



SAFETY DATA SHEET NESSOL 40E

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

1.1. Product identifier

Product name	NESSOL 40E
Product number	ID 10561
Internal identification	137211
Synonyms; trade names	Previous product name: NESSOL LI 200E. Previous product number: 755511.

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

Identified uses	Solvent. Use in cleaning agents
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1.3. Details of the supplier of the safety data sheet

Supplier

Neste Markkinointi Oy
Keilaranta 21, Espoo, PL 95, FIN-00095 NESTE, FINLAND
Tel. +358 10 45811
fueltec@neste.com

1.4. Emergency telephone number

National emergency telephone number +358-9-471 977, +358-9-4711, Poison Information Centre number

SECTION 2: Hazards identification

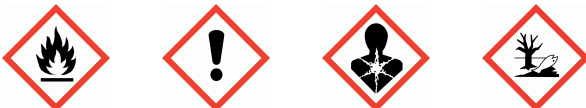
2.1. Classification of the substance or mixture

Classification (EC 1272/2008)

Physical hazards	Flam. Liq. 3 - H226
Health hazards	STOT SE 3 - H336 STOT RE 1 - H372 Asp. Tox. 1 - H304
Environmental hazards	Aquatic Chronic 2 - H411

2.2. Label elements

Pictogram



Signal word

Danger

Hazard statements

H226 Flammable liquid and vapour.
H304 May be fatal if swallowed and enters airways.
H336 May cause drowsiness or dizziness.
H372 Causes damage to organs through prolonged or repeated exposure.
H411 Toxic to aquatic life with long lasting effects.

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Precautionary statements

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P273 Avoid release to the environment.

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-C12, n-alkanes, isoalkanes, cyclics, aromatics (2-25%)

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.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Hydrocarbons, C9-C12, n-alkanes, isoalkanes, cyclics, aromatics (2-25%)	97 %
CAS number: —	REACH registration number: 01-2119458049-33-XXXX
Classification	
Flam. Liq. 3 - H226	
STOT SE 3 - H336	
STOT RE 1 - H372	
Asp. Tox. 1 - H304	
Aquatic Chronic 2 - H411	
(2-methoxymethylethoxy)propanol	< 1 %
CAS number: 34590-94-8	EC number: 252-104-2
	REACH registration number: 01-2119450011-60-XXXX
Classification	
Not Classified	

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

Composition comments

aromatic hydrocarbons 14...20 vol-%. Benzene (CAS 71-43-2) < 0,1 %. n-hexane (CAS 110-54-3) < 1,0 %.

Other information

Hydrocarbons, C9-C12, n-alkanes, isoalkanes, cyclics, aromatics (2-25%),, Identity outside the EU (CAS number and name of the substance):, 64742-82-1, Naphtha (petroleum), hydrodesulfurized, heavy., Previous EC number:., 265-185-4.

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation

Remove person to fresh air and keep comfortable for breathing. Get medical attention if symptoms are severe or persist.

Ingestion

Do not induce vomiting. Get medical attention immediately.

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Skin contact 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.

Eye contact 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

General information Harmful: danger of serious damage to health by prolonged exposure through inhalation. 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.

4.3. Indication of any immediate medical attention and special treatment needed

Notes for the doctor Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media Water spray, foam, dry powder or carbon dioxide.

Unsuitable extinguishing media Do not use water jet as an extinguisher, as this will spread the fire.

5.2. Special hazards arising from the substance or mixture

Specific hazards 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.

Hazardous combustion products Carbon dioxide (CO₂). Carbon monoxide (CO).

5.3. Advice for firefighters

Protective actions during firefighting 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.

Special protective equipment for firefighters 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

Personal precautions Avoid inhalation of vapours and contact with skin and eyes. Wear adequate protective equipment at all operations.

For non-emergency personnel Keep upwind to avoid inhalation of gases, vapours, fumes and smoke.

For emergency responders 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

Environmental precautions 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.

6.3. Methods and material for containment and cleaning up

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Methods for cleaning up Immediately start clean-up of the liquid and contaminated soil. Large spills should be collected mechanically (remove by pumping) for disposal. Small Spillages: Absorb spillage with sand or other inert absorbent. 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. All handling should only take place 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. Take precautions against leakage by constructing collecting pools and sewerage systems as well as by surfacing the loading and unloading stations. 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

Occupational exposure limits

(2-methoxymethylethoxy)propanol

(2-methoxymethylethoxy)propanol: 50 ppm (8h), 310 mg/m³ (8h), HTP 2016/FIN, EU OELV (EC/2000/39)
May be absorbed through the skin.

