

SAFETY DATA SHEET

SOLVENTNAPHTHA K

SECTION 1: IDENTIFICATION OF THE SUBSTANCE AND OF THE COMPANY

1.1. Product identifier

Substance name: Solvent naphtha (coal), xylene – styrene cut
Product name: SOLVENTNAPHTHA K
Index No: 648-007-00-3
EINECS: 287-502-5
CAS number: 85536-20-5
CAS name: Solvent naphtha (coal), xylene – styrene cut
IUPAC name: -
REACH registration number: 01-2119496055-34-0001
Type of substance: Composition: UVCB substance
Origin: organic

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

1.2.1. Relevant identified uses

Solventnaphtha K is mainly used as a solvent for bituminous products. It can be also used for xylene production and as an additive for fuel oil.

See section 16 for list of descriptors combination.

1.2.2. Uses advised against

The uses are provided in section 1.2.1. Other uses are not recommended unless an assessment is completed, prior to commencement of that use, which demonstrates that the use will be controlled.

1.3. Details of the supplier of the safety data sheet

Company identification: Petrochemia – Blachownia Sp. z o.o.
Szkolna 15
47-225 Kędzierzyn - Koźle
POLAND
Phone: +48 77 488 68 01 (Mon. – Frid., 7⁰⁰ – 15⁰⁰)
Fax: +48 77 488 67 21

E-mail of responsible person for SDS: reach@petrochemia-bl.com.pl

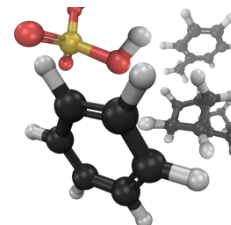
1.4. Emergency telephone number

Nofer Institute of Occupational Medicine; Łódź; Poland:

+48 42 631 47 67

+48 42 657 99 00

on working days Mon. – Frid.; 7⁰⁰ – 15⁰⁰



Company's emergency telephone number (round-the-clock): +48 697 986 566

Emergency services: general emergency number: 112
fire brigade: 998
emergency medical services: 999

SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the substance

PHYSICAL / CHEMICAL HAZARDS

Flammability Flammable Liquid Cat 3; H226 Flammable liquid and vapour

HEALTH HAZARDS

Acute toxicity – dermal: Acute Tox. 4; H312 Harmful in contact with skin.
Acute toxicity – inhalation: Acute Tox. 4; H332 Harmful if inhaled.
Skin corrosion / irritation: Skin Irrit. 2; H315 Causes skin irritation
Serious eye damage / eye irritation: Eye Irrit. 2; H319 Causes serious eye irritation.
Aspiration toxicity Asp. Tox. 1; H304 May be fatal if swallowed and enters airways
Reproductive toxicity: Repr. 2; H361d Suspected of damaging the unborn child.

Product is classified according to Note J: contains <0,1% of benzene.

ENVIRONMENTAL HAZARDS

Not sufficient for classification.

2.2 Label elements

Product identifier: SOLVENTNAPHTHA K
Substance: Solvent naphtha (coal), xylene – styrene cut
Index No: 648-007-00-3

Hazard pictograms:



GHS02



GHS08



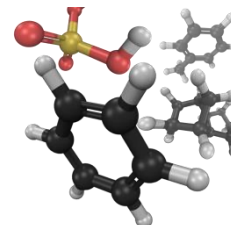
GHS07

Signal word:

Danger

Hazard statements:

H304 May be fatal if swallowed and enters airways.
H315 Causes skin irritation.



- H226 Flammable liquid and vapour.
- H312 Harmful in contact with skin.
- H315 Causes skin irritation.
- H319 Causes serious eye irritation.
- H332 Harmful if inhaled.
- H361d Suspected of damaging the unborn child.

Precautionary statements:

- P202 Do not handle until all safety precautions have been read and understood
- P210 Keep away from heat / sparks / open flames / ... / hot surface...No smoking.
- P243 Take precautionary measures against static discharge.
- P261 Avoid breathing mist/vapours/spray.
- P264 Wash your hands thoroughly after handling.
- P271 Use only outdoors or in a well-ventilated area.
- P280 Wear protective gloves / protective clothing / eye protection / face protection.
- P331 Do NOT induce vomiting.
- P303+P361+P353 IF ON SKIN (or hair): Remove / Take off immediately all contaminated clothing. Rinse skin with water / shower.
- P301+P310 IF SWALLOWED: Immediately call a PISON CENTER or doctor / physician.
- P302+P352 IF ON SKIN: Wash with plenty of soap and water.
- P304+P340: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P305+P351+P338 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
- P370+P378 In case of fire: Use extinguish foam to extinguish.
- P403+P235 Store in a well ventilated place. Keep cool.
- P405 Store locked up.
- P501 Dispose of contents to tight containers, and next to wastes disposal plants.

2.3 Other hazards

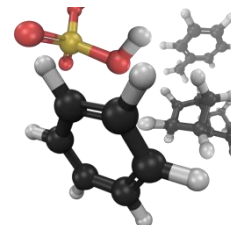
Substance do not meet the specific criteria for persistent and bioaccumulative and toxic (PBT) or the criteria for very persistent and very bioaccumulative (vPvB) detailed in Annex XIII of regulation 1907/2006/EC as indicate that the substance would not have these properties and the substance is not considered a PBT/vPvB.

The substance is not included in the list established in accordance with Article 59(1) of regulation 1907/2006 for having endocrine disrupting properties.

The substance is not a substance identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605.

SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

Name	Concentration; %	CAS number	EINECS number	Index number	Classification
Solvent naphtha (coal),	100	85536-20-5	287-502-5	648-007-00-3	Flam. Liq. 3; H226 Acute Tox. 4; H312 Acute Tox. 4; H332



xylene-styrene cut					Skin Irrit. 2; H315 Eye Irrit. 2; H319 Asp. Tox. 1; H304 Repr. 2; H361d
--------------------	--	--	--	--	--

Components influencing the classification

Nazwa	CAS number	EC number (EINECS)	Index number	Classification	Specific Conc. Limits, M-factors
Toluene	108-88-3	203-625-9	601-021-00-3	Flam. Liq. 2; H225 Repr. 2; H361d(***) Asp. Tox. 1; H304 STOT RE 2 (*); H373(**) Skin Irrit. 2; H315 STOT SE 3; H336	-
Xylene (isomers mixture)	1330-20-7	215-535-7	601-022-00-9	Flam. Liq. 3; H226 Acute Tox. 4 (*); H332 Acute Tox. 4 (*); H312 Skin Irrit. 2; H315	(*)
Styrene	100-42-5	202-851-5	601-026-00-0	Flam. Liq. 3; H226 Acute Tox. 4 (*); H332 Eye Irrit. 2; H319 Skin Irrit. 2; H315	(*)
Ethylbenzene	100-41-4	202-849-4	601-023-00-4	Flam. Liq. 2; H225 Acute Tox. 4 (*); H332	-

Product is classified according to Note J: contains <0,1% of benzene

SECTION 4: FIRST AID MEASURES

4.1. Description of first aid measures

4.1.1. General advice

Take care to self-protect by avoiding becoming contaminated.

