
No other specific measures identified.  
.

Storage  
Store substance within a closed system.  
Transfer via enclosed lines.

### 3. Exposure estimation (Health 1)

<b>Assessment method</b>	The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated
	Available hazard data do not enable the derivation of a DNEL for dermal irritant effects. Qualitative approach used to conclude safe use.

### 4. Guidance to check compliance with the exposure scenario (Health 1)

## **Distribution of Substance - Industrial**

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.

## Exposure scenario

### Formulation & (Re)packing of Substances and Mixtures - Industrial

#### Identification

<b>Product name</b>	Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, aromatics < 2%
<b>EU REACH registration number</b>	01-2119463258-33-0003
<b>Version number</b>	2021
<b>Es reference</b>	ES02

#### 1. Title of exposure scenario

<b>Main title</b>	Formulation & (Re)packing of Substances and Mixtures - Industrial
<b>Process scope</b>	Formulation, packing and re-packing of the substance and its mixtures in batch or continuous operations, including storage, materials transfers, mixing, tableting, compression, pelletisation, extrusion, large and small scale packing, sampling, maintenance and associated laboratory activities.
<b>Environment</b>	
<b>Environmental release category</b>	ERC2 Formulation into mixture
<b>SPERC</b>	ESVOC SPERC 2.2.v2
<b>Worker</b>	
<b>Process category</b>	<p>PROC1 Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions</p> <p>PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions</p> <p>PROC3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition</p> <p>PROC4 Chemical production where opportunity for exposure arises</p> <p>PROC5 Mixing or blending in batch processes</p> <p>PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities</p> <p>PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities</p> <p>PROC9 Transfer of substance or mixture into small containers (dedicated filling line, including weighing)</p> <p>PROC14 Tableting, compression, extrusion, pelletisation, granulation</p> <p>PROC15 Use as laboratory reagent.</p>

#### 2. Conditions of use affecting exposure (Industrial - Environment 1)

##### Product characteristics

<b>Physical state</b>	Liquid
<b>Vapour pressure</b>	Vapour pressure < 0.5 kPa at STP.

##### Amounts used

Daily amount per site: <= 13.46 tonnes  
 Annual site tonnage: <= 4040 tonnes  
 Fraction of EU tonnage used in region: 0.1

##### Frequency and duration of use

## Formulation & (Re)packing of Substances and Mixtures - Industrial

Emission days: 300 days/year

### Other given operational conditions affecting environmental exposure

Emission factor - air	1%
Emission factor - water	0.0005 %
Emission factor - soil	0.01%

### 2. Conditions of use affecting exposure (Workers - Health 1)

#### Product characteristics

Physical state	Liquid
Vapour pressure	Vapour pressure < 0.5 kPa at STP.
Concentration details	Covers percentage substance in the product up to 100% (unless stated differently).

#### Frequency and duration of use

Covers daily exposure up to 8hours

#### Other given operational conditions affecting workers exposure

Setting	Assumes a good basic standard of occupational hygiene is implemented.
Temperature	Assumes use at not more than 20°C above ambient temperature, unless stated differently.
Ventilation rate	≤ 3 air changes per hour

#### Risk management measures

No specific risk management measure identified beyond those operational conditions stated.

### 3. Exposure estimation (Health 1)

Assessment method	The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated
	Available hazard data do not enable the derivation of a DNEL for dermal irritant effects. Qualitative approach used to conclude safe use.

### 4. Guidance to check compliance with the exposure scenario (Health 1)

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.

## Exposure scenario Uses in Coatings - Industrial

### Identification

<b>Product name</b>	Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, aromatics < 2%
<b>EU REACH registration number</b>	01-2119463258-33-0003
<b>Version number</b>	2021
<b>Es reference</b>	ES03a

### 1. Title of exposure scenario

<b>Main title</b>	Uses in Coatings - Industrial
<b>Process scope</b>	Covers the use in coatings (paints, inks, adhesives, etc.), including exposures during use (including materials receipt, storage, preparation and transfer from bulk and semi-bulk, application by spray, roller, spreader, dip, flow, fluidised bed on production lines and film formation) and equipment cleaning, maintenance and associated laboratory activities.
<b>Environment</b>	
<b>Environmental release category</b>	ERC4 Use of non-reactive processing aid at industrial site (no inclusion into or onto article)
<b>SPERC</b>	ESVOC SPERC 4.3a.v2
<b>Worker</b>	
<b>Process category</b>	<p>PROC1 Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions</p> <p>PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions</p> <p>PROC3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition</p> <p>PROC4 Chemical production where opportunity for exposure arises</p> <p>PROC5 Mixing or blending in batch processes</p> <p>PROC7 Industrial spraying</p> <p>PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities</p> <p>PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities</p> <p>PROC9 Transfer of substance or mixture into small containers (dedicated filling line, including weighing)</p> <p>PROC10 Roller application or brushing</p> <p>PROC13 Treatment of articles by dipping and pouring.</p> <p>PROC14 Tableting, compression, extrusion, pelletisation, granulation</p> <p>PROC15 Use as laboratory reagent.</p>

### 2. Conditions of use affecting exposure (Industrial - Environment 1)

#### Amounts used

Daily amount per site: <= 18.66 tonnes  
 Annual site tonnage: <= 5600 tonnes  
 Fraction of EU tonnage used in region: 0.1

#### Frequency and duration of use

Emission days: 300 days/year



## Uses in Coatings - Industrial

### Other given operational conditions affecting environmental exposure

Emission factor - air	9.8%
Emission factor - water	0.002%
Emission factor - soil	5%

### 2. Conditions of use affecting exposure (Workers - Health 1)

#### Product characteristics

Physical state	Liquid
Vapour pressure	Vapour pressure < 0.5 kPa at STP.
Concentration details	Covers percentage substance in the product up to 100% (unless stated differently).

#### Frequency and duration of use

Covers daily exposures up to 8 hours (unless stated differently).

### Other given operational conditions affecting workers exposure

Setting	Indoor.
Temperature	Assumes use at not more than 20°C above ambient temperature, unless stated differently.
Ventilation rate	≤ 3 air changes per hour Unless otherwise stated.

#### Risk management measures

No specific risk management measure identified beyond those operational conditions stated. Unless otherwise stated.

PROC7 Industrial spraying  
5 - 10  
air changes per hour  
Wear suitable gloves tested to EN374.

### 3. Exposure estimation (Health 1)

Assessment method	The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated  Available hazard data do not enable the derivation of a DNEL for dermal irritant effects. Qualitative approach used to conclude safe use.
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### 4. Guidance to check compliance with the exposure scenario (Health 1)

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.

## Exposure scenario

### Uses in Coatings - Professional

#### Identification

<b>Product name</b>	Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, aromatics < 2%
<b>EU REACH registration number</b>	01-2119463258-33-0003
<b>Version number</b>	2021
<b>Es reference</b>	ES03b

#### 1. Title of exposure scenario

<b>Main title</b>	Uses in Coatings - Professional
<b>Process scope</b>	Covers the use in coatings (paints, inks, adhesives, etc.), including exposures during use (including materials receipt, storage, preparation and transfer from bulk and semi-bulk, application by spray, roller, brush, spreader by hand or similar methods and film formation) and equipment cleaning, maintenance and associated laboratory activities.

#### Environment

<b>Environmental release category</b>	ERC8a Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor) ERC8d Widespread use of non-reactive processing aid (no inclusion into or onto article, outdoor)
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<b>SPERC</b>	ESVOC SPERC 8.3b.v2
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#### Worker

<b>Process category</b>	PROC1 Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions PROC3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition PROC4 Chemical production where opportunity for exposure arises PROC5 Mixing or blending in batch processes PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities PROC10 Roller application or brushing PROC11 Non industrial spraying PROC13 Treatment of articles by dipping and pouring. PROC15 Use as laboratory reagent. PROC19 Manual activities involving hand contact
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#### 2. Conditions of use affecting exposure (Industrial - Environment 1)

##### Control of environmental exposure

No exposure assessment presented for the environment.

##### Amounts used

Daily amount per site: <=0.0063 tonnes  
Fraction of EU tonnage used in region: 0.1

##### Other given operational conditions affecting environmental exposure

## Uses in Coatings - Professional

<b>Emission factor - air</b>	98%
<b>Emission factor - water</b>	1%
<b>Emission factor - soil</b>	1%

### 2. Conditions of use affecting exposure (Workers - Health 1)

#### Product characteristics

<b>Physical state</b>	Liquid
<b>Vapour pressure</b>	Vapour pressure < 0.5 kPa at STP.
<b>Concentration details</b>	Covers percentage substance in the product up to 100% (unless stated differently).

#### Frequency and duration of use

Covers daily exposures up to 8 hours (unless stated differently).

#### Other given operational conditions affecting workers exposure

<b>Setting</b>	Indoor.
<b>Temperature</b>	Assumes use at not more than 20°C above ambient temperature, unless stated differently.
<b>Ventilation rate</b>	≤ 3 air changes per hour Unless otherwise stated.

#### Risk management measures

PROC10 Roller application or brushing  
3-5  
air changes per hour

PROC11 Non industrial spraying  
Duration  
4  
h/day  
5-10  
air changes per hour  
Wear suitable gloves tested to EN374.

PROC19 Manual activities involving hand contact  
3-5  
air changes per hour  
Wear suitable gloves tested to EN374.

### 3. Exposure estimation (Health 1)

<b>Assessment method</b>	The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated  Available hazard data do not enable the derivation of a DNEL for dermal irritant effects. Qualitative approach used to conclude safe use.
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### 4. Guidance to check compliance with the exposure scenario (Health 1)

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.

## Exposure scenario Uses in Coatings - Consumer

### Identification

<b>Product name</b>	Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, aromatics < 2%
<b>EU REACH registration number</b>	01-2119463258-33-0003
<b>Version number</b>	2021
<b>Es reference</b>	ES03c

### 1. Title of exposure scenario

<b>Main title</b>	Uses in Coatings - Consumer
<b>Process scope</b>	Covers the use in coatings (paints, inks, adhesives, etc.), including exposures during use (including product transfer and preparation, application by brush, spray by hand or similar methods) and equipment cleaning.
<b>Product category</b>	PC1 Adhesives, sealants. PC4 Anti-freeze and de-icing products. PC8 Biocidal products PC9a Coatings and paints, thinners, paint removers. PC9b Fillers, putties, plasters, modelling clay. PC9c Finger paints. PC15 Non-metal-surface treatment products. PC18 Ink and toners. PC23 Leather treatment products PC24 Lubricants, greases and release products. PC31 Polishes and wax blends. PC34 Textile dyes and impregnating products

### Environment

<b>Environmental release category</b>	ERC8a Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor) ERC8d Widespread use of non-reactive processing aid (no inclusion into or onto article, outdoor)
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<b>SPERC</b>	ESVOC SPERC 8.3c.v2
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### 2. Conditions of use affecting exposure (Non-industrial - Environment 1)

#### Amounts used

Daily amount per site: <=1.2 kg  
Fraction of EU tonnage used in region: 0.1

#### Other given operational conditions affecting environmental exposure

<b>Emission factor - air</b>	98.5%
<b>Emission factor - water</b>	1%
<b>Emission factor - soil</b>	0.5%

### 2. Conditions of use affecting exposure (Non-industrial - Health 1)

#### Control of Non-industrial exposure

## Uses in Coatings - Consumer

PC1 Adhesives, sealants. : PC1\_1 Glues, hobby use PC1\_2 Glues DIY-use (carpet glue, tile glue, wood parquet glue) PC1\_3 Glue from spray PC1\_4 Sealants

PC4 Anti-freeze and de-icing products. : PC4\_1 Washing car window PC4\_2 Pouring into radiator PC4\_3 Lock de-icer

PC8 Biocidal products : PC8\_1 Laundry and dish-washing products PC8\_2 Cleaners, liquids (all purpose cleaners, sanitary products, floor cleaners, glass cleaners, carpet cleaners, metal cleaners ) PC8\_3 Cleaners, trigger sprays (all purpose cleaners, sanitary products, glass cleaners)

### Product characteristics

#### Physical state

Liquid

#### Concentration details

PC1 Adhesives, sealants. , PC1\_2 Glues DIY-use (carpet glue, tile glue, wood parquet glue) , PC1\_3 Glue from spray , PC1\_4 Sealants : Covers concentrations up to 30 %.

PC4\_1 Washing car window : Covers concentrations up to 1 %.

PC4\_2 Pouring into radiator : Covers concentrations up to 10 %.

PC4\_3 Lock de-icer : Covers concentrations up to 50 %.

PC8\_1 Laundry and dish-washing products , PC8\_2 Cleaners, liquids (all purpose cleaners, sanitary products, floor cleaners, glass cleaners, carpet cleaners, metal cleaners ) : Covers concentrations up to 5 %.

PC8\_3 Cleaners, trigger sprays (all purpose cleaners, sanitary products, glass cleaners) : Covers concentrations up to 15 %.

### Amounts used

PC1\_1 Glues, hobby use

For each use event, covers use amounts up to 9 g.

PC1\_2 Glues DIY-use (carpet glue, tile glue, wood parquet glue)

For each use event, covers use amounts up to 6390 g.

PC1\_3 Glue from spray

For each use event, covers use amounts up to 80.05 g.

PC1\_4 Sealants

For each use event, covers use amounts up to 75 g.

PC4\_1 Washing car window

For each use event, covers use amounts up to 0.5 g.

PC4\_2 Pouring into radiator

For each use event, covers use amounts up to 2000 g.

PC4\_3 Lock de-icer

For each use event, covers use amounts up to 4 g.

PC8\_1 Laundry and dish-washing products

For each use event, covers use amounts up to 15 g.

PC8\_2 Cleaners, liquids (all purpose cleaners, sanitary products, floor cleaners, glass cleaners, carpet cleaners, metal cleaners )

For each use event, covers use amounts up to 27 g.

PC8\_3 Cleaners, trigger sprays (all purpose cleaners, sanitary products, glass cleaners)

For each use event, covers use amounts up to 35 g.

### Frequency and duration of use

## Uses in Coatings - Consumer

Covers use up to 1 time(s)/day.  
Covers use up to 365 days/year.  
Unless otherwise stated.

PC1\_1 Glues, hobby use

Covers exposure up to 4.00 hours per event.

PC1\_2 Glues DIY-use (carpet glue, tile glue, wood parquet glue)

Covers exposure up to 6.00 hours per event.

Covers use up to 1 day(s)/year.

PC1\_3 Glue from spray

Covers exposure up to 4.00 hours per event.

Covers use up to 6 days/year.

PC1\_4 Sealants

Covers exposure up to 1.00 hours per event.

PC4\_1 Washing car window

Covers exposure up to 0.017 hours per event.

PC4\_2 Pouring into radiator

Covers exposure up to 0.17 hours per event.

PC4\_3 Lock de-icer

Covers exposure up to 0.25 hours per event.

PC8\_1 Laundry and dish-washing products

Covers exposure up to 0.50 hours per event.

PC8\_2 Cleaners, liquids (all purpose cleaners, sanitary products, floor cleaners, glass cleaners, carpet cleaners, metal cleaners )

Covers exposure up to 0.33 hours per event.

Covers use up to 128 day(s)/year.

PC8\_3 Cleaners, trigger sprays (all purpose cleaners, sanitary products, glass cleaners)

Covers exposure up to 0.17 hours per event.

Covers use up to 128 day(s)/year.