Ingredient comments Solvent naphtha, group 2: 200 mg/m³ (8h), HTP 2016/FIN. The individual limit values can be applied for the hydrocarbons.

PNEC Not available.

Hydrocarbons, C9-C12, n-alkanes, isoalkanes, cyclics, aromatics (2-25%)

DNEL Workers - Inhalation; Short term systemic effects: 570 mg/m³
Workers - Inhalation; Long term systemic effects: 330 mg/m³
Workers - Dermal; Long term systemic effects: 44 mg/kg/day
Consumer - Inhalation; Short term systemic effects: 570 mg/m³
Consumer - Inhalation; Long term systemic effects: 71 mg/m³
Consumer - Oral; Long term systemic effects: 26 mg/kg/day

8.2. Exposure controls

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Appropriate engineering controls	All handling should only take place in well-ventilated areas. Use personal protective equipment and/or local ventilation when needed. Handle in accordance with good industrial hygiene and safety practice.
Eye/face protection	Tight-fitting safety glasses.
Hand protection	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 standards EN 420 and EN 374. Change protective gloves regularly.
Other skin and body protection	Protective clothing when needed. Wear anti-static protective clothing if there is a risk of ignition from static electricity.
Respiratory protection	Filter device/half mask Gas filter, type A2. Filter device could be used maximum 2 hours at a time. Filter devices must not be used in conditions where the oxygen level is low (< 19 vol.-%). At high concentrations a breathing apparatus must be used (self-contained or fresh air hose breathing apparatus). Filter must be changed often enough. Respirators according to standards EN 140 and EN 141.
Environmental exposure controls	Take precautions against leakage by constructing collecting pools and sewerage systems as well as by surfacing the loading and unloading stations.

SECTION 9: Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

Appearance	Mobile liquid.
Colour	Clear.
Odour	Hydrocarbons.
Odour threshold	-
pH	-
Melting point	(Melting/pour point) < -15°C
Initial boiling point and range	150-200°C (EN ISO 3405)
Flash point	≥ 39°C (DIN 51755)
Upper/lower flammability or explosive limits	Lower flammable/explosive limit: ~0,6 % (calculated) Upper flammable/explosive limit: ~7 % (calculated)
Vapour pressure	~ 1 kPa @ 38°C
Vapour density	> 3 (Air = 1.0)
Relative density	~ 0,8 @ 15/4°C
Solubility(ies)	Emulsifiable in water.
Partition coefficient	Hydrocarbons: log Kow: 2...7
Auto-ignition temperature	~ 250°C Estimated value.
Decomposition Temperature	-
Viscosity	Hydrocarbons: Kinematic viscosity < 2 mm ² /s @ 40°C (EN ISO 3104)
Explosive properties	Not considered to be explosive.
Oxidising properties	Does not meet the criteria for classification as oxidising.

9.2. Other information

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Other information None known.

SECTION 10: Stability and reactivity

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., Repeated exposure may cause skin dryness or cracking., (, Hydrocarbons., C9-C12: OECD 404)

Serious eye damage/irritation

Serious eye damage/irritation Based on available data the classification criteria are not met. (C9-C12: OECD 405).

Skin sensitisation

Skin sensitisation Based on available data the classification criteria are not met. (C9-C12: OECD 406; HRIPT).

Germ cell mutagenicity

Genotoxicity - in vitro Based on available data the classification criteria are not met. (C9-C12: OECD 471, 473, 479).

Genotoxicity - in vivo Based on available data the classification criteria are not met. (C9-C12: OECD 474, 475)

Carcinogenicity

Carcinogenicity Based on available data the classification criteria are not met. (C9-C12: OECD 453)

Reproductive toxicity

Reproductive toxicity - fertility Based on available data the classification criteria are not met. (C9-C12: OECD 413, 415)

Reproductive toxicity - development Based on available data the classification criteria are not met. (C9-C12: OECD 414)

Specific target organ toxicity - single exposure

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

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Specific target organ toxicity - repeated exposure

STOT - repeated exposure Causes damage to organs through prolonged or repeated exposure if inhaled.