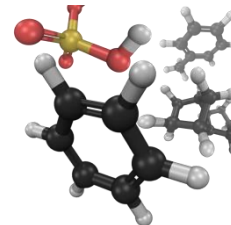
In case of health troubles or doubts, seek medical advice immediately and show this Material Safety Data Sheet. Ensure activity of vitally important functions until the arrival of the doctor (artificial respiration, inhalation of oxygen, heart massage). If patient is unconscious, or in case of danger of blackout (apsychia), transport patient in a stabilised position. In case of first degree burns (painful redness), and second degree burns (painful blisters), cool the affected area with cold running water for a long time. In case of third degree burns (redness, cracking).

4.1.2. Inhalation

Move to fresh air. Do not leave the victim unattended. Keep patient warm and at rest. Seek immediate medical attention. If breathing is difficult, give oxygen if possible or assisted ventilation, (do not use mouth to mouth). If unconscious place in recovery position. In the event of cardiac arrest, (no pulse), apply cardiopulmonary resuscitation.

4.1.3. Skin contact

Take off all contaminated clothing and shoes. Immediately flush affected area with plenty of soap and water – continue for at least 15 minutes. If there are signs of irritation or other symptoms seek medical attention.



4.1.4. Eye contact

Remove any contact lenses. Flush eyes with water thoroughly and continuously for at least 15 minutes. Keep eye wide open while rinsing. Protect unharmed eye. If there are signs of irritation or other symptoms seek medical attention. If eye irritation, pain, swelling, lachrimation or photophobia persists, the patient should be seen in a specialist health care facility.

4.1.5. Ingestion

Clean mouth with water and drink afterwards plenty of water. Do NOT induce vomiting, if vomiting does occur, have victim lean forward to reduce risk of aspiration. Get medical attention immediately. Do not give milk or alcoholic beverages.

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

Acute inhalation toxicity: Slight irritation to eyes and upper respiratory tract. High concentrations may cause central nervous system depression resulting in headaches, dizziness and nausea; continued inhalation may result in unconsciousness and / or death.

Skin Irritation: Pain and redness of the skin.

Eye irritation(slightly irritating): Pain and watery eyes, redness of the conjunctiva

Respiratory irritation: Inhalation of vapours, mists or aerosol may cause irritation to respiratory system.

Sensitisation: Not expected to be a skin sensitizer.

Repeated dose toxicity: repeated exposure affects the nervous system; effects were seen at high dose only.

Reproductive and developmental toxicity: Cause fetotoxicity in animals at doses which are maternally toxic. Does not impair fertility.

Visual system: Exposure on toluene present in product may cause decreased colour perception. These subtle changes have not been found to lead to functional colour vision deficits.

Auditory system: Prolonged and repeated exposure to high concentrations of toluene (product constituent), have resulted in hearing loss in rats. Solvent abuse and noise interaction in the work environment may cause hearing loss.

Other information: Exposure to very high concentrations of toluene (product constituent) and similar materials has been associated with irregular heart rhythms and cardiac arrest. Abuse of vapours has been associated with organ damage and death.

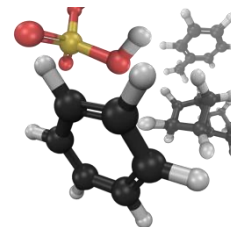
4.3. Indication of any immediate medical attention and special treatment needed

Causes irritation to the skin. This irritation can result in redness and swelling of the skin. Eye irritation can result in redness and swelling of the eyes. Repeated contact with the skin may cause it to become dry and cracked. If inhalation occurs, signs and symptoms may include coughing, choking, wheezing, difficulty in breathing, chest congestion, shortness of breath and may cause transient central nervous system (CNS) depression. In case of ingestion, Ipecac-induced emesis is not recommended. Consider use of charcoal as a slurry (240mL water/30 g charcoal). Usual dose: 25 to 100 g in adults If determined necessary (and under qualified medical supervision), the stomach should be emptied by gastric lavage under qualified medical supervision with the airway protected by endotracheal intubation.

SECTION 5: FIRE FIGHTING MEASURES

5.1. Extinguishing media

LARGE FIRE: Use water spray, water fog or foam. DO NOT use direct water jet.



SMALL FIRE: Dry powder or carbon dioxide (CO₂) extinguisher, dry sand or fire fighting foam. Use water spray to cool fire-exposed containers and to reduce rate of burning, taking care not to spread the fire

5.2. **Special hazards arising from the substance**

Carbon oxides (CO, CO₂), hydrocarbons vapours can be released in case of fire.

Vapour is denser than air – flashback may be possible over considerable distances. Containers may explode under fire conditions - use water spray to cool unopened containers. Do not allow run-off from firefighting to enter drains or water courses – may cause explosion hazard in drains and may reignite on surface water.

5.3. **Advice for fire-fighters**

Special protective equipment: Wear self-contained breathing apparatus in addition to standard firefighting gear.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Caution: an area threatened with explosion. Isolate hazard area. Evacuate all unauthorised personnel not participating in rescue operations from the area. Avoid entry into danger area. Shut off leaks, if possible without personal risks. Remove all possible sources of ignition. Stop traffic and switch off the motors of the engines. Do not smoke and do not handle with naked flame. Use explosion-proof lamps and non-sparking tools. Avoid contact with the substance and its vapours. Apply recommended full protective personal equipment to paralyse the accident. When escaping from the contaminated area, wear mask with cartridge A against organic vapours. In case of general average, evacuate personnel from danger area. In places under the ground level and in enclosed spaces (including drains) risk of explosion. Attempt to disperse the vapour or to direct its flow to a safe location for example by using fog spray. Take precautionary measures against static discharge. Ensure electrical continuity by bonding and grounding (earthing) all equipment. Ventilate contaminated area thoroughly.

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

Wear personal protective equipment. Avoid breathing vapours, mist or aerosol. Ensure adequate ventilation and absence of sources of ignition. Beware of accumulation of vapours in low areas or contained areas, where explosive concentrations may occur.

6.1.1. *For non-emergency personnel*

Use appropriate personal protection measures as described in section 8 of the safety data sheet. Follow the instructions of the people giving help / evacuation.

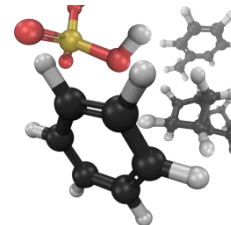
6.1.2. *For emergency responders*

Use appropriate personal protection measures as described in section 8 of the safety data sheet. Remove the injured from the danger zone; inform appropriate services, provide first aid in accordance with the guidelines contained in section 4 of the safety data sheet.

6.2. **Environmental precautions**

Land spillage

Prevent further leakage or spillage if safe to do so. Prevent spillage from entering drains.



Spillages in water or at sea

Prevent further leakage or spillage if safe to do so. If the spillage contaminates rivers, lakes or drains inform respective authorities. In case of drinking water contamination alert users.

6.3. Methods and material for containment and cleaning up

Contain spillage. Small spillages can be taken up by collection with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and placed in container for disposal according to local / national regulations. For larger spillages on water contain with booms or barriers, use surface acting agents to thicken spilled materials. Remove trapped material with suction hoses.

Spillages of liquid product will create a fire hazard and form an explosive atmosphere. Ensure all equipment is non sparking or electrically bonded. Avoid direct contact with released material. Stay upwind. Keep non-involved personnel away from the area of spillage. Ensure adequate ventilation, especially in confined areas.

6.4. Reference to other sections

Fire-fighting measures - see section 5; waste management - see section 13 of the charter; personal protection equipment - see section 8 of the SDS; emergency telephone numbers - see section 1.4.