### Human factors not influenced by risk management

#### Potentially exposed body parts

PC1\_1 Glues, hobby use , PC1\_3 Glue from spray , PC1\_4 Sealants : Fingertips Inhalation

PC1\_2 Glues DIY-use (carpet glue, tile glue, wood parquet glue) : Both hands. Inhalation

PC4\_1 Washing car window : Inhalation

PC4\_2 Pouring into radiator : Assumes that potential dermal contact is limited to inside hands/one hand/palm of hands. Inhalation

PC4\_3 Lock de-icer : Palm of one hand. Inhalation

PC8 Biocidal products : Inhalation

### Other given operational conditions affecting Non-industrial exposure

#### Setting

Indoor. Unless otherwise stated.

PC4\_3 Lock de-icer : Covers use in a one car garage (34 m<sup>3</sup>) under typical ventilation. PC4\_2 Pouring into radiator , PC4\_1 Washing car window : Outdoor.

#### Temperature

Assumes activities are at ambient temperature (unless stated differently).

#### Room size

PC4\_3 Lock de-icer : Covers use in a one car garage (34 m<sup>3</sup>) under typical ventilation. PC4\_2 Pouring into radiator , PC4\_1 Washing car window : Outdoor.

### Other given operational conditions affecting Non-industrial exposure

## Uses in Coatings - Consumer

No specific risk management measure identified beyond those operational conditions stated.

### 2. Conditions of use affecting exposure (Non-industrial - Health 2)

#### Control of Non-industrial exposure

PC9a Coatings and paints, thinners, paint removers. : PC9a\_1 Water-borne latex wall paint  
PC9a\_2 Solvent-rich, high-solid, water-borne paint PC9a\_3 Aerosol spray can. PC9a\_4  
Removers (paint-, glue-, wallpaper-, sealant-remover). PC9b Fillers, putties, plasters,  
modelling clay. : PC9b\_1 Fillers and putty PC9b\_2 Plasters and floor equalisers PC9b\_3  
Modelling clay PC9c Finger paints.

#### Product characteristics

##### Physical state

Liquid

##### Concentration details

PC9a\_1 Water-borne latex wall paint : Covers concentrations up to 1,5 %. PC9a\_2 Solvent-  
rich, high-solid, water-borne paint : Covers concentrations up to 27,5 %. PC9a\_3 Aerosol  
spray can. , PC9a\_4 Removers (paint-, glue-, wallpaper-, sealant-remover). : Covers  
concentrations up to 50 %. PC9b\_1 Fillers and putty , PC9b\_2 Plasters and floor equalisers :  
Covers concentrations up to 2 %. PC9b\_3 Modelling clay : Covers concentrations up to 1 %.  
PC9c Finger paints. : Covers concentrations up to 33 %.

#### Amounts used

PC9a\_1 Water-borne latex wall paint  
For each use event, covers use amounts up to 2 760 g.  
PC9a\_2 Solvent-rich, high-solid, water-borne paint  
For each use event, covers use amounts up to 744 g.  
PC9a\_3 Aerosol spray can.  
For each use event, covers use amounts up to 215 g.  
PC9a\_4 Removers (paint-, glue-, wallpaper-, sealant-remover).  
For each use event, covers use amounts up to 491 g.  
PC9b\_1 Fillers and putty  
For each use event, covers use amounts up to 85 g.  
PC9b\_2 Plasters and floor equalisers  
For each use event, covers use amounts up to 13 800 g.  
PC9b\_3 Modelling clay  
For each use event, covers use amounts up to 37 500 g.  
PC9c Finger paints.  
No specific recommendations.

#### Frequency and duration of use

## Uses in Coatings - Consumer

Covers use up to 1 time(s)/day.

PC9a\_1 Water-borne latex wall paint

Covers exposure up to 2,20 hours per event.

Covers use up to 4 day(s)/year.

PC9a\_2 Solvent-rich, high-solid, water-borne paint

Covers exposure up to 2,20 hours per event.

Covers use up to 6 day(s)/year.

PC9a\_3 Aerosol spray can.

Covers exposure up to 0,33 hours per event.

Covers use up to 2 day(s)/year.

PC9a\_4 Removers (paint-, glue-, wallpaper-, sealant-remover).

Covers exposure up to 2,00 hours per event.

Covers use up to 3 day(s)/year.

PC9b\_1 Fillers and putty

Covers exposure up to 4,00 hours per event.

Covers use up to 12 day(s)/year.

PC9b\_2 Plasters and floor equalisers

Covers exposure up to 2,00 hours per event.

Covers use up to 12 day(s)/year.

PC9b\_3 Modelling clay

Covers exposure up to 8 hours per event.

Covers use up to 365 day(s)/year.

PC9c Finger paints.

Covers exposure up to 8 hours per event.

Covers use up to 365 day(s)/year.

### Human factors not influenced by risk management

#### **Potentially exposed body parts**

PC9a\_1 Water-borne latex wall paint , PC9a\_2 Solvent-rich, high-solid, water-borne paint : Inhalation Assumes that potential dermal contact is limited to inside hands/one hand/palm of hands.

PC9a\_3 Aerosol spray can. : Inhalation

PC9a\_4 Removers (paint-, glue-, wallpaper-, sealant-remover). , PC9b\_2 Plasters and floor equalisers : Both hands. Inhalation

PC9b\_1 Fillers and putty : Inhalation Fingertips

PC9b\_3 Modelling clay : Both hands. For each use event, assumes swallowed amount of (cm3): 1

PC9c Finger paints. : Both hands. For each use event, assumes swallowed amount of (cm3): 1.35

PC9b\_3 Modelling clay For each use event, assumes swallowed amount of (g): 1,0. PC9c Finger paints. For each use event, assumes swallowed amount of (g): 1,35.

### Other given operational conditions affecting Non-industrial exposure

#### **Setting**

Indoor.

#### **Temperature**

Assumes activities are at ambient temperature (unless stated differently).

### Other given operational conditions affecting Non-industrial exposure

No specific risk management measure identified beyond those operational conditions stated.



## Uses in Coatings - Consumer

### 2. Conditions of use affecting exposure (Non-industrial - Health 3)

#### Control of Non-industrial exposure

PC15 Non-metal-surface treatment products. : PC15\_1 Water-borne latex wall paint PC15\_2 Solvent rich, high solid, water-borne paint PC15\_3 Aerosol spray can PC15\_4 Removers (paint-, glue-, wall paper-, sealant remover) PC18 Ink and toners. PC23 Leather treatment products : PC23\_1 Polishes, wax/cream (floor, furniture, shoes) PC23\_2 Polishes, spray (furniture, shoes)

#### Product characteristics

##### Physical state

Liquid

##### Concentration details

PC15\_1 Water-borne latex wall paint : Covers concentrations up to 1,5 %. PC15\_2 Solvent rich, high solid, water-borne paint : Covers concentrations up to 27,5 %. PC15\_3 Aerosol spray can , PC15\_4 Removers (paint-, glue-, wall paper-, sealant remover) : Covers concentrations up to 50 %. PC18 Ink and toners. : Covers concentrations up to 10 %. PC23 Leather treatment products : Covers concentrations up to 50 %.

#### Amounts used

PC15\_1 Water-borne latex wall paint  
For each use event, covers use amounts up to 2 760 g.  
PC15\_2 Solvent rich, high solid, water-borne paint  
For each use event, covers use amounts up to 744 g.  
PC15\_3 Aerosol spray can  
For each use event, covers use amounts up to 215 g.  
PC15\_4 Removers (paint-, glue-, wall paper-, sealant remover)  
For each use event, covers use amounts up to 491 g.  
PC18 Ink and toners.  
For each use event, covers use amounts up to 40 g.  
PC23 Leather treatment products  
For each use event, covers use amounts up to 56 g.

#### Frequency and duration of use

Covers use up to 1 time(s)/day.  
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PC15\_1 Water-borne latex wall paint  
Covers exposure up to 2,20 hours per event.  
Covers use up to 4 day(s)/year.  
PC15\_2 Solvent rich, high solid, water-borne paint  
Covers exposure up to 2,20 hours per event.  
Covers use up to 6 day(s)/year.  
PC15\_3 Aerosol spray can  
Covers exposure up to 0,33 hours per event.  
Covers use up to 2 day(s)/year.  
PC15\_4 Removers (paint-, glue-, wall paper-, sealant remover)  
Covers exposure up to 2,00 hours per event.  
Covers use up to 3 day(s)/year.  
PC18 Ink and toners.  
Covers exposure up to 2,20 hours per event.  
Covers use up to 365 day(s)/year.  
PC23\_1 Polishes, wax/cream (floor, furniture, shoes)  
Covers exposure up to 1,23 hours per event.  
Covers use up to 8 day(s)/year.  
PC23\_2 Polishes, spray (furniture, shoes)  
Covers exposure up to 0,33 hours per event.  
Covers use up to 8 day(s)/year.

## Uses in Coatings - Consumer

### Human factors not influenced by risk management

**Potentially exposed body parts** PC15\_1 Water-borne latex wall paint , PC15\_2 Solvent rich, high solid, water-borne paint , PC23 Leather treatment products : Assumes that potential dermal contact is limited to inside hands/one hand/palm of hands. Inhalation PC15\_3 Aerosol spray can : Inhalation PC15\_4 Removers (paint-, glue-, wall paper-, sealant remover) : Both hands. Inhalation PC18 Ink and toners. : Fingertips Inhalation

### Other given operational conditions affecting Non-industrial exposure

**Setting** Indoor. Unless otherwise stated.

**Temperature** Assumes activities are at ambient temperature (unless stated differently).

**Room size** PC15\_3 Aerosol spray can : Covers use in a one car garage (34 m<sup>3</sup>) under typical ventilation.

### Other given operational conditions affecting Non-industrial exposure

No specific risk management measure identified beyond those operational conditions stated.

## 2. Conditions of use affecting exposure (Non-industrial - Health 4)

### Control of Non-industrial exposure

PC24 Lubricants, greases and release products. : PC24\_1 Liquids PC24\_2 Pastes PC24\_3 Sprays PC31 Polishes and wax blends. : PC31\_1 Polishes, wax/cream (floor, furniture, shoes) PC31\_2 Polishes, spray (furniture, shoes) PC34 Textile dyes and impregnating products

### Product characteristics

**Physical state** Liquid

**Concentration details** PC24\_1 Liquids Covers concentrations up to 100 %. PC24\_2 Pastes Covers concentrations up to 20 %. PC24\_3 Sprays Covers concentrations up to 50 %. PC31 Polishes and wax blends. Covers concentrations up to 50 %. PC34 Textile dyes and impregnating products Covers concentrations up to 10 %.

PC31\_1 Polishes, wax/cream (floor, furniture, shoes) Avoid using at a product concentration greater than 2,4%. PC34 Textile dyes and impregnating products Avoid using at a product concentration greater than 1,1%.

### Amounts used

PC24\_1 Liquids  
For each use event, covers use amounts up to 2 200 g.

PC24\_3 Sprays  
For each use event, covers use amounts up to 73 g.

PC31\_1 Polishes, wax/cream (floor, furniture, shoes)  
For each use event, covers use amounts up to 142 g.

PC31\_2 Polishes, spray (furniture, shoes)  
For each use event, covers use amounts up to 35 g.

PC34 Textile dyes and impregnating products  
For each use event, covers use amounts up to 115 g.

### Frequency and duration of use

## Uses in Coatings - Consumer

Covers use up to 1 time(s)/day.

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PC24\_1 Liquids

Covers exposure up to 0,17 hours per event.

Covers use up to 4 day(s)/year.

PC24\_2 Pastes

Covers use up to 10 day(s)/year.

PC24\_3 Sprays

Covers exposure up to 0,17 hours per event.

Covers use up to 6 day(s)/year.

PC31\_1 Polishes, wax/cream (floor, furniture, shoes)

Covers exposure up to 1,23 hours per event.

Covers use up to 26 day(s)/year.

PC31\_2 Polishes, spray (furniture, shoes)

Covers exposure up to 0,33 hours per event.

Covers use up to 8 day(s)/year.

PC34 Textile dyes and impregnating products

Covers exposure up to 1,00 hours per event.

(frequent use over a year)

### Human factors not influenced by risk management

#### **Potentially exposed body parts**

PC24\_1 Liquids : Inhalation Assumes that potential dermal contact is limited to inside hands/one hand/palm of hands. PC24\_2 Pastes : Assumes that potential dermal contact is limited to inside hands/one hand/palm of hands. PC24\_3 Sprays : Assumes that potential dermal contact is limited to inside hands/one hand/palm of hands. Inhalation PC31 Polishes and wax blends. : Both hands. Inhalation PC34 Textile dyes and impregnating products : Both hands.

### Other given operational conditions affecting Non-industrial exposure

#### **Setting**

Indoor. Unless otherwise stated.

#### **Temperature**

Assumes activities are at ambient temperature (unless stated differently).

#### **Room size**

PC24\_1 Liquids : Covers use in a one car garage (34 m<sup>3</sup>) under typical ventilation.

### Other given operational conditions affecting Non-industrial exposure

No specific risk management measure identified beyond those operational conditions stated.

## 3. Exposure estimation (Health 1)

#### **Assessment method**

The ECETOC TRA tool has been used to estimate consumer exposures, unless otherwise indicated.

Available hazard data do not enable the derivation of a DNEL for dermal irritant effects. Qualitative approach used to conclude safe use.

## 4. Guidance to check compliance with the exposure scenario (Health 1)

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.

## Exposure scenario

### Use in Cleaning Agents - Industrial

#### Identification

Product name	Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, aromatics < 2%
EU REACH registration number	01-2119463258-33-0003
Version number	2021
Es reference	ES04a

#### 1. Title of exposure scenario

Main title	Use in Cleaning Agents - Industrial
Process scope	Covers the use as a component of cleaning products, including transfer from storage, pouring/unloading from drums or containers and exposures during mixing/diluting in the preparatory phase and cleaning activities (including spraying, brushing, dipping, wiping, automated and by hand), related equipment cleaning and maintenance.
<b>Environment</b>	
Environmental release category	ERC4 Use of non-reactive processing aid at industrial site (no inclusion into or onto article)
SPERC	ESVOC SPERC 4.4a.v3
<b>Worker</b>	
Process category	<p>PROC1 Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions</p> <p>PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions</p> <p>PROC3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition</p> <p>PROC4 Chemical production where opportunity for exposure arises</p> <p>PROC7 Industrial spraying</p> <p>PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities</p> <p>PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities</p> <p>PROC10 Roller application or brushing</p> <p>PROC13 Treatment of articles by dipping and pouring.</p>

#### 2. Conditions of use affecting exposure (Industrial - Environment 1)

##### Amounts used

Daily amount per site: <=5 tonnes  
 Annual amount per site: <=100 tonnes  
 Fraction of EU tonnage used in region: 0.1

##### Frequency and duration of use

Emission days: 20 days/year

##### Other given operational conditions affecting environmental exposure

Emission factor - air	29.4%
Emission factor - water	1E-5%

## Use in Cleaning Agents - Industrial

**Emission factor - soil** Not applicable - no direct release to soil.

### 2. Conditions of use affecting exposure (Workers - Health 1)

#### Product characteristics

**Physical state** Liquid

**Vapour pressure** Vapour pressure < 0.5 kPa at STP.

**Concentration details** Covers percentage substance in the product up to 100% (unless stated differently).

#### Frequency and duration of use

Covers daily exposure up to 8hours

#### Other given operational conditions affecting workers exposure

**Setting** Indoor.

**Temperature** Assumes use at not more than 20°C above ambient temperature, unless stated differently.

**Ventilation rate** ≤ 3 air changes per hour Unless otherwise stated.

#### Risk management measures

No specific risk management measure identified beyond those operational conditions stated. Unless otherwise stated.