Aspiration hazard

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

Hydrocarbons, C9-C12, n-alkanes, isoalkanes, cyclics, aromatics (2-25%)

Acute toxicity - oral

Notes (oral LD₅₀) LD₅₀ > 15000 mg/kg, Oral, Rat (OECD 401)

Acute toxicity - dermal

Notes (dermal LD₅₀) LD₅₀ > 3400 mg/kg, Dermal, Rabbit (OECD 402)

Acute toxicity - inhalation

Notes (inhalation LC₅₀) LC₅₀ > 13,1 mg/l, Inhalation, Rat (4h) (OECD 403)

(2-methoxymethylethoxy)propanol

Acute toxicity - oral

Notes (oral LD₅₀) LD₅₀ > 2000 mg/kg, Oral, Rat

SECTION 12: Ecological Information

12.1. Toxicity

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

Hydrocarbons, C9-C12, n-alkanes, isoalkanes, cyclics, aromatics (2-25%)

Acute toxicity - fish LL₅₀, 96 hours: 10 - 30 mg/l, Algae
NOELR, 96 hours: 0,3 mg/l, Algae
(OECD 203)

Acute toxicity - aquatic invertebrates EL50, 48 hours: 10 - 22 mg/l,
(OECD 202)

Acute toxicity - aquatic plants EC₅₀, 96 hours: 0,58 - 1,2 mg/l, Fish
NOEC, 96 hours: 0,16 mg/l, Fish
EL50, 72 hours: 4,6 - 10 mg/l, Fish
NOELR, 72 hours: 0,22 - 1,0 mg/l, Fish
(OECD 201)

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

Chronic toxicity - aquatic invertebrates NOEC, 21 days: 0,10 - 0,37 mg/l,
LOEC, 21 days: 0,20 - 0,83 mg/l,
EC10, 21 days: 0,11-0,25 mg/l,
(OECD 211)

(2-methoxymethylethoxy)propanol

Acute toxicity - fish LC₅₀, 96 hours: > 1000 mg/l, Algae

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Acute toxicity - aquatic plants EC₅₀, 96 hours: 969 mg/l, Fish

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.

Hydrocarbons, C9-C12, n-alkanes, isoalkanes, cyclics, aromatics (2-25%)

Biodegradation Rapidly degradable
(OECD 301F)

(2-methoxymethylethoxy)propanol

Biodegradation > 60% BOD, 28d (OECD 301F)

12.3. Bioaccumulative potential

Bioaccumulative potential No data available.

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

12.4. Mobility in soil

Mobility Evaporates slowly. 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.

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. Waste packaging should be collected for reuse or recycling.

SECTION 14: Transport information

14.1. UN number

UN No. (ADR/RID) 1300

14.2. UN proper shipping name

Proper shipping name (ADR/RID) TURPENTINE SUBSTITUTE (WHITE SPIRIT)

14.3. Transport hazard class(es)

ADR/RID class 3

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14.4. Packing group

ADR/RID packing group III

14.5. Environmental hazards

Environmentally hazardous substance/marine pollutant

MARINE POLLUTANT

14.6. Special precautions for user

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.

Not applicable.

SECTION 15: Regulatory information

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

EU legislation

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).

Commission Regulation (EU) No 2015/830 of 28 May 2015.

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).

Regulation (EC) No 648/2004 of the European Parliament and of the Council of 31 March 2004 on detergents (as amended).

The surfactant(s) contained in this product complies(comply) with the biodegradability criteria as laid down in Regulation (EC) No. 648/2004 on detergents.

Data to support this assertion are held at the disposal of the competent authorities of the Member States and will be made available to them at their direct request, or at the request of a detergent manufacturer.

15.2. Chemical safety assessment

Hydrocarbons: C9-C12: A chemical safety assessment has been carried out.

SECTION 16: Other information

Key literature references and sources for data Regulations, databases, literature, own research. Chemical Safety Report Hydrocarbons, C9-C12, n-alkanes, isoalkanes, cyclics, aromatics (2-25%), 2014.

Revision comments Updated, sections: 1-2, Exposure scenarios Product name change.

Revision date 03/11/2017

Supersedes date 20/01/2015

SDS number 5962

Hazard statements in full H226 Flammable liquid and vapour.
H304 May be fatal if swallowed and enters airways.
H336 May cause drowsiness or dizziness.
H372 Causes damage to organs through prolonged or repeated exposure.
H411 Toxic to aquatic life with long lasting effects.