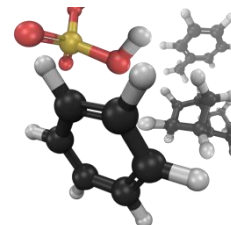
SECTION 7: HANDLING AND STORAGE

7.1. Precautions for safe handling

Smoking, eating and drinking should be prohibited. Use only in well ventilated areas. Avoid all sources of ignition. Take precautionary measures against static discharges. Avoid contact with heat and ignition sources and oxidizing agents. Containers should be opened only under exhaust ventilation hood. Do not allow splash filling of bulk volumes. Do not use compressed air for filling, discharging or handling. Cleaning, inspection and maintenance of the internal structure of storage tanks must be done only by properly equipped and qualified personnel as defined by national, local or company regulations. Handle empty containers with care; vapour residue may be flammable. Do not pressurise, cut, weld, braze, solder, drill, or grind on containers. Dispose of rinse water in accordance with local and national regulations. The vapour is heavier than air, beware of accumulation in pits and confined spaces. The product will float on water and can be reignited on surface water. Ensure that all relevant regulations regarding explosive atmospheres, and handling and storage facilities of flammable products are followed. Electrostatic charges may be generated during pumping. Electrostatic charges may cause fire. Ensure electrical continuity by bonding and grounding (earthing) all equipment. In order to avoid generation of electrostatic discharge restrict line velocity during pumping into storage tanks and / or tankers (≤ 1 m/sec until fill pipe submerged to twice its diameter, then ≤ 7 m/sec). Avoid splash filling. Do NOT use compressed air filling, discharging or handling operations.

7.2. Conditions for safe storage, including any incompatibilities

Solventnaphtha should be stored in either mild steel or stainless steel containers or vessels. No smoking. Store in a designated cool and well-ventilated place. Store in the original, tightly closed, container. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Keep container tightly closed and properly labelled. Vapour space above stored liquid may be flammable/explosive unless blanketed with inert gas. Storage installations should be designed with adequate bunds so as to prevent ground and water pollution in case of leaks or spills.



7.3. Specific end use(s)

See in exposure scenarios in Annexes.

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

Significant routes of exposure:

Human exposure: vapours by inhalation; liquid by skin

Environmental exposure: air

Pattern of exposure: accidental/infrequent

8.1. Control parameters

Exposure limits (according to Polish regulation)

	Xylenes (isomers mixture)**	Styrene**	Toluene*	Ethylbenzene**
TWA; mg/m ³	100	50	192	200
STEL; mg/m ³	200	100	384	400
Notation	skin		skin	skin

A skin notation assigned to the occupational exposure limit value indicates the possibility of significant uptake through the skin.

*According to Commission Directive 2006/15/EC of 7 February 2006 establishing a second list of indicative occupational exposure limit values in implementation of Council Directive 98/24/EC and amending Directives 91/322/EEC and 2000/39/EC.

** According to Polish national regulation

Exposure controls in accordance with local and national regulations.

DNEL: Derived No Effect Level (long-term based on local effect)

Workers

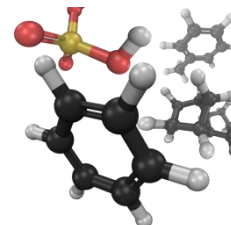
Acute - systemic effect (inhalation)	289 mg/m ³
Acute – local effect (inhalation)	289 mg/m ³ (nasal irritation)
Long-term - systemic effects (dermal)	180 mg/kg bw /day (repeated dose toxicity)
Long-term - systemic effects (inhalation)	77 mg/m ³ (repeated dose toxicity)

General population

Acute - systemic effect (inhalation)	174 mg/m ³
Acute – local effect (inhalation)	174 mg/m ³ (nasal irritation)
Long-term - systemic effects (dermal)	108 mg/kg bw /day (repeated dose toxicity)
Long-term - systemic effects (inhalation)	14,8 mg/m ³ (repeated dose toxicity)
Long-term - systemic effects (oral)	1,6 mg/kg bw /day (repeated dose toxicity)

PNEC: Predicted No Effect Concentration

Aqua – freshwater	0,327 mg/l
Aqua - marine water	0,327 mg/l
Aqua - intermittent releases	0,327 mg/l
Sediment	12,46 mg/kg d.w.
Sediment (marine water)	12,46 mg/kg d.w.
Soil	2,21 mg/kg.w.
Sewage Treatment Plant	6,85 mg/l



8.2. Exposure controls

The substance should be rigorously contained by technical means during its whole lifecycle; procedural and control technologies are used to minimise emissions and any resulting exposures; only properly trained and authorised personnel handle the substance; special procedures such as purging and washing should be applied during cleaning and maintenance works, in cases of accident and where waste is generated, procedural and/or control technologies should be used to minimise emissions and the resulting exposures; and substance-handling procedures should be well documented and strictly supervised by the site operator.

8.2.1. Appropriate engineering controls

The level of protection and types of controls necessary will vary depending upon potential exposure conditions. Select controls based on risk assessment of local circumstances.

Appropriate measures include: Use sealed systems as far as possible. Adequate explosion-proof ventilation to local airborne concentrations below the exposure guidelines / limits. Firewater monitors and deluge systems is recommended.

8.2.2. Personal protective equipment

Consider the potential hazards of this material applicable exposure limits, job activities, and other substances in the work place when designing engineering controls and selecting personal protective equipment.

If engineering controls or work practices are not adequate to prevent exposure to harmful levels of this material, the personal protective equipment listed below is recommended

Respiratory protection: gas-mask with A type absorber against organic vapours. The absorber should be selected depending on hydrocarbons vapours volumetric concentration: up. to 0,1% vol. – A1, 0,1 – 0,5 % vol. – A2; 0,5 – 1% vol. – A3.

When mixture of vapours of different substances may occur use universal ABEK absorber.

When concentration of compound is higher than 1% of volume or there is oxygen lack in air (below 17%) use self-contained breathing apparatus.

In case of emergency or when substance concentration isn't known use personal protective equipment in highest class of protection.

Hand protection: protective gloves covered by viton or nitril.

Eye protection: protective glasses ; when liquid spatter is possible use a protective mask.

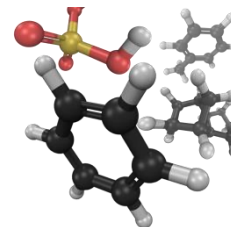
Skin and body protection: antistatic protective clothing and shoes

8.2.3. General safety and hygiene measures

Do not breath vapours and mist. Keep away from drink, food and animal feeding stuffs. No eating, drinking, smoking or tobacco use at the place of work. Take off immediately all contaminated clothing. Hands and face should be washed before breaks and at the end of shift. At the end of the shift the skin should be cleaned and skin-care agents applied.

8.2.4. Environmental exposure controls

Solventnaphtha does not dilute in water, is lighter than water and accumulates on its surface. It is dangerous for surface water and outer soil layers



SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Typical physical and chemical properties are given below. Consult the Supplier in Section 1 for additional data.