PROC7 Industrial spraying

≤ 5-10

air changes per hour

Wear suitable gloves tested to EN374.

### 3. Exposure estimation (Health 1)

**Assessment method** The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated

Available hazard data do not enable the derivation of a DNEL for dermal irritant effects. Qualitative approach used to conclude safe use.

### 4. Guidance to check compliance with the exposure scenario (Health 1)

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.

## Exposure scenario

### Use in Cleaning Agents - Professional

#### Identification

Product name	Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, aromatics < 2%
EU REACH registration number	01-2119463258-33-0003
Version number	2021
Es reference	ES04b

#### 1. Title of exposure scenario

Main title	Use in Cleaning Agents - Professional
Process scope	Covers the use as a component of cleaning products, including pouring/unloading from drums or containers and exposures during mixing/diluting in the preparatory phase and cleaning activities (including spraying, brushing, dipping, wiping, automated and by hand).

#### Environment

Environmental release category	ERC8a Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor) ERC8d Widespread use of non-reactive processing aid (no inclusion into or onto article, outdoor)
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SPERC	ESVOC SPERC 8.4a.v3
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#### Worker

Process category	PROC1 Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions PROC3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition PROC4 Chemical production where opportunity for exposure arises PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities PROC10 Roller application or brushing PROC11 Non industrial spraying PROC13 Treatment of articles by dipping and pouring.
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#### 2. Conditions of use affecting exposure (Industrial - Environment 1)

##### Amounts used

Daily amount per site: <= 2.7E-4 tonnes  
Fraction of EU tonnage used in region: 0.1

##### Other given operational conditions affecting environmental exposure

Emission factor - air	4%
Emission factor - water	0.0004%
Emission factor - soil	2E-5%

#### 2. Conditions of use affecting exposure (Workers - Health 1)

## Use in Cleaning Agents - Professional

### Product characteristics

<b>Physical state</b>	Liquid
<b>Vapour pressure</b>	Vapour pressure < 0.5 kPa at STP.
<b>Concentration details</b>	Covers percentage substance in the product up to 100% (unless stated differently).

### Frequency and duration of use

Covers daily exposures up to 8 hours (unless stated differently).

### Other given operational conditions affecting workers exposure

<b>Setting</b>	Assumes a good basic standard of occupational hygiene is implemented.
<b>Temperature</b>	Assumes use at not more than 20°C above ambient temperature, unless stated differently.
<b>Ventilation rate</b>	≤ 3 air changes per hour Unless otherwise stated.

### Risk management measures

PROC10 Roller application or brushing  
3-5  
air changes per hour

PROC11 Non industrial spraying  
Duration  
≤4  
h/day  
5-10  
air changes per hour  
Wear suitable gloves tested to EN374.

## 3. Exposure estimation (Health 1)

<b>Assessment method</b>	The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated  Available hazard data do not enable the derivation of a DNEL for dermal irritant effects. Qualitative approach used to conclude safe use.
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## 4. Guidance to check compliance with the exposure scenario (Health 1)

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.

## Exposure scenario

### Use in Cleaning Agents - Consumer

#### Identification

Product name	Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, aromatics < 2%
EU REACH registration number	01-2119463258-33-0003
Version number	2021
Es reference	ES04c

#### 1. Title of exposure scenario

Main title	Use in Cleaning Agents - Consumer
Process scope	Covers general exposures to consumers arising from the use of household products sold as washing and cleaning products, aerosols, coatings, de-icers, lubricants and air care products.
Product category	PC3 Air care products. PC4 Anti-freeze and de-icing products. PC8 Biocidal products PC9a Coatings and paints, thinners, paint removers. PC9b Fillers, putties, plasters, modelling clay. PC9c Finger paints. PC24 Lubricants, greases and release products. PC35 Washing and cleaning products PC38 Welding and soldering products, flux products

#### Environment

Environmental release category	ERC8a Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor) ERC8d Widespread use of non-reactive processing aid (no inclusion into or onto article, outdoor)
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SPERC	ESVOC SPERC 8.4c.v2
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#### 2. Conditions of use affecting exposure (Non-industrial - Environment 1)

##### Amounts used

Daily amount per site:  $\leq 7.2E-5$  tonnes  
Fraction of EU tonnage used in region: 0.1

##### Other given operational conditions affecting environmental exposure

Emission factor - air	95%
Emission factor - water	2.5%
Emission factor - soil	2.5%

#### 2. Conditions of use affecting exposure (Non-industrial - Health 1)

##### Control of Non-industrial exposure

PC3 Air care products. : PC3\_1 Air care, instant action (aerosol sprays) PC3\_2 Air care, continuous action (solid and liquid)

##### Product characteristics

Physical state	Liquid
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## Use in Cleaning Agents - Consumer

**Concentration details** PC3\_1 Air care, instant action (aerosol sprays) : Covers concentrations up to 50 %. PC3\_2 Air care, continuous action (solid and liquid) : Covers concentrations up to 10 %.

### Amounts used

PC3\_1 Air care, instant action (aerosol sprays)  
For each use event, covers use amounts up to 0.1 g.  
PC3\_2 Air care, continuous action (solid and liquid)  
For each use event, covers use amounts up to 0.48 g.

### Frequency and duration of use

PC3\_1 Air care, instant action (aerosol sprays)  
Covers use up to 4 time(s)/day.  
Covers exposure up to 0.25 hours per event.  
PC3\_2 Air care, continuous action (solid and liquid)  
Covers use up to 1 time(s)/day.  
Covers exposure up to 8.00 hours per event.

### Human factors not influenced by risk management

**Potentially exposed body parts** PC3\_1 Air care, instant action (aerosol sprays) : Inhalation PC3\_2 Air care, continuous action (solid and liquid) : Fingertips Inhalation

### Other given operational conditions affecting Non-industrial exposure

**Setting** Indoor.

**Temperature** Assumes activities are at ambient temperature (unless stated differently).

### Other given operational conditions affecting Non-industrial exposure

No specific risk management measure identified beyond those operational conditions stated.

## 2. Conditions of use affecting exposure (Non-industrial - Health 2)

### Control of Non-industrial exposure

PC4 Anti-freeze and de-icing products. : PC4\_1 Washing car window PC4\_2 Pouring into radiator PC4\_3 Lock de-icer PC8 Biocidal products : PC8\_1 Laundry and dish-washing products PC8\_2 Cleaners, liquids (all purpose cleaners, sanitary products, floor cleaners, glass cleaners, carpet cleaners, metal cleaners ) PC8\_3 Cleaners, trigger sprays (all purpose cleaners, sanitary products, glass cleaners)

### Product characteristics

**Physical state** Liquid

**Concentration details** PC4\_1 Washing car window Covers concentrations up to 1 %. PC4\_2 Pouring into radiator Covers concentrations up to 10 %. PC4\_3 Lock de-icer Covers concentrations up to 50 %. PC8\_1 Laundry and dish-washing products , PC8\_2 Cleaners, liquids (all purpose cleaners, sanitary products, floor cleaners, glass cleaners, carpet cleaners, metal cleaners ) Covers concentrations up to 5 %. PC8\_3 Cleaners, trigger sprays (all purpose cleaners, sanitary products, glass cleaners) Covers concentrations up to 15 %.

### Amounts used

## Use in Cleaning Agents - Consumer

PC4\_1 Washing car window

For each use event, covers use amounts up to 0,5 g.

PC4\_2 Pouring into radiator

For each use event, covers use amounts up to 2000 g.

PC4\_3 Lock de-icer

For each use event, covers use amounts up to 4 g.

PC8\_1 Laundry and dish-washing products

For each use event, covers use amounts up to 15 g.

PC8\_2 Cleaners, liquids (all purpose cleaners, sanitary products, floor cleaners, glass cleaners, carpet cleaners, metal cleaners )

For each use event, covers use amounts up to 27 g.

PC8\_3 Cleaners, trigger sprays (all purpose cleaners, sanitary products, glass cleaners)

For each use event, covers use amounts up to 35 g.

### Frequency and duration of use

Covers use up to 1 time(s)/day.

Covers use up to 365 days/year.

Unless otherwise stated.

PC4\_1 Washing car window

Covers exposure up to 0.017 hours per event.

PC4\_2 Pouring into radiator

Covers exposure up to 0,17 hours per event.

PC4\_3 Lock de-icer

Covers exposure up to 0,25 hours per event.

PC8\_1 Laundry and dish-washing products

Covers exposure up to 0,50 hours per event.

PC8\_2 Cleaners, liquids (all purpose cleaners, sanitary products, floor cleaners, glass cleaners, carpet cleaners, metal cleaners )

Covers exposure up to 2.2 hours per event.

Covers use up to 128 day(s)/year.

PC8\_3 Cleaners, trigger sprays (all purpose cleaners, sanitary products, glass cleaners)

Covers exposure up to 0,17 hours per event.

Covers use up to 128 day(s)/year.

### Human factors not influenced by risk management

#### **Potentially exposed body parts**

PC4\_1 Washing car window , PC8\_1 Laundry and dish-washing products , PC8\_2 Cleaners, liquids (all purpose cleaners, sanitary products, floor cleaners, glass cleaners, carpet cleaners, metal cleaners ) , PC8\_3 Cleaners, trigger sprays (all purpose cleaners, sanitary products, glass cleaners) : Inhalation PC4\_2 Pouring into radiator : Assumes that potential dermal contact is limited to inside hands/one hand/palm of hands. Inhalation PC4\_3 Lock de-icer : Palm of one hand. Inhalation :

### Other given operational conditions affecting Non-industrial exposure

#### **Setting**

Indoor. Unless otherwise stated.

PC4 Anti-freeze and de-icing products. , PC4\_2 Pouring into radiator , PC4\_3 Lock de-icer : Covers use in a one car garage (34 m<sup>3</sup>) under typical ventilation.

#### **Temperature**

Assumes activities are at ambient temperature (unless stated differently).

### Other given operational conditions affecting Non-industrial exposure

No specific risk management measure identified beyond those operational conditions stated.

## 2. Conditions of use affecting exposure (Non-industrial - Health 3)

## Use in Cleaning Agents - Consumer

### Control of Non-industrial exposure

PC9a Coatings and paints, thinners, paint removers. : PC9a\_1 Water-borne latex wall paint  
 PC9a\_2 Solvent-rich, high-solid, water-borne paint PC9a\_3 Aerosol spray can. PC9a\_4  
 Removers (paint-, glue-, wallpaper-, sealant-remover). PC9b Fillers, putties, plasters,  
 modelling clay. : PC9b\_1 Fillers and putty PC9b\_2 Plasters and floor equalisers PC9b\_3  
 Modelling clay PC9c Finger paints.

### Product characteristics

#### Physical state

Liquid

#### Concentration details

PC9a\_1 Water-borne latex wall paint : Covers concentrations up to 1,5 %. PC9a\_2 Solvent-  
 rich, high-solid, water-borne paint : Covers concentrations up to 27,5 %. PC9a\_3 Aerosol  
 spray can. , PC9a\_4 Removers (paint-, glue-, wallpaper-, sealant-remover). : Covers  
 concentrations up to 50 %. PC9b\_1 Fillers and putty , PC9b\_2 Plasters and floor equalisers :  
 Covers concentrations up to 2 %. PC9b\_3 Modelling clay : Covers concentrations up to 1 %.  
 PC9c Finger paints. : Covers concentrations up to 33 %.

### Amounts used

PC9a\_1 Water-borne latex wall paint  
 For each use event, covers use amounts up to 2760 g.  
 PC9a\_2 Solvent-rich, high-solid, water-borne paint  
 For each use event, covers use amounts up to 744 g.  
 PC9a\_3 Aerosol spray can.  
 For each use event, covers use amounts up to 215 g.  
 PC9a\_4 Removers (paint-, glue-, wallpaper-, sealant-remover).  
 For each use event, covers use amounts up to 491 g.  
 PC9b\_1 Fillers and putty  
 For each use event, covers use amounts up to 85 g.  
 PC9b\_2 Plasters and floor equalisers  
 For each use event, covers use amounts up to 13800 g.

### Frequency and duration of use

## Use in Cleaning Agents - Consumer

Covers use up to 1 time(s)/day.

PC9a\_1 Water-borne latex wall paint

Covers exposure up to 2,20 hours per event.

Covers use up to 4 day(s)/year.

PC9a\_2 Solvent-rich, high-solid, water-borne paint

Covers exposure up to 2,20 hours per event.

Covers use up to 6 day(s)/year.

PC9a\_3 Aerosol spray can.

Covers exposure up to 0,33 hours per event.

Covers use up to 2 day(s)/year.

PC9a\_4 Removers (paint-, glue-, wallpaper-, sealant-remover).

Covers exposure up to 2,00 hours per event.

Covers use up to 3 day(s)/year.

PC9b\_1 Fillers and putty

Covers exposure up to 4,00 hours per event.

Covers use up to 12 day(s)/year.

PC9b\_2 Plasters and floor equalisers

Covers exposure up to 2,00 hours per event.

Covers use up to 12 day(s)/year.

PC9b\_3 Modelling clay

Covers exposure up to 8 hours per event.

Covers use up to 365 day(s)/year.

PC9c Finger paints.

Covers exposure up to 8 hours per event.

Covers use up to 365 day(s)/year.

### Human factors not influenced by risk management

#### **Potentially exposed body parts**

PC9a\_1 Water-borne latex wall paint , PC9a\_2 Solvent-rich, high-solid, water-borne paint : Assumes that potential dermal contact is limited to inside hands/one hand/palm of hands. Inhalation PC9a\_3 Aerosol spray can : Inhalation PC9a\_4 Removers (paint-, glue-, wallpaper-, sealant-remover) . : Both hands. Inhalation PC9b\_1 Fillers and putty : Fingertips Inhalation PC9b\_2 Plasters and floor equalisers : Both hands. Inhalation PC9b\_3 Modelling clay , PC9c Finger paints. : Both hands.

PC9b\_3 Modelling clay For each use event, assumes swallowed amount of (cm3): 1. PC9c Finger paints. For each use event, assumes swallowed amount of (cm3): 1,35.

### Other given operational conditions affecting Non-industrial exposure

#### **Setting**

Indoor.

#### **Temperature**

Assumes activities are at ambient temperature (unless stated differently).

### Other given operational conditions affecting Non-industrial exposure

No specific risk management measure identified beyond those operational conditions stated.

## 2. Conditions of use affecting exposure (Non-industrial - Health 4)

### Control of Non-industrial exposure

PC24 Lubricants, greases and release products. : PC24\_1 Liquids PC24\_2 Pastes PC24\_3 Sprays PC35 Washing and cleaning products : PC35\_1 Laundry and dish washing products PC35\_2 Cleaners, liquids (all purpose cleaners, sanitary products, floor cleaners, carpet cleaners, metal cleaners) PC35\_3 Cleaners, trigger sprays (all purpose cleaners, sanitary products, glass cleaners) PC38 Welding and soldering products, flux products

### Product characteristics

## Use in Cleaning Agents - Consumer

### Physical state

Liquid

### Concentration details

PC24\_1 Liquids Covers concentrations up to 100 %. PC24\_2 Pastes Covers concentrations up to 20 %. PC24\_3 Sprays Covers concentrations up to 50 %. PC35\_1 Laundry and dish washing products , PC35\_2 Cleaners, liquids (all purpose cleaners, sanitary products, floor cleaners, carpet cleaners, metal cleaners) Covers concentrations up to 5 %. PC35\_3 Cleaners, trigger sprays (all purpose cleaners, sanitary products, glass cleaners) Covers concentrations up to 15 %. PC38 Welding and soldering products, flux products Covers concentrations up to 20 %.