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Exposure scenario

Use in Cleaning Agents - Industrial

Identification

Product name	Hydrocarbons, C9-C12, n-alkanes, isoalkanes, cyclics, aromatics (2-25%)
REACH registration number	01-2119458049-33-0006
Version number	2014

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.
Main sector	SU3 Industrial uses
Environment	
Environmental release category	ERC4 Industrial use of processing aids in processes and products, not becoming part of articles.
SPERC	ESVOC SpERC 4.4a.v1
Worker	
Process category	<p>PROC1 Use in closed process, no likelihood of exposure.</p> <p>PROC2 Use in closed, continuous process with occasional controlled exposure</p> <p>PROC3 Use in closed batch process (synthesis or formulation).</p> <p>PROC4 Use in batch and other process (synthesis) where opportunity for exposure arises.</p> <p>PROC7 Spraying in industrial settings and applications.</p> <p>PROC8a Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities.</p> <p>PROC8b Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities.</p> <p>PROC10 Roller application or brushing of adhesive and other coating.</p> <p>PROC13 Treatment of articles by dipping and pouring.</p>

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

Product characteristics

Substance is complex UVCB. Predominantly hydrophobic.

Amounts used

Fraction of EU tonnage used in region: 0.1
 Regional use tonnage: 1400 tonnes/year
 Fraction of Regional tonnage used locally: 1
 Annual site tonnage: 100 tonnes
 Maximum daily site tonnage: 5.0 tonnes

Frequency and duration of use

Continuous release.
 Emission days: 20 days/year

Use in Cleaning Agents - Industrial

Other given operational conditions affecting environmental exposure

Emission factor - air	Release fraction to air from process (initial release prior to RMM): 1.0
Emission factor - water	Release fraction to wastewater from process (initial release prior to RMM): 3.0E-07
Emission factor - soil	Release fraction to soil from process (initial release prior to RMM): 0

Environmental factors not influenced by risk management measures

Dilution	Local freshwater dilution factor: 10 Local marine water dilution factor: 100
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Risk management measures

Good practice	Common practices vary across sites, thus conservative process release estimates used.
STP details	Estimated substance removal from wastewater via domestic sewage treatment: 93.7% Removal efficiency (total): 93,7% Maximum allowable site tonnage (Msafe), based on release following total wastewater treatment removal: 4600 tonne/day Assumed domestic sewage treatment plant flow (m ³ /day): 2000.

Technical onsite conditions and measures to reduce or limit discharges to air, water and soil

Air	Treat air emission to provide a typical removal efficiency of 70%.
Water	No wastewater treatment required. Prevent discharge of undissolved substance to or recover from onsite waste water.
Soil	Do not apply industrial sludge to natural soils. Sludge should be incinerated, contained or reclaimed.

Conditions and measures related to external treatment of waste for disposal

Waste treatment	External treatment and disposal of waste should comply with applicable local and/or national regulations.
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Conditions and measures related to external recovery of waste

Recovery method	External recovery and recycling of waste should comply with applicable local and/or national regulations.
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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	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.

Risk management measures

Use in Cleaning Agents - Industrial

Bulk transfers

No other specific measures identified.

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Automated process with (semi) closed systems

Use in contained systems

No other specific measures identified.

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Automated process with (semi) closed systems

Drum/batch transfers

No other specific measures identified.

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Application of cleaning products in closed systems

No other specific measures identified.

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Filling/preparation of equipment from drums or containers.

No other specific measures identified.

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Use in contained batch processes

No other specific measures identified.

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Degreasing small objects in cleaning station

No other specific measures identified.

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Cleaning with low-pressure washers

No other specific measures identified.

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Cleaning with high-pressure washers

Provide a good standard of controlled ventilation (10 to 15 air changes per hour).

, or:

Wear a respirator conforming to EN140 with Type A filter or better.

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Surface cleaning

Manual

No other specific measures identified.

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Storage

No other specific measures identified.

3. Exposure estimation (Environment 1)

Assessment method Used Petrorisk model. (Hydrocarbon Block Method)

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

Guidance is based on assumed operating conditions which may not be applicable to all sites, thus, scaling may be necessary to define appropriate site-specific risk management measures. Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination. Required removal efficiency for air can be achieved using onsite technologies, either alone or in combination. Further details on scaling and control technologies are provided in SpERC factsheet (<http://cefic.org/en/reach-for-industries-libraries.html>).