GENERAL INFORMATION

Physical State:	Liquid
Colour:	Colourless to yellow
Odour:	Characteristic for aromatic compounds

IMPORTANT HEALTH, SAFETY, AND ENVIRONMENTAL INFORMATION

Relative Density (at 25 °C):	0,880 – 0,920 g/cm ³
Flammability	flammable liquid
Flash Point:	>26°C
Explosion limits	lower 0,9% upper 7,0 %
Autoignition Temperature:	488°C
Boiling Point / Range:	135-210°C (90%)
Melting point	<(-)30°C
Decomposition temperature	not applicable
Vapour Density (Air = 1):	not available
Vapour Pressure:	650-4137 Pa at 20°C
Evaporation Rate (N-Butyl Acetate = 1):	not available
Log Pow (n-Octanol/Water Partition Coefficient):	3,16
Solubility in Water:	165,8mg/l at 25°C
Viscosity:	0,74 mm ² /sec at 25°C
Oxidising properties:	not applicable

9.2. Other information

Surface tension	28 – 29,8 mN/m at 25°C.
Molecular Weight:	UVCB substance

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity

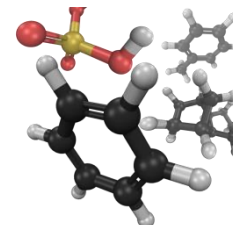
Danger of violent reaction and explosion in fire environment.

10.2. Chemical stability

In normal conditions -stable

10.3. Possibility of hazardous reactions

Thermal decomposition is highly dependent on conditions. A complex mixture of airborne solids, liquids and gases, including carbon monoxide (CAS 630-08-0), carbon dioxide and other organic compounds will be evolved when this material undergoes combustion or thermal or oxidative degradation.



10.4. Conditions to avoid

Avoid high temperatures, heat, sparks, open flames and other ignition sources. Static discharges. Prevent vapour accumulation. Tanks exposed to long effect of high temperatures may explode and cause fire

10.5. Incompatible materials

Strong oxidising agents.

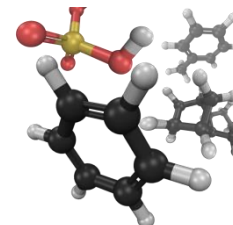
10.6. Hazardous decomposition products

No hazardous decomposition products if stored and handled as prescribed/indicated.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on hazards classes as defined in Regulation (EC) No 1272/2008

	Conclusion / Remarks
Acute toxicity	
By oral route	Low acute toxicity (LD50: 3523 mg/kg bw)
By inhalation	Low acute toxicity (LC50 27,124 mg/L) However, xylene is classified as Xn, R20 Harmful by inhalation under Annex I of Dir 67/548/EEC with corresponding classification of H332 Harmful if inhaled under CLP.
By dermal route	Low acute toxicity (LD50 12,126 mg/kg bw) However, xylene is currently classified under Annex I of Dir 67/548 as Xn, R21 Harmful in contact with skin with corresponding classification of H312 Harmful in contact with skin under CLP.
Skin corrosion / irritation	
Assessment of available human and animal data	Irritating
Assessment of the acid or alkaline reserve In vitro studies	Not justified
In vivo skin irritation	Irritating
Serious eye damage / irritation	
Assessment of available human and animal data,	Irritating
Assessment of the acid or alkaline reserve In vitro study	Not justified
In vivo eye irritation	Irritating
Respiratory or skin sensitisation	
Assessment of available human , animal and alternative data	Not sensitising There are no reports of sensitisation from the available literature, but there is no evidence of sensitisation reported from worker exposure.
In vivo study	Not sensitising
Germ cell mutagenicity	



In vitro studies In vivo studies	Not genotoxic
Carcinogenicity	No carcinogenic effect
Reproductive toxicity	
Fertility Pre-natal developmental tox study	No evidence of reproductive effects. There is some evidence of developmental toxicity (lower body weight at birth and delayed vaginal opening) at toluene (product constituent) exposure concentrations ≥ 1000 ppm, concentrations which are associated with slight maternal toxicity. The NOAEC for developmental and maternal effects is 600 ppm (2261 mg/m ³)
STOT – single exposure	Toluene contained in the product may cause drowsiness and dizziness; affects central nervous system (route of exposure: inhalation)
STOT- repeated exposure	
Short term and sub-chronic toxicity	High concentrations may cause central nervous system depression. After repeated dose exposure, toluene (product constituent) causes a number of adverse effects including neuropsychological effects, auditory dysfunction and effects on colour vision
Aspiration toxicity	
By oral route	May be fatal if swallowed and enters airways
By inhalation	

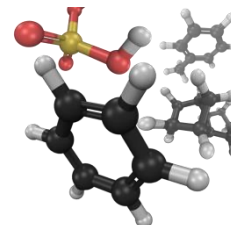
11.2. Information on other hazards

	Conclusion / Remarks
Endocrine disrupting properties	The substance is not included in the list established in accordance with Article 59(1) of regulation 1907/2006 for having endocrine disrupting properties. The substance is not a substance identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605.
Toxicokinetics	No other effects of significance for human health have been reported.
Chronic/Other Effects	Mild irritation of the upper respiratory tract were exposed to 442mg/m ³ xylene for 15-30 minutes Carcinogenic because of benzene content <1%.

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity

	Conclusion / Remarks
Aquatic toxicity:	
Short term toxicity testing on invertebrates (Daphnia)	48hr EC50 1mg/l
Long term toxicity testing on invertebrates (Daphnia)	7 day NOEC 0,96 mg/l
Growth inhibition study aquatic plants	72 hr EC50 2,2 mg/l 72 hr NOEC 0,44 mg/l
Short term toxicity testing on fish	96hr LC50 2,6 mg/l
Long term toxicity testing on fish	56 day NOEC >1,3 mg/l
Activated sludge respiration inhibition testing	3hr EC50 157 mg/l



Long term toxicity to sediment organisms	Not available
Terrestrial toxicity	
Long term toxicity to invertebrates:	Not available
Effects on soil microorganism:	Not available
Long-term toxicity to plant:	Not available
Long-term or reproductive toxicity to birds:	Not available

12.2. Persistence and degradability

Biodegradation: Solventnaphtha is readily biodegradable

Hydrolysis (as a function of pH) : Solventnaphtha will not undergo hydrolysis

Atmospheric Oxidation: Solventnaphtha is expected to degrade by indirect photolysis in air.

12.3. Bioaccumulative potential

The substance has low potential for bioaccumulation (BCF: 25,9)

12.4. Mobility in soil

The substance is not expected to adsorb to soil or sediment.

12.5. Results of PBT and vPvB assessment

Does not meet criteria

12.6. Endocrine disrupting properties

The substance is not included in the list established in accordance with Article 59(1) of regulation 1907/2006 for having endocrine disrupting properties.

The substance is not a substance identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605.

12.7. Other adverse effects

It is not expected that product has an effect on global warming, ozone depletion in the stratosphere or ozone formation in the troposphere.

SECTION 13: DISPOSAL CONSIDERATIONS

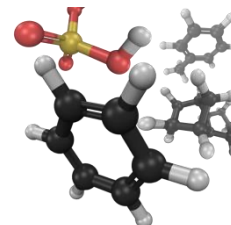
Wastes classification : according to Waste Catalogue.

13.1. Waste treatment methods

Do not let the product get into the sewage systems and soil waters. Do not store on municipal landfills. Consider possibility of use. Carry on the recovery or disposal of wastes in accordance to law regulations. Recommended way of disposal: incineration.

Disposable packaging provide to an authorized recipient. Carry on the recovery or disposal of wastes in accordance to law regulations.

Reusable packaging after careful cleaning can be reused if necessary.