PC35\_1 Laundry and dish washing products Avoid using at a product concentration greater than 3,5%. PC35\_3 Cleaners, trigger sprays (all purpose cleaners, sanitary products, glass cleaners) Avoid using at a product concentration greater than 11%. PC38 Welding and soldering products, flux products Avoid using at a product concentration greater than 5%.

### Amounts used

PC24\_1 Liquids

For each use event, covers use amounts up to 2200 g.

PC24\_3 Sprays

For each use event, covers use amounts up to 73 g.

PC35\_1 Laundry and dish washing products

For each use event, covers use amounts up to 15 g.

PC35\_2 Cleaners, liquids (all purpose cleaners, sanitary products, floor cleaners, carpet cleaners, metal cleaners)

For each use event, covers use amounts up to 27 g.

PC35\_3 Cleaners, trigger sprays (all purpose cleaners, sanitary products, glass cleaners)

For each use event, covers use amounts up to 35 g.

PC38 Welding and soldering products, flux products

For each use event, covers use amounts up to 12 g.

### Frequency and duration of use

Covers use up to 1 time(s)/day.

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PC24\_1 Liquids

Covers exposure up to 0,17 hours per event.

Covers use up to 4 day(s)/year.

PC24\_2 Pastes

Covers use up to 10 day(s)/year.

PC24\_3 Sprays

Covers exposure up to 0,17 hours per event.

Covers use up to 6 day(s)/year.

PC35\_1 Laundry and dish washing products

Covers exposure up to 0,50 hours per event.

Covers use up to 365 day(s)/year.

PC35\_2 Cleaners, liquids (all purpose cleaners, sanitary products, floor cleaners, carpet cleaners, metal cleaners)

Covers exposure up to 0,33 hours per event.

Covers use up to 128 day(s)/year.

PC35\_3 Cleaners, trigger sprays (all purpose cleaners, sanitary products, glass cleaners)

Covers exposure up to 0,17 hours per event.

Covers use up to 128 day(s)/year.

PC38 Welding and soldering products, flux products

Covers exposure up to 1,00 hours per event.

Covers use up to 365 day(s)/year.

### Human factors not influenced by risk management

## Use in Cleaning Agents - Consumer

**Potentially exposed body parts**

PC24\_1 Liquids : Assumes that potential dermal contact is limited to inside hands/one hand/palm of hands. Inhalation PC24\_2 Pastes : Both hands. PC24\_3 Sprays : Assumes that potential dermal contact is limited to inside hands/one hand/palm of hands. Inhalation PC35\_1 Laundry and dish washing products PC35\_2 Cleaners, liquids (all purpose cleaners, sanitary products, floor cleaners, carpet cleaners, metal cleaners) , : Both hands. Inhalation PC35\_3 Cleaners, trigger sprays (all purpose cleaners, sanitary products, glass cleaners) : Assumes that potential dermal contact is limited to inside hands/one hand/palm of hands. Inhalation PC38 Welding and soldering products, flux products : Inhalation

### Other given operational conditions affecting Non-industrial exposure

**Setting** Indoor. Unless otherwise stated.

**Temperature** Assumes activities are at ambient temperature (unless stated differently).

**Room size** PC24\_1 Liquids : Covers use in a one car garage (34 m<sup>3</sup>) under typical ventilation.

### Other given operational conditions affecting Non-industrial exposure

No specific risk management measure identified beyond those operational conditions stated.

## 3. Exposure estimation (Health 1)

**Assessment method** The ECETOC TRA tool has been used to estimate consumer exposures, unless otherwise indicated.

Available hazard data do not enable the derivation of a DNEL for dermal irritant effects. Qualitative approach used to conclude safe use.

## 4. Guidance to check compliance with the exposure scenario (Health 1)

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.

## Exposure scenario Lubricants - Industrial

### Identification

<b>Product name</b>	Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, aromatics < 2%
<b>EU REACH registration number</b>	01-2119463258-33-0003
<b>Version number</b>	2021
<b>Es reference</b>	ES06a

### 1. Title of exposure scenario

<b>Main title</b>	Lubricants - Industrial
<b>Process scope</b>	Covers the use of formulated lubricants in closed and open systems, including transfer operations, operation of machinery/engines and similar articles, reworking on reject articles, equipment maintenance and disposal of wastes.
<b>Environment</b>	
<b>Environmental release category</b>	ERC4 Use of non-reactive processing aid at industrial site (no inclusion into or onto article) ERC7 Use of functional fluid at industrial site
<b>SPERC</b>	ESVOC SPERC 4.6a.v2
<b>Worker</b>	
<b>Process category</b>	PROC1 Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions PROC3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition PROC4 Chemical production where opportunity for exposure arises PROC7 Industrial spraying PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities PROC9 Transfer of substance or mixture into small containers (dedicated filling line, including weighing) PROC10 Roller application or brushing PROC13 Treatment of articles by dipping and pouring. PROC17 Lubrication at high energy conditions in metal working operations PROC18 General greasing/lubrication at high kinetic energy conditions

### 2. Conditions of use affecting exposure (Industrial - Environment 1)

#### Control of environmental exposure

<b>Environmental release category</b>	ERC4 Use of non-reactive processing aid at industrial site (no inclusion into or onto article)
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#### Amounts used

Daily amount per site: <= 0.11 tonnes  
Annual amount per site: <= 2.2 tonnes  
Fraction of EU tonnage used in region: 0.1

#### Frequency and duration of use

## Lubricants - Industrial

Emission days: 20 days/year

### Other given operational conditions affecting environmental exposure

Emission factor - air 0.15%

Emission factor - water 0.0001%

Emission factor - soil 0.1%

## 2. Conditions of use affecting exposure (Industrial - Environment 2)

### Control of environmental exposure

Environmental release category ERC7 Use of functional fluid at industrial site

### Amounts used

Daily amount per site: <= 0.11 tonnes  
Annual site tonnage: <= 2.2 tonnes  
Fraction of EU tonnage used in region: 10%

### Frequency and duration of use

Emission days: 20 days/year

### Other given operational conditions affecting environmental exposure

Emission factor - air 0.15%

Emission factor - water 0.0001%

Emission factor - soil Not applicable - no direct release to soil.

### Environmental factors not influenced by risk management measures

Dilution Receiving surface water flow: >= 18400 m<sup>3</sup>/day

### Risk management measures

STP type Aerobic biological treatment

STP details Assumed domestic sewage treatment plant flow (m<sup>3</sup>/day):  
>= 2000

## 2. Conditions of use affecting exposure (Workers - Health 1)

### Product characteristics

Physical state Liquid

Vapour pressure Vapour pressure < 0.5 kPa at STP.

Concentration details Covers percentage substance in the product up to 100% (unless stated differently).

### Frequency and duration of use

Covers daily exposure up to 8hours

### Other given operational conditions affecting workers exposure

Setting Indoor.

Temperature Assumes use at not more than 20°C above ambient temperature, unless stated differently.

Ventilation rate ≤ 3 air changes per hour Unless otherwise stated.

### Risk management measures



## Lubricants - Industrial

No specific risk management measure identified beyond those operational conditions stated. Unless otherwise stated.

PROC7 Industrial spraying  
5-10  
air changes per hour  
Wear suitable gloves tested to EN374.

### 3. Exposure estimation (Health 1)

#### Assessment method

The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated

Available hazard data do not enable the derivation of a DNEL for dermal irritant effects. Qualitative approach used to conclude safe use.

### 4. Guidance to check compliance with the exposure scenario (Health 1)

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.

## Exposure scenario Lubricants - Professional

### Identification

<b>Product name</b>	Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, aromatics < 2%
<b>EU REACH registration number</b>	01-2119463258-33-0003
<b>Version number</b>	2021
<b>Es reference</b>	ES06b

### 1. Title of exposure scenario

<b>Main title</b>	Lubricants - Professional
<b>Process scope</b>	Covers the use of formulated lubricants within closed or contained systems, including incidental exposures during material transfers, operation of engines and similar articles, equipment maintenance and disposal of waste oil.

#### Environment

<b>Environmental release category</b>	ERC8a Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor) ERC8d Widespread use of non-reactive processing aid (no inclusion into or onto article, outdoor) ERC9a Widespread use of functional fluid (indoor) ERC9b Widespread use of functional fluid (outdoor)
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<b>SPERC</b>	ESVOC SPERC 8.6c.v2
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#### Worker

<b>Process category</b>	PROC1 Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions PROC3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition PROC4 Chemical production where opportunity for exposure arises PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities PROC9 Transfer of substance or mixture into small containers (dedicated filling line, including weighing) PROC10 Roller application or brushing PROC11 Non industrial spraying PROC13 Treatment of articles by dipping and pouring. PROC17 Lubrication at high energy conditions in metal working operations PROC18 General greasing/lubrication at high kinetic energy conditions PROC20 Use of functional fluids in small devices
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### 2. Conditions of use affecting exposure (Industrial - Environment 1)

#### Amounts used

Daily amount per site: <= 3.01E6 tonnes  
Fraction of EU tonnage used in region: 0.1

#### Other given operational conditions affecting environmental exposure

## Lubricants - Professional

<b>Emission factor - air</b>	15%
<b>Emission factor - water</b>	5%
<b>Emission factor - soil</b>	5%

### 2. Conditions of use affecting exposure (Workers - Health 1)

#### Product characteristics

<b>Physical state</b>	Liquid
<b>Vapour pressure</b>	Vapour pressure < 0.5 kPa at STP.
<b>Concentration details</b>	Covers percentage substance in the product up to 100% (unless stated differently).

#### Frequency and duration of use

Covers daily exposures up to 8 hours (unless stated differently).

#### Other given operational conditions affecting workers exposure

<b>Setting</b>	Indoor.
<b>Temperature</b>	Assumes use at not more than 20°C above ambient temperature, unless stated differently.
<b>Ventilation rate</b>	≤ 3 air changes per hour Unless otherwise stated.

#### Risk management measures

No specific risk management measure identified beyond those operational conditions stated.

PROC11 Non industrial spraying  
Covers daily exposure up to 4hours  
5-10  
air changes per hour  
Wear suitable gloves tested to EN374.

PROC17 Lubrication at high energy conditions in metal working operations  
PROC18 General greasing/lubrication at high kinetic energy conditions  
5-10  
air changes per hour

### 3. Exposure estimation (Health 1)

<b>Assessment method</b>	The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated  Available hazard data do not enable the derivation of a DNEL for dermal irritant effects. Qualitative approach used to conclude safe use.
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### 4. Guidance to check compliance with the exposure scenario (Health 1)

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.

## Exposure scenario Lubricants - Consumer

### Identification

Product name	Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, aromatics < 2%
EU REACH registration number	01-2119463258-33-0003
Version number	2021
Es reference	ES06c

### 1. Title of exposure scenario

Main title	Lubricants - Consumer
Process scope	Covers the consumer use of formulated lubricants in closed and open systems, including transfer operations, application, operation of engines and similar articles, equipment maintenance and disposal of waste oil.
Product category	PC1 Adhesives, sealants. PC24 Lubricants, greases and release products. PC31 Polishes and wax blends.

#### Environment

Environmental release category	ERC8a Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor) ERC8d Widespread use of non-reactive processing aid (no inclusion into or onto article, outdoor) ERC9a Widespread use of functional fluid (indoor) ERC9b Widespread use of functional fluid (outdoor)
SPERC	ESVOC SPERC 8.6e.v2

### 2. Conditions of use affecting exposure (Non-industrial - Environment 1)

#### Control of environmental exposure (Non-industrial)

Environmental release category	ERC8a Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor) ERC8d Widespread use of non-reactive processing aid (no inclusion into or onto article, outdoor)
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#### Amounts used

Daily amount per site:  $\leq 2.7E-6$  tonnes  
Fraction of EU tonnage used in region: 0.1

#### Other given operational conditions affecting environmental exposure

Emission factor - air	15%
Emission factor - water	5%
Emission factor - soil	5%

### 2. Conditions of use affecting exposure (Non-industrial - Environment 2)

#### Control of environmental exposure (Non-industrial)

Environmental release category	ERC9a Widespread use of functional fluid (indoor) ERC9b Widespread use of functional fluid (outdoor)
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## Lubricants - Consumer

### Amounts used

Daily amount for wide dispersive uses:  $\leq 2.7E-6$  tonnes  
 Fraction of EU tonnage used in region: 10%

### Other given operational conditions affecting environmental exposure

Emission factor - air 15%  
 Emission factor - water 5%  
 Emission factor - soil 5%

## 2. Conditions of use affecting exposure (Non-industrial - Health 1)

### Control of Non-industrial exposure

PC1 Adhesives, sealants. : PC1\_1 Glues, hobby use PC1\_2 Glues DIY-use (carpet glue, tile glue, wood parquet glue) PC1\_3 Glue from spray PC1\_4 Sealants

### Product characteristics

Physical state Liquid

Concentration details Covers concentrations up to 30 %.

### Amounts used

PC1\_1 Glues, hobby use  
 For each use event, covers use amounts up to 9 g.  
 For each use event, avoid using a product amount of greater than 5 g.  
 PC1\_2 Glues DIY-use (carpet glue, tile glue, wood parquet glue)  
 For each use event, covers use amounts up to 6390 g.  
 PC1\_3 Glue from spray  
 For each use event, covers use amounts up to 85.05 g.  
 PC1\_4 Sealants  
 For each use event, covers use amounts up to 75 g.

### Frequency and duration of use

Covers use up to 1 time(s)/day.  
 .  
 PC1\_1 Glues, hobby use  
 Covers exposure up to 4.00 hours per event.  
 Covers use up to 365 days/year.  
 PC1\_2 Glues DIY-use (carpet glue, tile glue, wood parquet glue)  
 Covers exposure up to 6.00 hours per event.  
 Covers use up to 1 day(s)/year.  
 PC1\_3 Glue from spray  
 Covers exposure up to 4.00 hours per event.  
 Covers use up to 6 days/year.  
 PC1\_4 Sealants  
 Covers exposure up to 1.00 hours per event.  
 Covers use up to 365 days/year.

### Human factors not influenced by risk management

Potentially exposed body parts PC1\_1 Glues, hobby use , PC1\_3 Glue from spray , PC1\_4 Sealants : Fingertips Inhalation .  
 PC1\_2 Glues DIY-use (carpet glue, tile glue, wood parquet glue) : Both hands. Inhalation

### Other given operational conditions affecting Non-industrial exposure

Setting Indoor.

Temperature Assumes activities are at ambient temperature (unless stated differently).

## Lubricants - Consumer

### Other given operational conditions affecting Non-industrial exposure

No specific risk management measure identified beyond those operational conditions stated.

### 2. Conditions of use affecting exposure (Non-industrial - Health 2)

#### Control of Non-industrial exposure

PC24 Lubricants, greases and release products. : PC24\_1 Liquids PC24\_2 Pastes PC24\_3 Sprays

#### Product characteristics

**Physical state** Liquid

**Concentration details** PC24\_1 Liquids Covers concentrations up to 100 %. PC24\_2 Pastes Covers concentrations up to 20 %. PC24\_3 Sprays Covers concentrations up to 50 %.

#### Amounts used

PC24\_1 Liquids  
For each use event, covers use amounts up to 2200 g.  
PC24\_2 Pastes  
For each use event, covers use amounts up to 34 g.  
PC24\_3 Sprays  
For each use event, covers use amounts up to 73 g.