3. Exposure estimation (Health 1)

Use in Cleaning Agents - Industrial

Assessment method

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

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-C12, n-alkanes, isoalkanes, cyclics, aromatics (2-25%)
REACH registration number	01-2119458049-33-0006
Version number	2014

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).
Main sector	SU22 Professional uses
Environment	
Environmental release category	ERC8a Wide dispersive indoor use of processing aids in open systems. ERC8d Wide dispersive outdoor use of processing aids in open systems.
SPERC	ESVOC SpERC 8.4b.v1
Worker	
Process category	PROC1 Use in closed process, no likelihood of exposure. PROC2 Use in closed, continuous process with occasional controlled exposure PROC3 Use in closed batch process (synthesis or formulation). PROC4 Use in batch and other process (synthesis) where opportunity for exposure arises. PROC8a Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities. PROC8b Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities. PROC10 Roller application or brushing of adhesive and other coating. PROC11 Spraying outside industrial settings and/or applications. PROC13 Treatment of articles by dipping and pouring.

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

Product characteristics

Substance is complex UVCB. Predominantly hydrophobic.

Amounts used

Fraction of EU tonnage used in region: 0.1
Regional use tonnage: 340 tonnes/year
Fraction of Regional tonnage used locally: 1
Annual site tonnage: 0.17 tonnes
Maximum daily site tonnage: 0.47 kg

Frequency and duration of use

Continuous release.
Emission days: 365 days/year

Other given operational conditions affecting environmental exposure

Use in Cleaning Agents - Professional

Emission factor - air	Release fraction to air from process (initial release prior to RMM): 0.02
Emission factor - water	Release fraction to wastewater from process (initial release prior to RMM): 1.0E-06
Emission factor - soil	Release fraction to soil from process (initial release prior to RMM): 0

Environmental factors not influenced by risk management measures

Dilution	Local freshwater dilution factor: 10 Local marine water dilution factor: 100
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Risk management measures

Good practice	Common practices vary across sites, thus conservative process release estimates used. Risk from environmental exposure is driven by fresh water.
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STP details	Estimated substance removal from wastewater via domestic sewage treatment: 93.7% Removal efficiency (total): 93,7% Maximum allowable site tonnage (Msafe), based on release following total wastewater treatment removal: 470 kg/day Assumed domestic sewage treatment plant flow (m ³ /day): 2000.
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Technical onsite conditions and measures to reduce or limit discharges to air, water and soil

Water	No wastewater treatment required. Prevent discharge of undissolved substance to or recover from onsite waste water.
Soil	Do not apply industrial sludge to natural soils. Sludge should be incinerated, contained or reclaimed.

Conditions and measures related to external treatment of waste for disposal

Waste treatment	External treatment and disposal of waste should comply with applicable local and/or national regulations.
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Conditions and measures related to external recovery of waste

Recovery method	External recovery and recycling of waste should comply with applicable local and/or national regulations.
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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	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.

Risk management measures

Use in Cleaning Agents - Professional

Filling/preparation of equipment from drums or containers.
No other specific measures identified.

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Automated process with (semi) closed systems
Use in contained systems
No other specific measures identified.

.
Automated process with (semi) closed systems
Drum/batch transfers
Use in contained batch processes
No other specific measures identified.

.
Semi-automated process (e.g. semi-automatic application of floor care and maintenance products)
No other specific measures identified.

.
Filling/preparation of equipment from drums or containers.
No other specific measures identified.

.
Surface cleaning
Manual
Dipping, immersion and pouring
No other specific measures identified.

.
Rolling, brushing
Cleaning with low-pressure washers
No spraying
No other specific measures identified.

.
Cleaning with high-pressure washers
Spraying
Indoor.
Provide a good standard of controlled ventilation (10 to 15 air changes per hour).
, or:
Wear a respirator conforming to EN140 with Type A filter or better.

.
Cleaning with high-pressure washers
Spraying
Outdoor.
Ensure operation is undertaken outdoors.
Limit the substance content in the product to 25%.
, or:
Wear a respirator conforming to EN140 with Type A filter or better.

.
Surface cleaning
Manual
Spraying
No other specific measures identified.

.
Ad hoc manual application via trigger sprays, dipping, etc.
Rolling, brushing
No other specific measures identified.