SECTION 14: TRANSPORT INFORMATION

Subsection	Road transport (ADR)	Railway transport (RID)
14.1. UN numer or ID number	UN 3295	UN 3295
14.2. Proper shipping name	HYDROCARBONS, LIQUID, N.O.S.	HYDROCARBONS, LIQUID, N.O.S.
14.3. Transport hazard class(es)	3	3
14.4. Packing group	III	III
14.5. Environmental hazards	no	no
14.6. Special precautions for users	Excepted quantities: LQ7 Packing instructions: P001, IBC03, LP01	Excepted quantities: LQ7 Packing instructions: P001, DPPL03, LP01
14.7. Marine transport in bulk according to IMO instruments	-	-

SECTION 15: REGULATORY INFORMATION

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

15.1.1. Information regarding relevant Community safety, health and environmental provisions

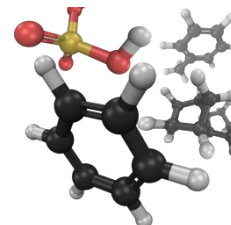
The group of flammable liquids is found in Annex I of Directive 2012/18/EC (Seveso III). Qualifying quantity (tonnes) for dangerous substance for the application of:

Lower-tier: 5.000 tonnes

Upper-tier: 50.000 tonnes

15.1.2. EU regulations

- 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), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/105/EC and 2000/21/EC
- 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, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006.
- Directive No 2012/18/EC of the European Parliament and of the Council of 4 July 2012 on the control of major-accident hazards involving dangerous substances, amending and subsequently repealing Council Directive 96/82/EC.
- Regulation (EC) No 273/2004 of the European Parliament and of the Council of 11 February 2004 on drug precursors.
- Directive No 2004/37/EC of the European Parliament and of the Council of 29 April 2004 on the protection of workers from the risks related to exposure to carcinogens or mutagens at work (sixth individual directive within the meaning of Article 16(1) of Directive 89/391/EEC).
- Council Directive No 98/24/EC of 7 April 1998 on the protection of the health and safety of workers from the risks related to chemical agents at work (fourteen individual directive within the meaning of Article 16(1) of Directive 89/391/EEC).



- Commission Directive No 2000/39/EC of 8 June 2000 establishing a first list of indicative occupational exposure limit values in implementation of Council Directive 98/24/EC.
- Commission Directive No 2006/15/EC of 7 February 2006 establishing a second list of indicative occupational exposure limit values in implementation of Council Directive 98/24/EC and amending of Directive 2000/39/EC.
- Commission Directive No 2009/161/EU of 17 December 2009 establishing a third list of indicative occupational exposure limit values in implementation of Council Directive 98/24/EC and amending of Directive 2000/39/EC
- Commission Directive (EU) 2017/164 of 31 January 2017 establishing a fourth list of indicative occupational exposure limit values pursuant to Council Directive 98/24/EC, and amending Commission Directives 91/322/EEC, 2000/39/EC and 2009/161/EU
- Commission Directive (EU) 2019/1831 of 24 October 2019 establishing a fifth list of indicative occupational exposure limit values pursuant to Council Directive 98/24/EC and amending Commission Directive 2000/39/EC
- Directive 2008/98/EC of the European Parliament and of the Council of 19 November 2008 on waste and repealing certain Directives.
- Commission Decision of 3 May 2000 replacing Decision 94/3/EC establishing a list of wastes pursuant to Article 1(a) of Council Directive 75/442/EEC on waste and Council Decision 94/904/EC establishing a list of hazardous waste pursuant to Article 1(4) of Council Directive 91/689/EEC on hazardous waste
- Directive 2008/68/EC of the European Parliament and of the Council of 24 September 2008 on the inland transport of dangerous goods.
- European Agreement concerning the International Carriage of Dangerous Goods by Road (ADR).
- Regulations concerning the International Carriage of Dangerous Goods by Rail (RID).
- Regulation (EC) No 273/2004 of the European Parliament and of the Council of 11 February 2004 on drug precursors.
- Commission Delegated Regulation (EU) 2017/2100 of 4 September 2017 setting out scientific criteria for the determination of endocrine-disrupting properties pursuant to Regulation (EU) No 528/2012 of the European Parliament and Council.
- Regulation (EU) No 528/2012 of the European Parliament and of the Council of 22 May 2012 concerning the making available on the market and use of biocidal products

15.2. Chemical Safety Assessment

Chemical Safety Report has been carried out.

SECTION 16: OTHER INFORMATION

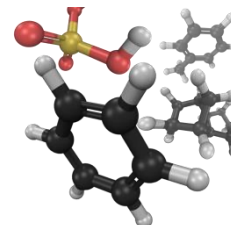
16.1. Indication of changes

This version replaces versions 4.1 of 26.09.2022

Section 2.1.; Section 2.2.; Section 3, Section 14.7 – Information on substance in the scope of environmental hazards has been updated.

16.2. Abbreviations and acronyms

DNEL	Derived No Effect Level
PNEC	Predicted No Effect Concentration
EC50	Half maximal effective concentration



LC50	Lethal concentration, 50 %
LD50	Median Lethal Dose
NOAEC / NOAEC	No Observed Adverse Effect Level / Concentration
NOEL / NOEC	No Observed Effect Level / Concentration
PBT	Persistent, Bioaccumulative and Toxic
vPvB	Very Persistent and Very Bioaccumulative

16.3. Key literature references and sources for data

Registration dossier for solventnaphtha K.

16.4. Advice on any training for workers

To ensure protection of human health and the environment all workers involve in product handling should be appropriately trained. Trainings should include physical and chemical properties of the substance, effects for human health and on environment as well as way of protection (including personal protective equipment) and first aid measurements. Trainings should include accident / emergency simulations and should be periodically repeat.

16.5. Further information

This SDS is prepared for the purpose of providing health, safety and environmental data. The information given corresponds with our actual knowledge and experience. While the descriptions, data and information contained in the present datasheet are provided in good faith, these are to be considered as guidance only. Thus, this SDS shall not constitute a guarantee for any specific properties or quality standards.

This information is meant to describe our product in view of possible safety requirements, but it remains the responsibility of the customer to determine the applicability of the information and suitability of any product for its own particular purpose, to provide a safe workplace and comply with all applicable laws and regulations.

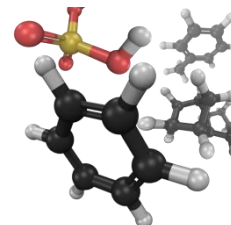
Since handling, storage, use and disposal is of the product are beyond our control and our knowledge, we do exclude any responsibility connecting to handling, storage, use or disposal of this product.

Please note that if the product used as a component of another product, this SDS information may not be applicable.