#### Frequency and duration of use

Covers use up to 1 time(s)/day.  
.  
PC24\_1 Liquids  
Covers exposure up to 0,17 hours per event.  
Covers use up to 4 days/year.  
PC24\_2 Pastes  
Covers use up to 10 days/year.  
PC24\_3 Sprays  
Covers exposure up to 0,17 hours per event.  
Covers use up to 6 days/year.

#### Human factors not influenced by risk management

**Potentially exposed body parts** PC24\_1 Liquids , PC24\_3 Sprays : Assumes that potential dermal contact is limited to inside hands/one hand/palm of hands. Inhalation PC24\_2 Pastes : Assumes that potential dermal contact is limited to inside hands/one hand/palm of hands.

### Other given operational conditions affecting Non-industrial exposure

**Setting** Indoor. Unless otherwise stated.

**Temperature** Assumes activities are at ambient temperature (unless stated differently).

**Room size** PC24\_1 Liquids : Covers use in a one car garage (34 m<sup>3</sup>) under typical ventilation.

### Other given operational conditions affecting Non-industrial exposure

No specific risk management measure identified beyond those operational conditions stated.

### 2. Conditions of use affecting exposure (Non-industrial - Health 3)

#### Control of Non-industrial exposure

PC31 Polishes and wax blends. : PC31\_1 Polishes, wax/cream (floor, furniture, shoes)  
PC31\_2 Polishes, spray (furniture, shoes)

#### Product characteristics

## Lubricants - Consumer

<b>Physical state</b>	Liquid
<b>Concentration details</b>	Covers concentrations up to 50 %.
<b><u>Amounts used</u></b>	<p>PC31_1 Polishes, wax/cream (floor, furniture, shoes) For each use event, covers use amounts up to 142 g.</p> <p>PC31_2 Polishes, spray (furniture, shoes) For each use event, covers use amounts up to 35 g.</p>

### Frequency and duration of use

Covers use up to 1 time(s)/day.

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PC31\_1 Polishes, wax/cream (floor, furniture, shoes)  
Covers exposure up to 1,23 hours per event.  
Covers use up to 26 days/year.

PC31\_2 Polishes, spray (furniture, shoes)  
Covers exposure up to 0,33 hours per event.  
Covers use up to 8 days/year.

### Human factors not influenced by risk management

**Potentially exposed body parts** Both hands. Inhalation

### Other given operational conditions affecting Non-industrial exposure

**Setting** Indoor.

**Temperature** Assumes activities are at ambient temperature (unless stated differently).

### Other given operational conditions affecting Non-industrial exposure

No specific risk management measure identified beyond those operational conditions stated.

## 3. Exposure estimation (Health 1)

**Assessment method** The ECETOC TRA tool has been used to estimate consumer exposures, unless otherwise indicated.

Available hazard data do not enable the derivation of a DNEL for dermal irritant effects.  
Qualitative approach used to conclude safe use.

## 4. Guidance to check compliance with the exposure scenario (Health 1)

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.

## Exposure scenario

### Use in Metal Working Fluids/Rolling Oils - Industrial

#### Identification

<b>Product name</b>	Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, aromatics < 2%
<b>EU REACH registration number</b>	01-2119463258-33-0003
<b>Version number</b>	2021
<b>Es reference</b>	ES07a

#### 1. Title of exposure scenario

<b>Main title</b>	Use in Metal Working Fluids/Rolling Oils - Industrial
<b>Process scope</b>	Covers the use in formulated MWFs/rolling oils, including transfer operations, rolling and annealing activities, cutting/machining activities, automated and manual application of corrosion protections (including brushing, dipping and spraying), equipment maintenance, draining and disposal of waste oils.
<b>Environment</b>	
<b>Environmental release category</b>	ERC4 Use of non-reactive processing aid at industrial site (no inclusion into or onto article)
<b>SPERC</b>	ESVOC SPERC 4.7a.v3
<b>Worker</b>	
<b>Process category</b>	<p>PROC1 Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions</p> <p>PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions</p> <p>PROC3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition</p> <p>PROC4 Chemical production where opportunity for exposure arises</p> <p>PROC5 Mixing or blending in batch processes</p> <p>PROC7 Industrial spraying</p> <p>PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities</p> <p>PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities</p> <p>PROC9 Transfer of substance or mixture into small containers (dedicated filling line, including weighing)</p> <p>PROC10 Roller application or brushing</p> <p>PROC13 Treatment of articles by dipping and pouring.</p> <p>PROC17 Lubrication at high energy conditions in metal working operations</p>

#### 2. Conditions of use affecting exposure (Industrial - Environment 1)

##### Amounts used

Daily amount per site: <= 11.85 tonnes  
 Annual site tonnage: <=237 tonnes  
 Fraction of EU tonnage used in region: 0.1

##### Frequency and duration of use

Emission days: 20 days/year

##### Other given operational conditions affecting environmental exposure



## Use in Metal Working Fluids/Rolling Oils - Industrial

<b>Emission factor - air</b>	1.5%
<b>Emission factor - water</b>	0.0001%
<b>Emission factor - soil</b>	Not applicable - no direct release to soil.

### 2. Conditions of use affecting exposure (Workers - Health 1)

#### Product characteristics

<b>Physical state</b>	Liquid
<b>Vapour pressure</b>	Vapour pressure < 0.5 kPa at STP.
<b>Concentration details</b>	Covers percentage substance in the product up to 100% (unless stated differently).

#### Frequency and duration of use

Covers daily exposure up to 8hours

#### Other given operational conditions affecting workers exposure

<b>Setting</b>	Indoor.
<b>Temperature</b>	Assumes use at not more than 20°C above ambient temperature, unless stated differently.
<b>Ventilation rate</b>	≤ 3 air changes per hour Unless otherwise stated.

#### Risk management measures

No specific risk management measure identified beyond those operational conditions stated. Unless otherwise stated.

PROC7 Industrial spraying  
5-10  
air changes per hour  
Wear suitable gloves tested to EN374.

### 3. Exposure estimation (Health 1)

<b>Assessment method</b>	The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated
	Available hazard data do not enable the derivation of a DNEL for dermal irritant effects. Qualitative approach used to conclude safe use.

### 4. Guidance to check compliance with the exposure scenario (Health 1)

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.

## Exposure scenario

### Use in Metal Working Fluids/Rolling Oils - Professional

#### Identification

<b>Product name</b>	Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, aromatics < 2%
<b>EU REACH registration number</b>	01-2119463258-33-0003
<b>Version number</b>	2017
<b>Es reference</b>	ES07b

#### 1. Title of exposure scenario

<b>Main title</b>	Use in Metal Working Fluids/Rolling Oils - Professional
<b>Process scope</b>	Covers the use in formulated MWFs, including transfer operations, open and contained cutting/machining activities, automated and manual application of corrosion protections, draining and working on contaminated/ reject articles and disposal of waste oils.
<b>Environment</b>	
<b>Environmental release category</b>	ERC8a Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor) ERC8d Widespread use of non-reactive processing aid (no inclusion into or onto article, outdoor)
<b>SPERC</b>	ESVOC SPERC 8.7c.v2
<b>Worker</b>	
<b>Process category</b>	PROC1 Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions PROC3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition PROC5 Mixing or blending in batch processes PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities PROC9 Transfer of substance or mixture into small containers (dedicated filling line, including weighing) PROC10 Roller application or brushing PROC11 Non industrial spraying PROC13 Treatment of articles by dipping and pouring. PROC17 Lubrication at high energy conditions in metal working operations

#### 2. Conditions of use affecting exposure (Industrial - Environment 1)

##### Amounts used

Daily amount per site:  $\leq 1.6E-4$  tonnes  
Fraction of EU tonnage used in region: 0.1

##### Other given operational conditions affecting environmental exposure

<b>Emission factor - air</b>	15%
<b>Emission factor - water</b>	5%

## Use in Metal Working Fluids/Rolling Oils - Professional

Emission factor - soil 5%

### 2. Conditions of use affecting exposure (Workers - Health 1)

#### Product characteristics

Physical state Liquid

Vapour pressure Vapour pressure < 0.5 kPa at STP.

Concentration details Covers percentage substance in the product up to 100% (unless stated differently).

#### Frequency and duration of use

Covers daily exposures up to 8 hours (unless stated differently).

#### Other given operational conditions affecting workers exposure

Setting Indoor.

Temperature Assumes use at not more than 20°C above ambient temperature, unless stated differently.

Ventilation rate ≤ 3 air changes per hour Unless otherwise stated.

#### Risk management measures

PROC10 Roller application or brushing  
3-5  
air changes per hour

PROC11 Non industrial spraying  
Duration  
<=4  
h/day  
5-10  
air changes per hour  
Wear suitable gloves tested to EN374.

PROC17 Lubrication at high energy conditions in metal working operations  
5-10  
air changes per hour

### 3. Exposure estimation (Health 1)

**Assessment method** The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated

Available hazard data do not enable the derivation of a DNEL for dermal irritant effects. Qualitative approach used to conclude safe use.

### 4. Guidance to check compliance with the exposure scenario (Health 1)

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.

## Exposure scenario

### Use as Release Agents or Binders - Industrial

#### Identification

Product name	Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, aromatics < 2%
EU REACH registration number	01-2119463258-33-0003
Version number	2017
Es reference	ES10a

#### 1. Title of exposure scenario

Main title	Use as Release Agents or Binders - Industrial
Process scope	Covers the use as binders and release agents, including material transfers, mixing, application (including spraying and brushing), mould forming and casting and handling of waste.
<u>Environment</u>	
Environmental release category	ERC4 Use of non-reactive processing aid at industrial site (no inclusion into or onto article)
SPERC	ESVOC SPERC 4.10a.v3
<u>Worker</u>	
Process category	<p>PROC1 Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions</p> <p>PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions</p> <p>PROC3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition</p> <p>PROC4 Chemical production where opportunity for exposure arises</p> <p>PROC6 Calendering operations.</p> <p>PROC7 Industrial spraying</p> <p>PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities</p> <p>PROC10 Roller application or brushing</p> <p>PROC13 Treatment of articles by dipping and pouring.</p> <p>PROC14 Tableting, compression, extrusion, pelletisation, granulation</p>

#### 2. Conditions of use affecting exposure (Industrial - Environment 1)

##### Amounts used

Daily amount per site: <= 11.85 tonnes  
 Annual amount per site: <= 237 tonnes  
 Fraction of EU tonnage used in region: 0.1

##### Frequency and duration of use

Emission days: 20 days/year

##### Other given operational conditions affecting environmental exposure

Emission factor - air	19.6 %
Emission factor - water	0.005 %
Emission factor - soil	Not applicable - no direct release to soil.

## Use as Release Agents or Binders - Industrial

### 2. Conditions of use affecting exposure (Workers - Health 1)

#### Product characteristics

<b>Physical state</b>	Liquid
<b>Vapour pressure</b>	Vapour pressure < 0.5 kPa at STP.
<b>Concentration details</b>	Covers percentage substance in the product up to 100% (unless stated differently).

#### Frequency and duration of use

Covers daily exposure up to 8hours

#### Other given operational conditions affecting workers exposure

<b>Setting</b>	Indoor.
<b>Temperature</b>	Assumes use at not more than 20°C above ambient temperature, unless stated differently.
<b>Ventilation rate</b>	<= 3 air changes per hour Unless otherwise stated.

#### Risk management measures

No specific risk management measure identified beyond those operational conditions stated. Unless otherwise stated.

PROC7 Industrial spraying  
5-10  
air changes per hour  
Wear suitable gloves tested to EN374.

### 3. Exposure estimation (Health 1)

<b>Assessment method</b>	The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated
	Available hazard data do not enable the derivation of a DNEL for dermal irritant effects. Qualitative approach used to conclude safe use.

### 4. Guidance to check compliance with the exposure scenario (Health 1)

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.

## Exposure scenario

### Use as Release Agents or Binders - Professional

#### Identification

<b>Product name</b>	Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, aromatics < 2%
<b>EU REACH registration number</b>	01-2119463258-33-0003
<b>Version number</b>	2021
<b>Es reference</b>	ES10b

#### 1. Title of exposure scenario

<b>Main title</b>	Use as Release Agents or Binders - Professional
<b>Process scope</b>	Covers the use as binders and release agents, including material transfers, mixing, application by spraying, brushing and handling of waste.

#### Environment

<b>Environmental release category</b>	ERC8a Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor) ERC8d Widespread use of non-reactive processing aid (no inclusion into or onto article, outdoor)
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<b>SPERC</b>	ESVOC SPERC 8.10b.v2
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#### Worker

<b>Process category</b>	PROC1 Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions PROC3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition PROC4 Chemical production where opportunity for exposure arises PROC6 Calendering operations. PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities PROC10 Roller application or brushing PROC11 Non industrial spraying PROC14 Tableting, compression, extrusion, pelletisation, granulation
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#### 2. Conditions of use affecting exposure (Industrial - Environment 1)

#### Amounts used

Daily amount per site: <= 1.4E-4  
Fraction of EU tonnage used in region: 0.1

#### Other given operational conditions affecting environmental exposure

<b>Emission factor - air</b>	90%
<b>Emission factor - water</b>	2.5%
<b>Emission factor - soil</b>	2.5%

#### 2. Conditions of use affecting exposure (Workers - Health 1)

## Use as Release Agents or Binders - Professional

### Product characteristics

<b>Physical state</b>	Liquid
<b>Vapour pressure</b>	Vapour pressure < 0.5 kPa at STP.
<b>Concentration details</b>	Covers percentage substance in the product up to 100% (unless stated differently).

### Frequency and duration of use

Covers daily exposures up to 8 hours (unless stated differently).

### Other given operational conditions affecting workers exposure

<b>Setting</b>	Indoor.
<b>Temperature</b>	Assumes use at not more than 20°C above ambient temperature, unless stated differently.
<b>Ventilation rate</b>	≤ 3 air changes per hour Unless otherwise stated.

### Risk management measures

PROC10 Roller application or brushing  
3-5  
air changes per hour

PROC11 Non industrial spraying  
Duration  
4  
h/day  
5-10  
air changes per hour  
Wear suitable gloves tested to EN374.

## 3. Exposure estimation (Health 1)

<b>Assessment method</b>	The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated  Available hazard data do not enable the derivation of a DNEL for dermal irritant effects. Qualitative approach used to conclude safe use.
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## 4. Guidance to check compliance with the exposure scenario (Health 1)

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.

## Exposure scenario

### Use as a Fuel - Industrial

#### Identification

Product name	Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, aromatics < 2%
EU REACH registration number	01-2119463258-33-0003
Version number	2021
Es reference	ES12a

#### 1. Title of exposure scenario

Main title	Use as a Fuel - Industrial
Process scope	Covers the use as a fuel (or fuel additive) and includes activities associated with its transfer, use, equipment maintenance and handling of waste.

#### Environment

Environmental release category	ERC7 Use of functional fluid at industrial site
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SPERC	ESVOC SPERC 7.12a.v3
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#### Worker

Process category	<p>PROC1 Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions</p> <p>PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions</p> <p>PROC3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition</p> <p>PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities</p> <p>PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities</p> <p>PROC16 Use of fuels</p>
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#### 2. Conditions of use affecting exposure (Industrial - Environment 1)

##### Control of environmental exposure

No exposure assessment presented for the environment.

##### Amounts used

Daily amount per site: <= 0.1 tonnes  
 Annual amount per site: <= 2 tonnes  
 Fraction of EU tonnage used in region: 0.1

##### Frequency and duration of use

Emission days: 20 days/year

##### Other given operational conditions affecting environmental exposure

Emission factor - air	0.025%
Emission factor - water	0.001%
Emission factor - soil	Not applicable - no direct release to soil.