.
Application of cleaning products in closed systems
Outdoor.

Use in Cleaning Agents - Professional

No other specific measures identified.

.

Cleaning of medical devices

No other specific measures identified.

.

Storage

No other specific measures identified.

3. Exposure estimation (Environment 1)

Assessment method Used Petrorisk model. (Hydrocarbon Block Method)

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

Guidance is based on assumed operating conditions which may not be applicable to all sites, thus, scaling may be necessary to define appropriate site-specific risk management measures. Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination. Required removal efficiency for air can be achieved using onsite technologies, either alone or in combination. Further details on scaling and control technologies are provided in SpERC factsheet (<http://cefic.org/en/reach-for-industries-libraries.html>).

3. Exposure estimation (Health 1)

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

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-C12, n-alkanes, isoalkanes, cyclics, aromatics (2-25%)
REACH registration number	01-2119458049-33-0006
Version number	2016

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 (including solvent-based products). PC38 Welding and soldering products, flux products.
Main sector	SU21 Consumer uses
Environment	
Environmental release category	ERC8a Wide dispersive indoor use of processing aids in open systems. ERC8d Wide dispersive outdoor use of processing aids in open systems.
SPERC	ESVOC SpERC 8.4c.v1

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

Product characteristics

Substance is complex UVCB. Predominantly hydrophobic.

Amounts used

Fraction of EU tonnage used in region: 0.1
Regional use tonnage: 50 tonnes/year
Fraction of Regional tonnage used locally: 5.0E-04
Annual site tonnage: 2.5E-02 tonnes
Maximum daily site tonnage: 6.8E-02 kg/day

Frequency and duration of use

Continuous release.
Emission days: 365 days/year

Other given operational conditions affecting environmental exposure

Emission factor - air	Release fraction to air from process (initial release prior to RMM): 0.95
Emission factor - water	Release fraction to wastewater from process (initial release prior to RMM): 0.025
Emission factor - soil	Release fraction to soil from process (initial release prior to RMM): 0.025

Use in Cleaning Agents - Consumer

Environmental factors not influenced by risk management measures

Dilution Local freshwater dilution factor: 10
Local marine water dilution factor: 100

Risk management measures

STP details Estimated substance removal from wastewater via domestic sewage treatment: 93.7%
Maximum allowable site tonnage (Msafe), based on release following total wastewater treatment removal: 63 kg/day
Assumed domestic sewage treatment plant flow (m³/day): 2000.

Conditions and measures related to external treatment of waste for disposal

Waste treatment External treatment and disposal of waste should comply with applicable local and/or national regulations.

Conditions and measures related to external recovery of waste

Recovery method External recovery and recycling of waste should comply with applicable local and/or national regulations.

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_n Air care, instant action (aerosol sprays) - pesticidal - excipient only PC3_2 Air care, continuous action (solid and liquid) PC3_n Air care, continuous action (solid and liquid) - pesticidal - excipient only

Product characteristics

Physical state Liquid

Vapour pressure 231 Pa

Concentration details Covers concentrations up to 50 %. Unless otherwise stated.

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_n Air care, instant action (aerosol sprays) - pesticidal - excipient only
For each use event, covers use amounts up to 0.5 g.
PC3_2 Air care, continuous action (solid and liquid)
For each use event, covers use amounts up to 0.48 g.
PC3_n Air care, continuous action (solid and liquid) - pesticidal - excipient only
For each use event, covers use amounts up to 0.48 g.

Frequency and duration of use

Use in Cleaning Agents - Consumer

Covers use up to 365 days/year.

PC3_1 Air care, instant action (aerosol sprays)

PC3_n Air care, instant action (aerosol sprays) - pesticidal - excipient only

Covers exposure up to 0.25 hours per event.

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

PC3_2 Air care, continuous action (solid and liquid)

PC3_n Air care, continuous action (solid and liquid) - pesticidal - excipient only

Covers exposure up to 8.00 hours per event.

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

Human factors not influenced by risk management

Potentially exposed body parts PC3_1 Air care, instant action (aerosol sprays) , PC3_n Air care, instant action (aerosol sprays) - pesticidal - excipient only : Covers skin contact area up to 857,5 cm². PC3_2 Air care, continuous action (solid and liquid) , PC3_n Air care, continuous action (solid and liquid) - pesticidal - excipient only : Covers skin contact area up to 35.70 cm².