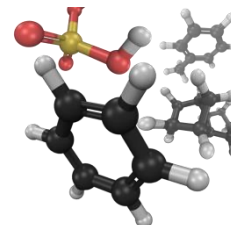
16.5.1. Identified uses

Uses by workers in industrial settings

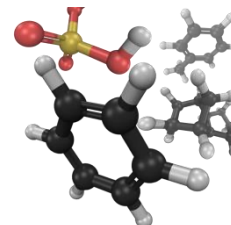
Identified Use Name	Use descriptors
Manufacture	Process category (PROC): PROC 1: Use in closed process, no likelihood of exposure PROC 2: Use in closed, continuous process with occasional controlled exposure PROC 4: Use in batch and other process (synthesis) where opportunity for exposure arises PROC 3: Use in closed batch process (synthesis or formulation) PROC 8b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities PROC 8a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities PROC 15: Use as laboratory reagent Environmental release category (ERC):



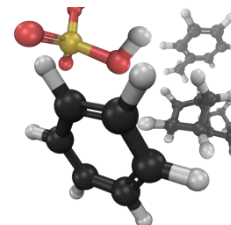
	<p>ERC 1: Manufacture of substances ERC 4: Industrial use of processing aids in processes and products, not becoming part of articles</p> <p>Sector of end use (SU): SU 8: Manufacture of bulk, large scale chemicals (including petroleum products) SU 9: Manufacture of fine chemicals SU 0: Other: 3</p> <p>Exposure scenario reference in the CSR: 1</p>
Distribution of substance	<p>Process category (PROC): PROC 1: Use in closed process, no likelihood of exposure PROC 2: Use in closed, continuous process with occasional controlled exposure PROC 3: Use in closed batch process (synthesis or formulation) PROC 4: Use in batch and other process (synthesis) where opportunity for exposure arises PROC 8a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities PROC 8b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities PROC 9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) PROC 15: Use as laboratory reagent</p> <p>Environmental release category (ERC): ERC 1: Manufacture of substances ERC 2: Formulation of preparations ERC 3: Formulation in materials ERC 4: Industrial use of processing aids in processes and products, not becoming part of articles ERC 5: Industrial use resulting in inclusion into or onto a matrix ERC 7: Industrial use of substances in closed systems ERC 0: Other: 6</p> <p>Sector of end use (SU): SU 8: Manufacture of bulk, large scale chemicals (including petroleum products) SU 9: Manufacture</p> <p>Exposure scenario reference in the CSR: 2</p>
Formulation	<p>Process category (PROC): PROC 1: Use in closed process, no likelihood of exposure PROC 2: Use in closed, continuous process with occasional controlled exposure PROC 3: Use in closed batch process (synthesis or formulation) PROC 4: Use in batch and other process (synthesis) where opportunity for exposure arises PROC 5: Mixing or blending in batch processes for formulation of preparations and articles (multistage and/or significant contact) PROC 8a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities PROC 8b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities PROC 9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) PROC 14: Production of preparations or articles by tableting, compression, extrusion, pelletisation PROC 15: Use as laboratory reagent</p> <p>Environmental release category (ERC): ERC 2: Formulation of preparations</p>



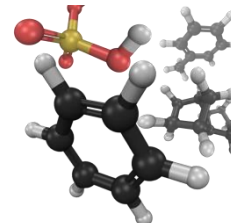
	<p>Sector of end use (SU): SU 10: Formulation [mixing] of preparations and/or re-packaging (excluding alloys) SU 0: Other: 3 Exposure scenario reference in the CSR: 4</p>
Use as an intermediate	<p>Process category (PROC): PROC 1: Use in closed process, no likelihood of exposure PROC 2: Use in closed, continuous process with occasional controlled exposure PROC 3: Use in closed batch process (synthesis or formulation) PROC 4: Use in batch and other process (synthesis) where opportunity for exposure arises PROC 8a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities PROC 8b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities PROC 15: Use as laboratory reagent Environmental release category (ERC): ERC 6a: Industrial use resulting in manufacture of another substance (use of intermediates) Sector of end use (SU): SU 8: Manufacture of bulk, large scale chemicals (including petroleum products) SU 9: Manufacture of fine chemicals SU 0: Other: 3 Exposure scenario reference in the CSR: 3</p>
Lubricants	<p>Process category (PROC): PROC 1: Use in closed process, no likelihood of exposure PROC 2: Use in closed, continuous process with occasional controlled exposure PROC 3: Use in closed batch process (synthesis or formulation) PROC 4: Use in batch and other process (synthesis) where opportunity for exposure arises PROC 7: Industrial spraying PROC 8a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities PROC 8b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities PROC 9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) PROC 10: Roller application or brushing PROC 13: Treatment of articles by dipping and pouring PROC 17: Lubrication at high energy conditions and in partly open process PROC 18: Greasing at high energy conditions Environmental release category (ERC): ERC 4: Industrial use of processing aids in processes and products, not becoming part of articles ERC 7: Industrial use of substances in closed systems Sector of end use (SU): SU 0: Other: 3 Exposure scenario reference in the CSR: 11</p>
Use as a fuel	<p>Process category (PROC): PROC 1: Use in closed process, no likelihood of exposure PROC 2: Use in closed, continuous process with occasional controlled exposure PROC 3: Use in closed batch process (synthesis or formulation) PROC 8a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities</p>



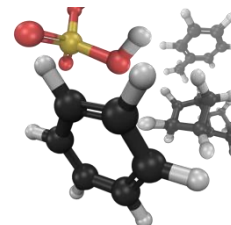
	<p>PROC 8b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities PROC 16: Using material as fuel sources, limited exposure to unburned product to be expected</p> <p>Environmental release category (ERC): ERC 7: Industrial use of substances in closed systems</p> <p>Sector of end use (SU): SU 0: Other: 3</p> <p>Exposure scenario reference in the CSR: 18</p>
Uses in coatings	<p>Process category (PROC): PROC 1: Use in closed process, no likelihood of exposure PROC 2: Use in closed, continuous process with occasional controlled exposure PROC 3: Use in closed batch process (synthesis or formulation) PROC 4: Use in batch and other process (synthesis) where opportunity for exposure arises PROC 5: Mixing or blending in batch processes for formulation of preparations and articles (multistage and/or significant contact) PROC 7: Industrial spraying PROC 8a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities PROC 8b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities PROC 10: Roller application or brushing PROC 13: Treatment of articles by dipping and pouring PROC 15: Use as laboratory reagent</p> <p>Environmental release category (ERC): ERC 4: Industrial use of processing aids in processes and products, not becoming part of articles</p> <p>Sector of end use (SU): SU 0: Other: 3</p> <p>Exposure scenario reference in the CSR: 5</p>
Use in cleaning agents	<p>Process category (PROC): PROC 1: Use in closed process, no likelihood of exposure PROC 2: Use in closed, continuous process with occasional controlled exposure PROC 3: Use in closed batch process (synthesis or formulation) PROC 4: Use in batch and other process (synthesis) where opportunity for exposure arises PROC 7: Industrial spraying PROC 8b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities PROC 8a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities PROC 10: Roller application or brushing PROC 13: Treatment of articles by dipping and pouring</p> <p>Environmental release category (ERC): ERC 4: Industrial use of processing aids in processes and products, not becoming part of articles</p> <p>Sector of end use (SU): SU 0: Other: 3</p> <p>Exposure scenario reference in the CSR: 8</p>
Use as binders and release agents	<p>Process category (PROC): PROC 1: Use in closed process, no likelihood of exposure PROC 2: Use in closed, continuous process with occasional controlled exposure</p>