## Use as a Fuel - Industrial

### 2. Conditions of use affecting exposure (Workers - Health 1)

#### Product characteristics

<b>Physical state</b>	Liquid
<b>Vapour pressure</b>	Vapour pressure < 0.5 kPa at STP.
<b>Concentration details</b>	Covers percentage substance in the product up to 100% (unless stated differently).

#### Frequency and duration of use

Covers daily exposure up to 8hours

#### Other given operational conditions affecting workers exposure

<b>Setting</b>	Indoor.
<b>Temperature</b>	Assumes use at not more than 20°C above ambient temperature, unless stated differently.
<b>Ventilation rate</b>	≤ 3 air changes per hour

#### Risk management measures

No specific risk management measure identified beyond those operational conditions stated.

### 3. Exposure estimation (Health 1)

<b>Assessment method</b>	The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated  Available hazard data do not enable the derivation of a DNEL for dermal irritant effects. Qualitative approach used to conclude safe use.
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### 4. Guidance to check compliance with the exposure scenario (Health 1)

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.

## Exposure scenario

### Use as a Fuel - Professional

#### Identification

Product name	Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, aromatics < 2%
EU REACH registration number	01-2119463258-33-0003
Version number	2021
Es reference	ES12b

#### 1. Title of exposure scenario

Main title	Use as a Fuel - Professional
Process scope	Covers the use as a fuel (or fuel additive) and includes activities associated with its transfer, use, equipment maintenance and handling of waste.

#### Environment

Environmental release category	ERC9a Widespread use of functional fluid (indoor) ERC9b Widespread use of functional fluid (outdoor)
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SPERC	ESVOC SPERC 9.12b.v3
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#### Worker

Process category	PROC1 Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions PROC3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities PROC16 Use of fuels
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#### 2. Conditions of use affecting exposure (Industrial - Environment 1)

##### Amounts used

Daily amount per site:  $\leq 2.7E-6$  tonnes  
Fraction of EU tonnage used in region: 0.1

##### Other given operational conditions affecting environmental exposure

Emission factor - air	0.5%
Emission factor - water	0.0001%
Emission factor - soil	0.025%

#### 2. Conditions of use affecting exposure (Workers - Health 1)

##### Product characteristics

Physical state	Liquid
Vapour pressure	Vapour pressure < 0.5 kPa at STP.
Concentration details	Covers percentage substance in the product up to 100% (unless stated differently).

## Use as a Fuel - Professional

### Frequency and duration of use

Covers daily exposures up to 8 hours (unless stated differently).

### Other given operational conditions affecting workers exposure

<b>Setting</b>	Indoor.
<b>Temperature</b>	Assumes use at not more than 20°C above ambient temperature, unless stated differently.
<b>Ventilation rate</b>	≤ 3 air changes per hour

### Risk management measures

No specific risk management measure identified beyond those operational conditions stated.

### 3. Exposure estimation (Health 1)

<b>Assessment method</b>	The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated  Available hazard data do not enable the derivation of a DNEL for dermal irritant effects. Qualitative approach used to conclude safe use.
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### 4. Guidance to check compliance with the exposure scenario (Health 1)

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.

## Exposure scenario

### Use as a Fuel - Consumer

#### Identification

Product name	Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, aromatics < 2%
EU REACH registration number	01-2119463258-33-0003
Version number	2021
Es reference	ES12c

#### 1. Title of exposure scenario

Main title	Use as a Fuel - Consumer
Process scope	Covers consumer uses in liquid fuels.
Product category	PC13 Fuels.
<u>Environment</u>	
Environmental release category	ERC9a Widespread use of functional fluid (indoor) ERC9b Widespread use of functional fluid (outdoor)
SPERC	ESVOC SPERC 9.12c.v3

#### 2. Conditions of use affecting exposure (Non-industrial - Environment 1)

##### Amounts used

Daily amount per site: <=2.7E-6 tonnes  
Fraction of EU tonnage used in region: 0.1

##### Other given operational conditions affecting environmental exposure

Emission factor - air	0.01%
Emission factor - water	2E-5%
Emission factor - soil	0.005%

#### 2. Conditions of use affecting exposure (Non-industrial - Health 1)

##### Product characteristics

Physical state	Liquid
Concentration details	Covers percentage substance in the product up to 100% (unless stated differently).

##### Amounts used

PC13\_1 Liquid: automotive refuelling  
For each use event, covers use amounts up to 37.5 kg.  
PC13\_2 Liquid: scooter refuelling  
For each use event, covers use amounts up to 3.75 kg.  
PC13\_3 Liquid: garden equipment - use  
For each use event, covers use amounts up to 750 g.  
PC13\_4 Liquid: Garden equipment - Refuelling  
For each use event, covers use amounts up to 750 g.  
PC13\_5 Liquid: lamp oil  
For each use event, covers use amounts up to 100 g.  
PC13\_6 Liquid: home space heater fuel  
For each use event, covers use amounts up to 3000 g.

## Use as a Fuel - Consumer

### Frequency and duration of use

Covers use up to 1 time(s)/day.  
Covers use up to 52 days/year.  
Unless otherwise stated.

PC13\_1 Liquid: automotive refuelling  
Covers exposure up to 0.05 hours per event.

PC13\_2 Liquid: scooter refuelling  
Covers exposure up to 0.033 hours per event.

PC13\_3 Liquid: garden equipment - use  
Covers exposure up to 2.00 hours per event.  
(frequent use over a year)

PC13\_4 Liquid: Garden equipment - Refuelling  
Covers exposure up to 0.03 hours per event.  
Covers use up to  
26  
times per year

PC13\_5 Liquid: lamp oil  
Covers exposure up to 0.013 hours per event.

PC13\_6 Liquid: home space heater fuel  
Covers exposure up to 0.03 hours per event.  
Covers use up to 365 days/year.

### Human factors not influenced by risk management

#### **Potentially exposed body parts**

Assumes that potential dermal contact is limited to inside hands/one hand/palm of hands.  
Unless otherwise stated.

PC13\_2 Liquid: scooter refuelling , PC13\_3 Liquid: garden equipment - use : Dermal exposure is considered to be not relevant.

PC13\_6 Liquid: home space heater fuel , PC13\_5 Liquid: lamp oil : Palm of one hand.

### Other given operational conditions affecting Non-industrial exposure

#### **Setting**

Covers outdoor use. Unless otherwise stated.

PC13\_6 Liquid: home space heater fuel , PC13\_5 Liquid: lamp oil : Indoor use.

#### **Temperature**

Assumes activities are at ambient temperature (unless stated differently).

### Other given operational conditions affecting Non-industrial exposure

No specific risk management measure identified beyond those operational conditions stated.

## 3. Exposure estimation (Health 1)

#### **Assessment method**

The ECETOC TRA tool has been used to estimate consumer exposures, unless otherwise indicated.

Available hazard data do not enable the derivation of a DNEL for dermal irritant effects.  
Qualitative approach used to conclude safe use.

## 4. Guidance to check compliance with the exposure scenario (Health 1)

## **Use as a Fuel - Consumer**

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.

## Exposure scenario

### Use as Functional Fluids - Industrial

#### Identification

Product name	Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, aromatics < 2%
EU REACH registration number	01-2119463258-33-0003
Version number	2021
Es reference	ES13a

#### 1. Title of exposure scenario

Main title	Use as Functional Fluids - Industrial
Process scope	Use as functional fluids e.g. cable oils, transfer oils, coolants, insulators, refrigerants, hydraulic fluids in industrial equipment, including maintenance and related material transfers.

#### Environment

Environmental release category	ERC7 Use of functional fluid at industrial site
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SPERC	ESVOC SPERC 7.13a.v2
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#### Worker

Process category	<p>PROC1 Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions</p> <p>PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions</p> <p>PROC3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition</p> <p>PROC4 Chemical production where opportunity for exposure arises</p> <p>PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities</p> <p>PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities</p> <p>PROC9 Transfer of substance or mixture into small containers (dedicated filling line, including weighing)</p>
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#### 2. Conditions of use affecting exposure (Industrial - Environment 1)

##### Amounts used

Daily amount per site: <=0.5 tonnes  
 Annual amount per site: <= 10 tonnes  
 Fraction of EU tonnage used in region: 0.1

##### Frequency and duration of use

Emission days: 20 days/year

##### Other given operational conditions affecting environmental exposure

Emission factor - air	0.5%
Emission factor - water	0.0001%
Emission factor - soil	0.1%

#### 2. Conditions of use affecting exposure (Workers - Health 1)

## Use as Functional Fluids - Industrial

### Product characteristics

<b>Physical state</b>	Liquid
<b>Vapour pressure</b>	Vapour pressure < 0.5 kPa at STP.
<b>Concentration details</b>	Covers percentage substance in the product up to 100% (unless stated differently).

### Frequency and duration of use

Covers daily exposure up to 8hours

### Other given operational conditions affecting workers exposure

<b>Setting</b>	Indoor.
<b>Temperature</b>	Assumes use at not more than 20°C above ambient temperature, unless stated differently.
<b>Ventilation rate</b>	≤ 3 air changes per hour

### Risk management measures

No specific risk management measure identified beyond those operational conditions stated.

### 3. Exposure estimation (Health 1)

<b>Assessment method</b>	The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated
	Available hazard data do not enable the derivation of a DNEL for dermal irritant effects. Qualitative approach used to conclude safe use.

### 4. Guidance to check compliance with the exposure scenario (Health 1)

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.



## Exposure scenario

### Use as Functional Fluids - Professional

#### Identification

Product name	Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, aromatics < 2%
EU REACH registration number	01-2119463258-33-0003
Version number	2021
Es reference	ES13b

#### 1. Title of exposure scenario

Main title	Use as Functional Fluids - Professional
Process scope	Use as functional fluids e.g. cable oils, transfer oils, coolants, insulators, refrigerants, hydraulic fluids in professional equipment, including maintenance and related material transfers.
<u>Environment</u>	
Environmental release category	ERC9a Widespread use of functional fluid (indoor) ERC9b Widespread use of functional fluid (outdoor)
SPERC	ESVOC SPERC 9.13b.v1
<u>Worker</u>	
Process category	PROC1 Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions PROC3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities PROC9 Transfer of substance or mixture into small containers (dedicated filling line, including weighing) PROC20 Use of functional fluids in small devices

#### 2. Conditions of use affecting exposure (Industrial - Environment 1)

##### Amounts used

Daily amount per site: <= 1.4E-5 tonnes  
Fraction of EU tonnage used in region: 0.1

##### Other given operational conditions affecting environmental exposure

Emission factor - air	5%
Emission factor - water	5%
Emission factor - soil	5%

#### 2. Conditions of use affecting exposure (Workers - Health 1)

##### Product characteristics

Physical state	Liquid
Vapour pressure	Vapour pressure < 0.5 kPa at STP.

## Use as Functional Fluids - Professional

**Concentration details** Covers percentage substance in the product up to 100% (unless stated differently).

### Frequency and duration of use

Covers daily exposure up to 8hours

### Other given operational conditions affecting workers exposure

**Setting** Indoor.

**Temperature** Assumes use at not more than 20°C above ambient temperature, unless stated differently.

**Ventilation rate** ≤ 3 air changes per hour

### Risk management measures

No specific risk management measure identified beyond those operational conditions stated.

## 3. Exposure estimation (Health 1)

### **Assessment method**

The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated

Available hazard data do not enable the derivation of a DNEL for dermal irritant effects.  
Qualitative approach used to conclude safe use.

## 4. Guidance to check compliance with the exposure scenario (Health 1)

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.

## Exposure scenario

### Use as Functional Fluids - Consumer

#### Identification

Product name	Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, aromatics < 2%
EU REACH registration number	01-2119463258-33-0003
Version number	2021
Es reference	ES13c

#### 1. Title of exposure scenario

Main title	Use as Functional Fluids - Consumer
Process scope	Use of sealed items containing functional fluids e.g. transfer oils, hydraulic fluids, refrigerants.
Product category	PC16 Heat transfer fluids. PC17 Hydraulic fluids.
<u>Environment</u>	
Environmental release category	ERC9a Widespread use of functional fluid (indoor) ERC9b Widespread use of functional fluid (outdoor)
SPERC	ESVOC SPERC 9.13c.v2

#### 2. Conditions of use affecting exposure (Non-industrial - Environment 1)

##### Amounts used

Daily amount per site:  $\leq 1.4E-5$  tonnes  
Fraction of EU tonnage used in region: 0.1

##### Other given operational conditions affecting environmental exposure

Emission factor - air	5%
Emission factor - water	5%
Emission factor - soil	5%

#### 2. Conditions of use affecting exposure (Non-industrial - Health 1)

##### Control of Non-industrial exposure

PC16 Heat transfer fluids. PC17 Hydraulic fluids.

##### Product characteristics

Physical state	Liquid
Concentration details	Covers percentage substance in the product up to 100% (unless stated differently).

##### Amounts used

For each use event, covers use amounts up to 2200 g.

##### Frequency and duration of use

Covers exposure up to 0.17 hours per event.  
Covers use up to 1 time(s)/day.  
Covers use up to 4 days/year.

##### Human factors not influenced by risk management

## Use as Functional Fluids - Consumer

<b>Potentially exposed body parts</b>	Hand Palm of one hand. Palm of both hands.
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### Other given operational conditions affecting Non-industrial exposure

<b>Setting</b>	Covers use in a one car garage (34 m <sup>3</sup> ) under typical ventilation.
<b>Temperature</b>	Assumes activities are at ambient temperature (unless stated differently).

### Other given operational conditions affecting Non-industrial exposure

No specific risk management measure identified beyond those operational conditions stated.

### 3. Exposure estimation (Health 1)

<b>Assessment method</b>	The ECETOC TRA tool has been used to estimate consumer exposures, unless otherwise indicated.  Available hazard data do not enable the derivation of a DNEL for dermal irritant effects. Qualitative approach used to conclude safe use.
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### 4. Guidance to check compliance with the exposure scenario (Health 1)

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.

## Exposure scenario

### Use in Road and Construction Applications - Professional

#### Identification

Product name	Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, aromatics < 2%
EU REACH registration number	01-2119463258-33-0003
Version number	2021
Es reference	ES15b

#### 1. Title of exposure scenario

Main title	Use in Road and Construction Applications - Professional
Process scope	Application of surface coatings and binders in road and construction activities, including paving uses, manual mastic and in the application of roofing and water-proofing membranes.
<u>Environment</u>	
Environmental release category	ERC8d Widespread use of non-reactive processing aid (no inclusion into or onto article, outdoor) ERC8f Widespread use leading to inclusion into/onto article (outdoor)
SPERC	SPERC 8.15.v2
<u>Worker</u>	
Process category	PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities PROC9 Transfer of substance or mixture into small containers (dedicated filling line, including weighing) PROC10 Roller application or brushing PROC11 Non industrial spraying PROC13 Treatment of articles by dipping and pouring.

#### 2. Conditions of use affecting exposure (Industrial - Environment 1)

##### Control of environmental exposure

Environmental release category	ERC8d Widespread use of non-reactive processing aid (no inclusion into or onto article, outdoor)
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##### Amounts used

Daily amount per site: <=5.5E-6 tonnes  
Fraction of EU tonnage used in region: 0.1

##### Other given operational conditions affecting environmental exposure

Emission factor - air	95%
Emission factor - water	1%
Emission factor - soil	4%

#### 2. Conditions of use affecting exposure (Industrial - Environment 2)

##### Control of environmental exposure

Environmental release category	ERC8f Widespread use leading to inclusion into/onto article (outdoor)
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## Use in Road and Construction Applications - Professional

### Amounts used

Daily amount per site:  $\leq 5.5 \times 10^{-6}$  tonnes  
Annual amount used in the EU: 10%

### Other given operational conditions affecting environmental exposure

Emission factor - air	94%
Emission factor - water	1%
Emission factor - soil	4%

## 2. Conditions of use affecting exposure (Workers - Health 1)

### Product characteristics

Physical state	Liquid
Vapour pressure	Vapour pressure < 0.5 kPa at STP.
Concentration details	Covers percentage substance in the product up to 100% (unless stated differently).