Other given operational conditions affecting Non-industrial exposure

Setting Covers use under typical household ventilation. Covers use in room size of 20 m³.

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

Vapour pressure 231 Pa

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 day(s)/year.

Unless otherwise stated.

.

PC4_1 Washing car window

Covers exposure up to 0,02 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

PC4_1 Washing car window : Covers skin contact area up to 857,50 cm². PC4_2 Pouring into radiator : Covers skin contact area up to 428,00 cm². PC4_3 Lock de-icer : Covers skin contact area up to 214,40 cm². 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 skin contact area up to 857,50 cm². PC8_3 Cleaners, trigger sprays (all purpose cleaners, sanitary products, glass cleaners) : Covers skin contact area up to 428,00 cm².

Other given operational conditions affecting Non-industrial exposure

Setting

PC4 Anti-freeze and de-icing products. : Covers use in a one car garage (34 m³) under typical ventilation. PC8 Biocidal products. : Covers use under typical household ventilation. Covers use in room size of 20 m³.

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

Vapour pressure

231 Pa

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 50 %.

PC9c Finger paints. : Avoid using at a product concentration greater than 5%.

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 13 800 g.

PC9b_3 Modelling clay

For each use event, covers use amounts up to 13 800 g.

PC9c Finger paints.

For each use event, covers use amounts up to 13 800 g.

Frequency and duration of use

Use in Cleaning Agents - Consumer

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

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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 8,00 hours per event.

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

PC9c Finger paints.

Covers exposure up to 8,00 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 : Covers skin contact area up to 428,75 cm². PC9a_3 Aerosol spray can. , PC9a_4 Removers (paint-, glue-, wallpaper-, sealant-remover). : Covers skin contact area up to 857,50 cm². PC9b_1 Fillers and putty : Covers skin contact area up to 35,73 cm². PC9b_2 Plasters and floor equalisers : Covers skin contact area up to 857,50 cm². PC9b_3 Modelling clay , PC9c Finger paints. : Covers skin contact area up to 254,40 cm².

PC9b_3 Modelling clay For each use event, assumes swallowed amount of (g): 1. PC9c Finger paints. For each use event, assumes swallowed amount of (g): 1,35.

Other given operational conditions affecting Non-industrial exposure

Setting

Covers use under typical household ventilation. Covers use in room size of 20 m³. Unless otherwise stated.

Temperature

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

Room size

PC9a_3 Aerosol spray can. : Covers use in a one car garage (34 m³) 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

Use in Cleaning Agents - Consumer

PC24 Lubricants, greases and release products. : PC24_1 Liquids PC24_2 Pastes PC24_3 Sprays PC35 Washing and cleaning products (including solvent-based 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

Physical state

Liquid

Vapour pressure

231 Pa

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 %.

Amounts used

PC24_1 Liquids

For each use event, covers use amounts up to 2 200 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.

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

Use in Cleaning Agents - Consumer

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 day(s)/year.

PC24_2 Pastes

Covers exposure up to 4,00 hours per event.

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 hour per event.

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

Human factors not influenced by risk management

Potentially exposed body parts

PC24_1 Liquids , PC24_2 Pastes : Covers skin contact area up to 468,00 cm². PC24_3 Sprays : Covers skin contact area up to 428,75 cm². PC35_1 Laundry and dish washing products , PC35_2 Cleaners, liquids (all purpose cleaners, sanitary products, floor cleaners, carpet cleaners, metal cleaners) : Covers skin contact area up to 857,50 cm². PC35_3 Cleaners, trigger sprays (all purpose cleaners, sanitary products, glass cleaners) : Covers skin contact area up to 428,00 cm². PC38 Welding and soldering products, flux products. : Covers skin contact area up to 857,50 cm².

Other given operational conditions affecting Non-industrial exposure

Setting

Covers use under typical household ventilation. Covers use in room size of 20 m³. 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 m³) 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 (Environment 1)

Assessment method

Used Petrorisk model. (Hydrocarbon Block Method)

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

Guidance is based on assumed operating conditions which may not be applicable to all sites, thus, scaling may be necessary to define appropriate site-specific risk management measures. Further details on scaling and control technologies are provided in SpERC factsheet (<http://cefic.org/en/reach-for-industries-libraries.html>).

Use in Cleaning Agents - Consumer

3. Exposure estimation (Health 1)

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

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.