	<p>PROC 3: Use in closed batch process (synthesis or formulation) PROC 4: Use in batch and other process (synthesis) where opportunity for exposure arises PROC 6: Calendering operations PROC 7: Industrial spraying PROC 8b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities PROC 10: Roller application or brushing PROC 13: Treatment of articles by dipping and pouring PROC 14: Production of preparations or articles by tableting, compression, extrusion, pelletisation</p> <p>Environmental release category (ERC): ERC 4: Industrial use of processing aids in processes and products, not becoming part of articles</p> <p>Sector of end use (SU): SU 0: Other: 3</p> <p>Exposure scenario reference in the CSR: 14</p>
Polymer processing	<p>Process category (PROC): PROC 1: Use in closed process, no likelihood of exposure PROC 2: Use in closed, continuous process with occasional controlled exposure PROC 3: Use in closed batch process (synthesis or formulation) PROC 4: Use in batch and other process (synthesis) where opportunity for exposure arises PROC 5: Mixing or blending in batch processes for formulation of preparations and articles (multistage and/or significant contact) PROC 6: Calendering operations PROC 8a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities PROC 8b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities PROC 9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) PROC 13: Treatment of articles by dipping and pouring PROC 14: Production of preparations or articles by tableting, compression, extrusion, pelletisation PROC 21: Low energy manipulation of substances bound in materials and/or articles</p> <p>Environmental release category (ERC): ERC 4: Industrial use of processing aids in processes and products, not becoming part of articles</p> <p>Sector of end use (SU): SU 10: Formulation [mixing] of preparations and/or re-packaging (excluding alloys) SU 0: Other: 3</p> <p>Exposure scenario reference in the CSR: 22</p>
Functional fluids	<p>Process category (PROC): PROC 1: Use in closed process, no likelihood of exposure PROC 2: Use in closed, continuous process with occasional controlled exposure PROC 3: Use in closed batch process (synthesis or formulation) PROC 4: Use in batch and other process (synthesis) where opportunity for exposure arises PROC 8a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities PROC 8b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities</p>

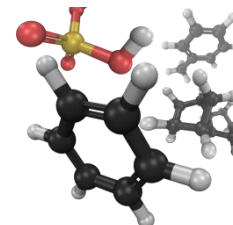


	<p>PROC 9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) Environmental release category (ERC): ERC 7: Industrial use of substances in closed systems Sector of end use (SU): SU 0: Other: 3 Exposure scenario reference in the CSR: 24</p>
Use in laboratories	<p>Process category (PROC): PROC 10: Roller application or brushing PROC 15: Use as laboratory reagent Environmental release category (ERC): ERC 2: Formulation of preparations ERC 4: Industrial use of processing aids in processes and products, not becoming part of articles Sector of end use (SU): SU 0: Other: 3 Exposure scenario reference in the CSR: 30</p>
Rubber production and processing	<p>Process category (PROC): PROC 1: Use in closed process, no likelihood of exposure PROC 2: Use in closed, continuous process with occasional controlled exposure PROC 3: Use in closed batch process (synthesis or formulation) PROC 4: Use in batch and other process (synthesis) where opportunity for exposure arises PROC 5: Mixing or blending in batch processes for formulation of preparations and articles (multistage and/or significant contact) PROC 6: Calendaring operations PROC 7: Industrial spraying PROC 8a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities PROC 8b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities PROC 9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) PROC 13: Treatment of articles by dipping and pouring PROC 14: Production of preparations or articles by tableting, compression, extrusion, pelletisation PROC 15: Use as laboratory reagent PROC 21: Low energy manipulation of substances bound in materials and/or articles Environmental release category (ERC): ERC 1: Manufacture of substances ERC 4: Industrial use of processing aids in processes and products, not becoming part of articles ERC 6d: Industrial use of process regulators for polymerisation processes in production of resins, rubbers, polymers Sector of end use (SU): SU 10: Formulation [mixing] of preparations and/or re-packaging (excluding alloys) SU 0: Other: 3 Exposure scenario reference in the CSR: 33</p>

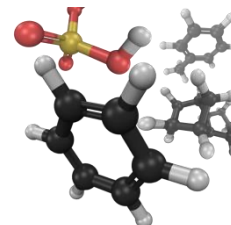


Uses by workers in professional settings {(SU22: Professional uses: Public domain (administration, education, entertainment, services, craftsmen))}

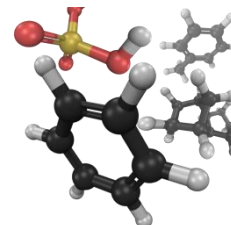
Identified Use name	Use descriptors
Lubricants	<p>Process category (PROC): PROC 1: Use in closed process, no likelihood of exposure PROC 2: Use in closed, continuous process with occasional controlled exposure PROC 3: Use in closed batch process (synthesis or formulation) PROC 4: Use in batch and other process (synthesis) where opportunity for exposure arises PROC 8a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities PROC 8b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities PROC 9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) PROC 10: Roller application or brushing PROC 11: Non industrial spraying PROC 13: Treatment of articles by dipping and pouring PROC 17: Lubrication at high energy conditions and in partly open process PROC 18: Greasing at high energy conditions PROC 20: Heat and pressure transfer fluids in dispersive, professional use but closed systems</p> <p>Environmental release category (ERC): ERC 8a: Wide dispersive indoor use of processing aids in open systems ERC 8d: Wide dispersive outdoor use of processing aids in open systems ERC 9a: Wide dispersive indoor use of substances in closed systems ERC 9b: Wide dispersive outdoor use of substances in closed systems</p> <p>Sector of end use (SU): 22 Exposure scenario reference in the CSR:12</p>
Uses in coatings	<p>Process category (PROC): PROC 1: Use in closed process, no likelihood of exposure PROC 2: Use in closed, continuous process with occasional controlled exposure PROC 3: Use in closed batch process (synthesis or formulation) PROC 4: Use in batch and other process (synthesis) where opportunity for exposure arises PROC 5: Mixing or blending in batch processes for formulation of preparations and articles (multistage and/or significant contact) PROC 8a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities PROC 8b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities PROC 10: Roller application or brushing PROC 11: Non industrial spraying PROC 13: Treatment of articles by dipping and pouring PROC 15: Use as laboratory reagent PROC 19: Hand-mixing with intimate contact and only PPE available.</p> <p>Environmental release category (ERC): ERC 8a: Wide dispersive indoor use of processing aids in open systems ERC 8d: Wide dispersive outdoor use of processing aids in open systems</p> <p>Sector of end use (SU): 22 Exposure scenario reference in the CSR: 6</p>



Use in cleaning agents	<p>Process category (PROC): PROC 1: Use in closed process, no likelihood of exposure PROC 2: Use in closed, continuous process with occasional controlled exposure PROC 3: Use in closed batch process (synthesis or formulation) PROC 4: Use in batch and other process (synthesis) where opportunity for exposure arises PROC 8a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities PROC 8b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities PROC 10: Roller application or brushing PROC 11: Non industrial spraying PROC 13: Treatment of articles by dipping and pouring</p> <p>Environmental release category (ERC): ERC 8a: Wide dispersive indoor use of processing aids in open systems ERC 8d: Wide dispersive outdoor use of processing aids in open systems</p> <p>Sector of end use (SU): 22 Exposure scenario reference in the CSR: 9</p>
Use as binders and release agents	<p>Process category (PROC): PROC 1: Use in closed process, no likelihood of exposure PROC 2: Use in closed, continuous process with occasional controlled exposure PROC 3: Use in closed batch process (synthesis or formulation) PROC 4: Use in batch and other process (synthesis) where opportunity for exposure arises PROC 6: Calendering operations PROC 8a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities PROC 8b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities PROC 10: Roller application or brushing PROC 11: Non industrial spraying PROC 14: Production of preparations or articles by tableting, compression, extrusion, pelletisation</p> <p>Environmental release category (ERC): ERC 8a: Wide dispersive indoor use of processing aids in open systems ERC 8d: Wide dispersive outdoor use of processing aids in open systems</p> <p>Sector of end use (SU): 22 Exposure scenario reference in the CSR: 15</p>
Polymer processing	<p>Process category (PROC): PROC 1: Use in closed process, no likelihood of exposure PROC 2: Use in closed, continuous process with occasional controlled exposure PROC 6: Calendering operations PROC 8a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities PROC 8b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities PROC 14: Production of preparations or articles by tableting, compression, extrusion, pelletisation PROC 21: Low energy manipulation of substances bound in materials and/or articles</p> <p>Environmental release category (ERC): ERC 8a: Wide dispersive indoor use of processing aids in open systems</p>