### Frequency and duration of use

Covers daily exposures up to 8 hours (unless stated differently).

### Other given operational conditions affecting workers exposure

Setting	Indoor.
Temperature	Assumes use at not more than 20°C above ambient temperature, unless stated differently.
Ventilation rate	$\leq 3$ air changes per hour Unless otherwise stated.

### Risk management measures

PROC10 Roller application or brushing  
3-5  
air changes per hour

PROC11 Non industrial spraying  
Duration  
 $\leq 4$   
h/day  
5-10  
air changes per hour  
Wear suitable gloves tested to EN374.

## 3. Exposure estimation (Health 1)

Assessment method	The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated
	Available hazard data do not enable the derivation of a DNEL for dermal irritant effects. Qualitative approach used to conclude safe use.

## 4. Guidance to check compliance with the exposure scenario (Health 1)

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.

## Exposure scenario

### Other Consumer Uses - Consumer

#### Identification

Product name	Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, aromatics < 2%
EU REACH registration number	01-2119463258-33-0003
Version number	2021
Es reference	ES16c

#### 1. Title of exposure scenario

Main title	Other Consumer Uses - Consumer
Process scope	Consumer uses e.g. as a carrier in cosmetics/personal care products, perfumes and fragrances. Note: for cosmetic and personal care products, risk assessment only required for the environment under REACH as human health is covered by alternative legislation.
Product category	PC28 Perfumes, fragrances. PC39 Cosmetics, personal care.
<b>Environment</b>	
Environmental release category	ERC8a Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor) ERC8d Widespread use of non-reactive processing aid (no inclusion into or onto article, outdoor)

#### 2. Conditions of use affecting exposure (Non-industrial - Environment 1)

##### Amounts used

Daily amount per site:  $\leq 2.3E-6$  tonnes  
Fraction of EU tonnage used in region: 0.1

##### Other given operational conditions affecting environmental exposure

Emission factor - air	95%
Emission factor - water	2.5%
Emission factor - soil	2.5%

#### 2. Conditions of use affecting exposure (Non-industrial - Health 1)

##### Control of Non-industrial exposure

PC28 Perfumes, fragrances.

##### Product characteristics

Physical state	Liquid
Concentration details	Covers concentrations up to 100 %.

##### Amounts used

For each use event, covers use amounts up to 0.61 g.

##### Frequency and duration of use

Covers exposure up to 5.333 hours per event.  
Covers use up to 1 time(s)/day.

## Other Consumer Uses - Consumer

### Other given operational conditions affecting Non-industrial exposure

Setting Indoor.

### Other given operational conditions affecting Non-industrial exposure

Exposure route Inhalation

## 2. Conditions of use affecting exposure (Non-industrial - Health 2)

### Control of Non-industrial exposure

PC39 Cosmetics, personal care.

### Product characteristics

Physical state Liquid

Concentration details Covers concentrations up to 100 %.

### Frequency and duration of use

Covers use up to 1 time(s)/day.

### Other given operational conditions affecting Non-industrial exposure

Setting Indoor.

### Other given operational conditions affecting Non-industrial exposure

Exposure route Inhalation

## 3. Exposure estimation (Environment 1)

Assessment method Used Petrorisk model.



## Exposure scenario Use in Laboratories - Industrial

### Identification

Product name	Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, aromatics < 2%
EU REACH registration number	01-2119463258-33-0003
Version number	2021
Es reference	ES17a

### 1. Title of exposure scenario

Main title	Use in Laboratories - Industrial
Process scope	Use of the substance within laboratory settings, including material transfers and equipment cleaning.

#### Environment

Environmental release category	ERC4 Use of non-reactive processing aid at industrial site (no inclusion into or onto article)
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#### Worker

Process category	PROC10 Roller application or brushing PROC15 Use as laboratory reagent.
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### 2. Conditions of use affecting exposure (Industrial - Environment 1)

#### Amounts used

Daily amount per site: <= 0.0005 tonnes  
Annual amount per site: <= 0.01 tonnes  
Fraction of EU tonnage used in region: 0.1

#### Frequency and duration of use

Emission days: 20 days/year

#### Other given operational conditions affecting environmental exposure

Emission factor - air	2.5%
Emission factor - water	2%
Emission factor - soil	0.01%

### 2. Conditions of use affecting exposure (Workers - Health 1)

#### Product characteristics

Physical state	Liquid
Vapour pressure	Vapour pressure < 0.5 kPa at STP.
Concentration details	Covers percentage substance in the product up to 100% (unless stated differently).

#### Frequency and duration of use

Covers daily exposure up to 8hours

#### Other given operational conditions affecting workers exposure

Setting	Indoor.
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## Use in Laboratories - Industrial

**Temperature** Assumes use at not more than 20°C above ambient temperature, unless stated differently.

**Ventilation rate** ≤ 3 air changes per hour

### Risk management measures

No specific risk management measure identified beyond those operational conditions stated.

### 3. Exposure estimation (Environment 1)

**Assessment method** Used Petrorisk model.

### 3. Exposure estimation (Health 1)

**Assessment method** The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated

Available hazard data do not enable the derivation of a DNEL for dermal irritant effects.  
Qualitative approach used to conclude safe use.

### 4. Guidance to check compliance with the exposure scenario (Health 1)

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.

## Exposure scenario

### Use in Laboratories - Professional

#### Identification

Product name	Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, aromatics < 2%
EU REACH registration number	01-2119463258-33-0003
Version number	2021
Es reference	ES17b

#### 1. Title of exposure scenario

Main title	Use in Laboratories - Professional
Process scope	Use of small quantities within laboratory settings, including material transfers and equipment cleaning.

#### Environment

**Environmental release category** ERC8a Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor)

**SPERC** ESVOC SPERC 8.17.v2

#### Worker

**Process category** PROC10 Roller application or brushing  
PROC15 Use as laboratory reagent.

#### 2. Conditions of use affecting exposure (Industrial - Environment 1)

#### Amounts used

Daily amount per site:  $\leq 1.4E-8$  tonnes  
Fraction of EU tonnage used in region: 0.1

#### Other given operational conditions affecting environmental exposure

Emission factor - air	50%
Emission factor - water	50%
Emission factor - soil	Not applicable - no direct release to soil.

#### 2. Conditions of use affecting exposure (Workers - Health 1)

#### Product characteristics

Physical state	Liquid
Vapour pressure	Vapour pressure < 0.5 kPa at STP.
Concentration details	Covers percentage substance in the product up to 100% (unless stated differently).

#### Frequency and duration of use

Covers daily exposure up to 8hours

#### Other given operational conditions affecting workers exposure

Setting	Indoor.
Temperature	Assumes use at not more than 20°C above ambient temperature, unless stated differently.

## Use in Laboratories - Professional

### Risk management measures

PROC10 Roller application or brushing  
3-5  
air changes per hour

PROC15 Use as laboratory reagent.  
≤ 3  
air changes per hour

### 3. Exposure estimation (Health 1)

#### Assessment method

The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated

Available hazard data do not enable the derivation of a DNEL for dermal irritant effects. Qualitative approach used to conclude safe use.

### 4. Guidance to check compliance with the exposure scenario (Health 1)

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.

## Exposure scenario

### Use in Polymer Processing - Industrial

#### Identification

<b>Product name</b>	Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, aromatics < 2%
<b>EU REACH registration number</b>	01-2119463258-33-0003
<b>Version number</b>	2021
<b>Es reference</b>	ES23a

#### 1. Title of exposure scenario

<b>Main title</b>	Use in Polymer Processing - Industrial
<b>Process scope</b>	Processing of formulated polymers, including material transfers, additives handling (e.g. pigments, stabilisers, fillers, plasticisers etc.), moulding, curing and forming activities, material reworks, storage and associated maintenance.

#### Environment

<b>Environmental release category</b>	ERC4 Use of non-reactive processing aid at industrial site (no inclusion into or onto article)
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<b>SPERC</b>	ESVOC SPERC 4.21a.v2
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#### Worker

<b>Process category</b>	<p>PROC1 Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions</p> <p>PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions</p> <p>PROC3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition</p> <p>PROC4 Chemical production where opportunity for exposure arises</p> <p>PROC5 Mixing or blending in batch processes</p> <p>PROC6 Calendering operations.</p> <p>PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities</p> <p>PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities</p> <p>PROC9 Transfer of substance or mixture into small containers (dedicated filling line, including weighing)</p> <p>PROC13 Treatment of articles by dipping and pouring.</p> <p>PROC14 Tableting, compression, extrusion, pelletisation, granulation</p>
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#### 2. Conditions of use affecting exposure (Industrial - Environment 1)

#### Amounts used

Daily amount per site: <=14.5 tonnes  
 Annual site tonnage: <=1450 tonnes  
 Fraction of EU tonnage used in region: 0.1

#### Frequency and duration of use

Emission days: 100 days/year

#### Other given operational conditions affecting environmental exposure

<b>Emission factor - air</b>	5%
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## Use in Polymer Processing - Industrial

<b>Emission factor - water</b>	0%
<b>Emission factor - soil</b>	0.001%

### 2. Conditions of use affecting exposure (Workers - Health 1)

#### Product characteristics

<b>Physical state</b>	Liquid
<b>Vapour pressure</b>	Vapour pressure < 0.5 kPa at STP.
<b>Concentration details</b>	Covers percentage substance in the product up to 100% (unless stated differently).

#### Frequency and duration of use

Covers daily exposure up to 8hours

#### Other given operational conditions affecting workers exposure

<b>Setting</b>	Indoor.
<b>Temperature</b>	Assumes use at not more than 20°C above ambient temperature, unless stated differently.
<b>Ventilation rate</b>	≤ 3 air changes per hour

#### Risk management measures

No specific risk management measure identified beyond those operational conditions stated.

### 3. Exposure estimation (Health 1)

<b>Assessment method</b>	The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated  Available hazard data do not enable the derivation of a DNEL for dermal irritant effects. Qualitative approach used to conclude safe use.
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### 4. Guidance to check compliance with the exposure scenario (Health 1)

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.

## Exposure scenario

### Use in Polymer Processing - Professional

#### Identification

Product name	Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, aromatics < 2%
EU REACH registration number	01-2119463258-33-0003
Version number	2021
Es reference	ES23b

#### 1. Title of exposure scenario

Main title	Use in Polymer Processing - Professional
Process scope	Processing of formulated polymers, including material transfers, moulding and forming activities, material reworks and associated maintenance.

#### Environment

Environmental release category	ERC8a Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor) ERC8d Widespread use of non-reactive processing aid (no inclusion into or onto article, outdoor)
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SPERC	ESVOC SPERC 8.21b.v1 ESVOC SPERC 8.21b.v2
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#### Worker

Process category	PROC1 Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions PROC6 Calendering operations. PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities PROC14 Tableting, compression, extrusion, pelletisation, granulation
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#### 2. Conditions of use affecting exposure (Industrial - Environment 1)

#### Amounts used

Daily amount per site: <= 0.0018 tonnes  
Fraction of EU tonnage used in region: 0.1

#### Other given operational conditions affecting environmental exposure

Emission factor - air	98%
Emission factor - water	1%
Emission factor - soil	1%

#### 2. Conditions of use affecting exposure (Workers - Health 1)

#### Product characteristics

Physical state	Liquid
Vapour pressure	Vapour pressure < 0.5 kPa at STP.
Concentration details	Covers percentage substance in the product up to 100% (unless stated differently).

## Use in Polymer Processing - Professional

### Frequency and duration of use

Covers daily exposures up to 8 hours (unless stated differently).

### Other given operational conditions affecting workers exposure

**Setting** Indoor.

**Temperature** Assumes use at not more than 20°C above ambient temperature, unless stated differently.

**Ventilation rate** ≤ 3 air changes per hour

### Risk management measures

No specific risk management measure identified beyond those operational conditions stated.

### 3. Exposure estimation (Health 1)

#### **Assessment method**

The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated

Available hazard data do not enable the derivation of a DNEL for dermal irritant effects. Qualitative approach used to conclude safe use.

### 4. Guidance to check compliance with the exposure scenario (Health 1)

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.



## Exposure scenario

### Use in Water Treatment Chemicals - Industrial

#### Identification

Product name	Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, aromatics < 2%
EU REACH registration number	01-2119463258-33-0003
Version number	2021
Es reference	ES21a

#### 1. Title of exposure scenario

Main title	Use in Water Treatment Chemicals - Industrial
Process scope	Covers the use of the substance for the treatment of water at industrial facilities in open and closed systems.

#### Environment

Environmental release category	ERC4 Use of non-reactive processing aid at industrial site (no inclusion into or onto article)
SPERC	ESVOC SPERC 3.22a.v3

#### Worker

Process category	<p>PROC1 Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions</p> <p>PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions</p> <p>PROC3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition</p> <p>PROC4 Chemical production where opportunity for exposure arises</p> <p>PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities</p> <p>PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities</p> <p>PROC13 Treatment of articles by dipping and pouring.</p>
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#### 2. Conditions of use affecting exposure (Industrial - Environment 1)

##### Amounts used

Daily amount per site: <= 0.1 tonnes  
Annual site tonnage: <= 30 tonnes  
Fraction of EU tonnage used in region: 0.1

##### Frequency and duration of use

Emission days: 300 days/year

##### Other given operational conditions affecting environmental exposure

Emission factor - air	0.03%
Emission factor - water	1.23%
Emission factor - soil	Not applicable - no direct release to soil.

#### 2. Conditions of use affecting exposure (Workers - Health 1)

##### Product characteristics

## Use in Water Treatment Chemicals - Industrial

<b>Physical state</b>	Liquid
<b>Vapour pressure</b>	Vapour pressure < 0.5 kPa at STP.
<b>Concentration details</b>	Covers percentage substance in the product up to 100% (unless stated differently).

### Frequency and duration of use

Covers daily exposures up to 8 hours (unless stated differently).  
Covers daily exposure up to 8hours

### Other given operational conditions affecting workers exposure

<b>Setting</b>	Indoor.
<b>Temperature</b>	Assumes use at not more than 20°C above ambient temperature, unless stated differently.
<b>Ventilation rate</b>	≤ 3 air changes per hour

### Risk management measures

No specific risk management measure identified beyond those operational conditions stated.

## 3. Exposure estimation (Health 1)

<b>Assessment method</b>	The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated  Available hazard data do not enable the derivation of a DNEL for dermal irritant effects. Qualitative approach used to conclude safe use.
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## 4. Guidance to check compliance with the exposure scenario (Health 1)

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.

## Exposure scenario

### Manufacture of Substance - Industrial

#### Identification

Product name	Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, aromatics < 2%
EU REACH registration number	01-2119463258-33-0003
Version number	2021
Es reference	ES01

#### 1. Title of exposure scenario

Main title	Manufacture of Substance - Industrial
Process scope	Manufacture of the substance or use as a process chemical or extraction agent within closed or contained systems. Includes incidental exposures during recycling/recovery, material transfers, storage, sampling, associated laboratory activities, maintenance and loading (including marine vessel/barge, road/rail car and bulk container).
<u>Environment</u>	
Environmental release category	ERC1 Manufacture of the substance
SPERC	ESVOC SPERC 1.1.v2
<u>Worker</u>	
Process category	<p>PROC1 Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions</p> <p>PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions</p> <p>PROC3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition</p> <p>PROC4 Chemical production where opportunity for exposure arises</p> <p>PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities</p> <p>PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities</p> <p>PROC15 Use as laboratory reagent.</p>

#### 2. Conditions of use affecting exposure (Industrial - Environment 1)

##### Amounts used

Daily amount per site: <= 57.66 tonnes  
 Annual amount per site: <= 1.73E4 tonnes  
 Fraction of EU tonnage used in region: 0.1

##### Frequency and duration of use

Emission days: 300 days/year

##### Other given operational conditions affecting environmental exposure

Emission factor - air	0.1%
Emission factor - water	0.001%
Emission factor - soil	0.01%

## Manufacture of Substance - Industrial

### 2. Conditions of use affecting exposure (Workers - Health 1)

#### Product characteristics

<b>Physical state</b>	Liquid
<b>Vapour pressure</b>	Vapour pressure < 0.5 kPa at STP.
<b>Concentration details</b>	Covers percentage substance in the product up to 100% (unless stated differently).

#### Frequency and duration of use

Covers daily exposure up to 8hours

#### Other given operational conditions affecting workers exposure

<b>Setting</b>	Indoor.
<b>Temperature</b>	Assumes use at not more than 20°C above ambient temperature, unless stated differently.
<b>Ventilation rate</b>	≤ 3 air changes per hour

#### Risk management measures

No specific risk management measure identified beyond those operational conditions stated.

### 3. Exposure estimation (Health 1)

<b>Assessment method</b>	The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated  Available hazard data do not enable the derivation of a DNEL for dermal irritant effects. Qualitative approach used to conclude safe use.
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### 4. Guidance to check compliance with the exposure scenario (Health 1)

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.

## Exposure scenario

### Use in Water Treatment Chemicals - Professional

#### Identification

Product name	Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, aromatics < 2%
EU REACH registration number	01-2119463258-33-0003
Version number	2021
Es reference	ES21b

#### 1. Title of exposure scenario

Main title	Use in Water Treatment Chemicals - Professional
Process scope	Covers the use of the substance for the treatment of water in open and closed systems.

#### Environment

Environmental release category	ERC8d Widespread use of non-reactive processing aid (no inclusion into or onto article, outdoor)
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SPERC	ESVOC SPERC 8.22b.v2
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#### Worker

Process category	<p>PROC1 Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions</p> <p>PROC3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition</p> <p>PROC4 Chemical production where opportunity for exposure arises</p> <p>PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities</p> <p>PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities</p> <p>PROC13 Treatment of articles by dipping and pouring.</p>
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#### 2. Conditions of use affecting exposure (Industrial - Environment 1)

##### Amounts used

Daily amount per site:  $\leq 1.8E-4$  tonnes  
 Fraction of EU tonnage used in region: 0.1

##### Other given operational conditions affecting environmental exposure

Emission factor - air	1%
Emission factor - water	99%
Emission factor - soil	Not applicable - no direct release to soil.

#### 2. Conditions of use affecting exposure (Workers - Health 1)

##### Product characteristics

Physical state	Liquid
Vapour pressure	Vapour pressure < 0.5 kPa at STP.
Concentration details	Covers percentage substance in the product up to 100% (unless stated differently).

##### Frequency and duration of use

Covers daily exposures up to 8 hours (unless stated differently).

## Use in Water Treatment Chemicals - Professional

### Other given operational conditions affecting workers exposure

<b>Setting</b>	Indoor.
<b>Temperature</b>	Assumes use at not more than 20°C above ambient temperature, unless stated differently.
<b>Ventilation rate</b>	≤ 3 air changes per hour
<b><u>Risk management measures</u></b>	No specific risk management measure identified beyond those operational conditions stated.

### 3. Exposure estimation (Health 1)

<b>Assessment method</b>	The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated  Available hazard data do not enable the derivation of a DNEL for dermal irritant effects. Qualitative approach used to conclude safe use.
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### 4. Guidance to check compliance with the exposure scenario (Health 1)

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.

## Exposure scenario

### Distribution of Substance - Industrial

#### Identification

<b>Product name</b>	Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, aromatics < 2%
<b>EU REACH registration number</b>	01-2119463258-33-0003
<b>Version number</b>	2021
<b>Es reference</b>	ES01a

#### 1. Title of exposure scenario

<b>Main title</b>	Distribution of Substance - Industrial
<b>Process scope</b>	Loading (including marine vessel/barge, rail/road car and IBC loading) and repacking (including drums and small packs) of substance, including its sampling, storage, unloading distribution and associated laboratory activities.

#### Environment

<b>Environmental release category</b>	ERC1 Manufacture of the substance ERC2 Formulation into mixture ERC3 Formulation into solid matrix ERC4 Use of non-reactive processing aid at industrial site (no inclusion into or onto article) ERC5 Use at industrial site leading to inclusion into/onto article ERC6a Use of intermediate ERC6b Use of reactive processing aid at industrial site (no inclusion into or onto article) ERC6c Use of monomer in polymerisation processes at industrial site (inclusion or not into/onto article) ERC6d Use of reactive process regulators in polymerisation processes at industrial site (inclusion or not into/onto article) ERC7 Use of functional fluid at industrial site
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<b>SPERC</b>	ESVOC SPERC 1.1b.v1
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#### Worker

<b>Process category</b>	PROC1 Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions PROC3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition PROC4 Chemical production where opportunity for exposure arises PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities PROC9 Transfer of substance or mixture into small containers (dedicated filling line, including weighing) PROC15 Use as laboratory reagent.
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#### 2. Conditions of use affecting exposure (Industrial - Environment 1)

##### Control of environmental exposure

No exposure assessment presented for the environment.

#### 2. Conditions of use affecting exposure (Workers - Health 1)

## Distribution of Substance - Industrial

### Product characteristics

<b>Physical state</b>	Liquid
<b>Vapour pressure</b>	Vapour pressure < 0.5 kPa at STP.
<b>Concentration details</b>	Covers percentage substance in the product up to 100% (unless stated differently).

### Frequency and duration of use

Covers daily exposures up to 8 hours (unless stated differently).

### Other given operational conditions affecting workers exposure

<b>Setting</b>	Assumes a good basic standard of occupational hygiene is implemented.
<b>Temperature</b>	Assumes use at not more than 20°C above ambient temperature, unless stated differently.

### Risk management measures

General exposures (closed systems)  
Handle substance within a closed system.  
.

General exposures (open systems)  
No other specific measures identified.  
.

Process sampling  
No other specific measures identified.  
.

Laboratory activities  
No other specific measures identified.  
.

Bulk transfers  
(closed systems)  
No other specific measures identified.  
.

Bulk transfers  
(open systems)  
No other specific measures identified.  
.

Drum and small package filling  
No other specific measures identified.  
.

Equipment cleaning and maintenance  
No other specific measures identified.  
.

Storage  
Store substance within a closed system.  
Transfer via enclosed lines.

### 3. Exposure estimation (Health 1)

<b>Assessment method</b>	The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated
	Available hazard data do not enable the derivation of a DNEL for dermal irritant effects. Qualitative approach used to conclude safe use.

### 4. Guidance to check compliance with the exposure scenario (Health 1)



## **Distribution of Substance - Industrial**

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.

## Exposure scenario

### Formulation & (Re)packing of Substances and Mixtures - Industrial

#### Identification

<b>Product name</b>	Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, aromatics < 2%
<b>EU REACH registration number</b>	01-2119463258-33-0003
<b>Version number</b>	2021
<b>Es reference</b>	ES02

#### 1. Title of exposure scenario

<b>Main title</b>	Formulation & (Re)packing of Substances and Mixtures - Industrial
<b>Process scope</b>	Formulation, packing and re-packing of the substance and its mixtures in batch or continuous operations, including storage, materials transfers, mixing, tableting, compression, pelletisation, extrusion, large and small scale packing, sampling, maintenance and associated laboratory activities.
<b>Environment</b>	
<b>Environmental release category</b>	ERC2 Formulation into mixture
<b>SPERC</b>	ESVOC SPERC 2.2.v2
<b>Worker</b>	
<b>Process category</b>	<p>PROC1 Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions</p> <p>PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions</p> <p>PROC3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition</p> <p>PROC4 Chemical production where opportunity for exposure arises</p> <p>PROC5 Mixing or blending in batch processes</p> <p>PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities</p> <p>PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities</p> <p>PROC9 Transfer of substance or mixture into small containers (dedicated filling line, including weighing)</p> <p>PROC14 Tableting, compression, extrusion, pelletisation, granulation</p> <p>PROC15 Use as laboratory reagent.</p>

#### 2. Conditions of use affecting exposure (Industrial - Environment 1)

##### Product characteristics

<b>Physical state</b>	Liquid
<b>Vapour pressure</b>	Vapour pressure < 0.5 kPa at STP.

##### Amounts used

Daily amount per site: <= 13.46 tonnes  
 Annual site tonnage: <= 4040 tonnes  
 Fraction of EU tonnage used in region: 0.1

##### Frequency and duration of use

## Formulation & (Re)packing of Substances and Mixtures - Industrial

Emission days: 300 days/year

### Other given operational conditions affecting environmental exposure

Emission factor - air	1%
Emission factor - water	0.0005 %
Emission factor - soil	0.01%

### 2. Conditions of use affecting exposure (Workers - Health 1)

#### Product characteristics

Physical state	Liquid
Vapour pressure	Vapour pressure < 0.5 kPa at STP.
Concentration details	Covers percentage substance in the product up to 100% (unless stated differently).

#### Frequency and duration of use

Covers daily exposure up to 8hours

### Other given operational conditions affecting workers exposure

Setting	Assumes a good basic standard of occupational hygiene is implemented.
Temperature	Assumes use at not more than 20°C above ambient temperature, unless stated differently.
Ventilation rate	≤ 3 air changes per hour

#### Risk management measures

No specific risk management measure identified beyond those operational conditions stated.

### 3. Exposure estimation (Health 1)

Assessment method	The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated
	Available hazard data do not enable the derivation of a DNEL for dermal irritant effects. Qualitative approach used to conclude safe use.

### 4. Guidance to check compliance with the exposure scenario (Health 1)

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.

## Exposure scenario

### Use in Water Treatment Chemicals - Consumer

#### Identification

Product name	Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, aromatics < 2%
EU REACH registration number	01-2119463258-33-0003
Version number	2021
Es reference	ES21c

#### 1. Title of exposure scenario

Main title	Use in Water Treatment Chemicals - Consumer
Process scope	Covers the use of the substance for the treatment of water in open and closed systems.
Product category	PC36 Water softeners. PC37 Water treatment chemicals.

#### Environment

Environmental release category	ERC8d Widespread use of non-reactive processing aid (no inclusion into or onto article, outdoor)
SPERC	ESVOC SPERC 8.22c.v2

#### 2. Conditions of use affecting exposure (Non-industrial - Environment 1)

##### Amounts used

Daily amount per site:  $\leq 1.4E-5$  tonnes  
Fraction of EU tonnage used in region: 0.1

##### Other given operational conditions affecting environmental exposure

Emission factor - air	1%
Emission factor - water	99%
Emission factor - soil	Not applicable - no direct release to soil.

#### 2. Conditions of use affecting exposure (Non-industrial - Health 1)

##### Control of Non-industrial exposure

PC36 Water softeners. PC37 Water treatment chemicals.

##### Product characteristics

Physical state	Liquid
Concentration details	Covers concentrations up to 100 %.

##### Frequency and duration of use

Covers use up to 1 time(s)/day.  
(frequent use over a year)

##### Human factors not influenced by risk management

Potentially exposed body parts	Inhalation
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##### Other given operational conditions affecting Non-industrial exposure

## Use in Water Treatment Chemicals - Consumer

**Setting** Indoor.

**Other given operational conditions affecting Non-industrial exposure**

No specific risk management measure identified beyond those operational conditions stated.

### 3. Exposure estimation (Health 1)

**Assessment method** The ECETOC TRA tool has been used to estimate consumer exposures, unless otherwise indicated.

Available hazard data do not enable the derivation of a DNEL for dermal irritant effects. Qualitative approach used to conclude safe use.

### 4. Guidance to check compliance with the exposure scenario (Health 1)

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.

## Exposure scenario

### Uses in Coatings - Industrial

#### Identification

<b>Product name</b>	Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, aromatics < 2%
<b>EU REACH registration number</b>	01-2119463258-33-0003
<b>Version number</b>	2021
<b>Es reference</b>	ES03a

#### 1. Title of exposure scenario

<b>Main title</b>	Uses in Coatings - Industrial
<b>Process scope</b>	Covers the use in coatings (paints, inks, adhesives, etc.), including exposures during use (including materials receipt, storage, preparation and transfer from bulk and semi-bulk, application by spray, roller, spreader, dip, flow, fluidised bed on production lines and film formation) and equipment cleaning, maintenance and associated laboratory activities.
<b>Environment</b>	
<b>Environmental release category</b>	ERC4 Use of non-reactive processing aid at industrial site (no inclusion into or onto article)
<b>SPERC</b>	ESVOC SPERC 4.3a.v2
<b>Worker</b>	
<b>Process category</b>	<p>PROC1 Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions</p> <p>PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions</p> <p>PROC3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition</p> <p>PROC4 Chemical production where opportunity for exposure arises</p> <p>PROC5 Mixing or blending in batch processes</p> <p>PROC7 Industrial spraying</p> <p>PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities</p> <p>PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities</p> <p>PROC9 Transfer of substance or mixture into small containers (dedicated filling line, including weighing)</p> <p>PROC10 Roller application or brushing</p> <p>PROC13 Treatment of articles by dipping and pouring.</p> <p>PROC14 Tableting, compression, extrusion, pelletisation, granulation</p> <p>PROC15 Use as laboratory reagent.</p>

#### 2. Conditions of use affecting exposure (Industrial - Environment 1)

##### Amounts used

Daily amount per site: <= 18.66 tonnes  
 Annual site tonnage: <= 5600 tonnes  
 Fraction of EU tonnage used in region: 0.1

##### Frequency and duration of use

Emission days: 300 days/year

## Uses in Coatings - Industrial

### Other given operational conditions affecting environmental exposure

Emission factor - air	9.8%
Emission factor - water	0.002%
Emission factor - soil	5%

### 2. Conditions of use affecting exposure (Workers - Health 1)

#### Product characteristics

Physical state	Liquid
Vapour pressure	Vapour pressure < 0.5 kPa at STP.
Concentration details	Covers percentage substance in the product up to 100% (unless stated differently).

#### Frequency and duration of use

Covers daily exposures up to 8 hours (unless stated differently).

### Other given operational conditions affecting workers exposure

Setting	Indoor.
Temperature	Assumes use at not more than 20°C above ambient temperature, unless stated differently.
Ventilation rate	≤ 3 air changes per hour Unless otherwise stated.

#### Risk management measures

No specific risk management measure identified beyond those operational conditions stated. Unless otherwise stated.

PROC7 Industrial spraying  
5 - 10  
air changes per hour  
Wear suitable gloves tested to EN374.

### 3. Exposure estimation (Health 1)

Assessment method	The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated  Available hazard data do not enable the derivation of a DNEL for dermal irritant effects. Qualitative approach used to conclude safe use.
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### 4. Guidance to check compliance with the exposure scenario (Health 1)

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.