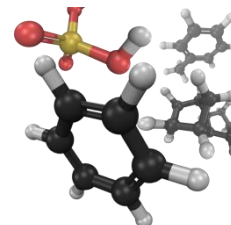
	<p>ERC 8d: Wide dispersive outdoor use of processing aids in open systems Sector of end use (SU): 22 Exposure scenario reference in the CSR: 23</p>
Use in fuel	<p>Process category (PROC): PROC 1: Use in closed process, no likelihood of exposure PROC 2: Use in closed, continuous process with occasional controlled exposure PROC 3: Use in closed batch process (synthesis or formulation) PROC 8a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities PROC 8b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities PROC 16: Using material as fuel sources, limited exposure to unburned product to be expected</p> <p>Environmental release category (ERC): ERC 9a: Wide dispersive indoor use of substances in closed systems ERC 9b: Wide dispersive outdoor use of substances in closed systems Sector of end use (SU): 22 Exposure scenario reference in the CSR: 19</p>
Functional fluids	<p>Process category (PROC): PROC 1: Use in closed process, no likelihood of exposure PROC 2: Use in closed, continuous process with occasional controlled exposure PROC 3: Use in closed batch process (synthesis or formulation) PROC 8a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities PROC 9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) PROC 20: Heat and pressure transfer fluids in dispersive, professional use but closed systems</p> <p>Environmental release category (ERC): ERC 9a: Wide dispersive indoor use of substances in closed systems ERC 9b: Wide dispersive outdoor use of substances in closed systems Sector of end use (SU): 22 Exposure scenario reference in the CSR: 25</p>
Road and construction applications	<p>Process category (PROC): PROC 8a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities PROC 8b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities PROC 9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) PROC 10: Roller application or brushing PROC 11: Non industrial spraying PROC 13: Treatment of articles by dipping and pouring</p> <p>Environmental release category (ERC): ERC 8d: Wide dispersive outdoor use of processing aids in open systems ERC 8f: Wide dispersive outdoor use resulting in inclusion into or onto a matrix Sector of end use (SU): 22 Exposure scenario reference in the CSR: 29</p>
Use in laboratories	<p>Process category (PROC): PROC 10: Roller application or brushing</p>



	PROC 15: Use as laboratory reagent Environmental release category (ERC): ERC 8a: Wide dispersive indoor use of processing aids in open systems Sector of end use (SU): 22 Exposure scenario reference in the CSR: 31
--	---

Uses by consumers {(SU21: Consumer uses: Private households (= general public = consumers))}

Identified Use name	Use descriptors
Lubricants	Chemical product category (PC): PC 1: Adhesives, sealants PC 24: Lubricants, greases, release products PC 31: Polishes and wax blends Environmental release category (ERC): ERC 8a: Wide dispersive indoor use of processing aids in open systems ERC 8d: Wide dispersive outdoor use of processing aids in open systems ERC 9a: Wide dispersive indoor use of substances in closed systems ERC 9b: Wide dispersive outdoor use of substances in closed systems Sector of end use (SU): 21 Exposure scenario reference in the CSR: 13
Uses in coatings	Chemical product category (PC): PC 1: Adhesives, sealants PC 4: Anti-freeze and de-icing products PC 15: Non-metal-surface treatment products PC 18: Ink and toners PC 23: Leather tanning, dye, finishing, impregnation and care products PC 24: Lubricants, greases, release products PC 31: Polishes and wax blends PC 0: Other: 9 PC 34: Textile dyes, finishing and impregnating products; including bleaches and other processing aids PC 8: Biocidal products (e.g. disinfectants, pest control) Environmental release category (ERC): ERC 8a: Wide dispersive indoor use of processing aids in open systems ERC 8d: Wide dispersive outdoor use of processing aids in open systems Sector of end use (SU): 21 Exposure scenario reference in the CSR: 7
Use in cleaning agents	Chemical product category (PC): PC 3: Air care products PC 4: Anti-freeze and de-icing products PC 0: Other: 9 PC 24: Lubricants, greases, release products PC 35: Washing and cleaning products (including solvent based products) PC 38: Welding and soldering products (with flux coatings or flux cores.), flux products PC 8: Biocidal products (e.g. disinfectants, pest control) Environmental release category (ERC): ERC 8a: Wide dispersive indoor use of processing aids in open systems ERC 8d: Wide dispersive outdoor use of processing aids in open systems Sector of end use (SU): 21 Exposure scenario reference in the CSR: 10



Use as a fuel	Chemical product category (PC): PC 13: Fuels Environmental release category (ERC): ERC 9a: Wide dispersive indoor use of substances in closed systems ERC 9b: Wide dispersive outdoor use of substances in closed systems Sector of end use (SU): 21 Exposure scenario reference in the CSR: 20
Functional fluids	Chemical product category (PC): PC 16: Heat transfer fluids PC 17: Hydraulic fluids Environmental release category (ERC): ERC 9a: Wide dispersive indoor use of substances in closed systems ERC 9b: Wide dispersive outdoor use of substances in closed systems Sector of end use (SU): 21 Exposure scenario reference in the CSR: 26

Annexes: Exposure scenarios

Annex 1	Exposure scenario 1: Manufacture (industrial)
Annex 2	Exposure scenario 2: Distribution of substance
Annex 3	Exposure scenario 3: Use as an intermediate
Annex 4	Exposure scenario 4: Formulation
Annex 5	Exposure scenario 11: Lubricants (industrial)
Annex 6	Exposure scenario 12: Lubricants (professional)
Annex 7	Exposure scenario 13: Lubricants (consumers)
Annex 8	Exposure scenario 18: Use as a fuel (industrial)
Annex 9	Exposure scenario 19: Use as a fuel (professional)
Annex 10	Exposure scenario 20: Use as a fuel (consumers)
Annex 11	Exposure scenario 5: Uses in coatings (industrial)
Annex 12	Exposure scenario 6; Uses in coatings (professional)
Annex 13	Exposure scenario 7: Uses in coatings (consumers)
Annex 14	Exposure scenario 8: Use in cleaning agents (industrial)
Annex 15	Exposure scenario 9: Use in cleaning agents (professional)
Annex 16	Exposure scenario 10: Use in cleaning agents (consumers)
Annex 17	Exposure scenario 14: Use as binders and release agents (industrial)
Annex 18	Exposure scenario 15: Use as binders and release agents (professional)
Annex 19	Exposure scenario 22: Polymer processing (industrial)
Annex 20	Exposure scenario 23: Polymer processing (professional)
Annex 21	Exposure scenario 24: Functional fluids (industrial)
Annex 22	Exposure scenario 25: Functional fluids (professional)
Annex 23	Exposure scenario 26: Functional fluids (consumers)
Annex 24	Exposure scenario 30: Use in laboratories (industrial)
Annex 25	Exposure scenario 31: Use in laboratories (professional)
Annex 26	Exposure scenario 33: Rubber production and processing (industrial)
Annex 27	Exposure scenario 29: Road and construction applications (professional)