



SAFETY DATA SHEET

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Material safety data sheet according to Regulation (EC) No 1907/2006, as amended
Identifier: DSZ_EN/K2598/W2542/2022-11-28/EN/v.15.0

Heat-resistant silverware

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

1.1. Product identifier

Name:	Heat-resistant silverware
Other names:	not applicable
Contains:	Xylene Reaction mixture of ethylbenzene and xylene Hydrocarbons C7-C9, n-alkanes, isoalkanes, cyclic Ethylbenzene
UFI code:	EK70-G0GP-2008-1X0N
CAS No.:	not applicable
EC number:	not applicable
Index number:	not applicable
Registration No.:	not applicable
Date of issue:	2002-09-10
Revision date:	2022-11-28
Version:	15.0

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

Identified uses:	For painting metal surfaces (except copper, brass and bronze) exposed to high temperatures. Recommended for painting stoves, fireplace inserts, heating elements, car exhaust system elements (mufflers and exhaust pipes).
Uses advised against:	All other than mentioned above, consumption.

1.3. Details of the supplier of the safety data sheet

Supplier	Dragon Poland Spółka z ograniczoną odpowiedzialnością ul. rtm. Witolda Pileckiego 5, 32-050 Skawina ☎ +48 12 625 75 00 fax: +48 12 637 79 30 www.dragon.com.pl e-mail: info@dragon.com.pl
E-mail address of the person responsible for the safety data sheet:	technologia@dragon.com.pl

1.4. Emergency telephone number

Phone number:	<ul style="list-style-type: none">☎ 112 (🕒24h/7)☎ +48 12 625 75 00 (🕒8:00 -16:00 📠5/7)
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2. SECTION 2: Hazards identification



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2.1. Classification of the substance or mixture

Classification according to regulation (EC) No. 1272/2008 (CLP)

Hazards resulting from the physicochemical properties: **Flam. Liq. 2** Flammable liquids, category 2
H225 Highly flammable liquid and vapour.

Hazards to humans: **Acute Tox. 4** Acute toxicity, category 4
H332 Harmful if inhaled.
Skin Irrit. 2 Skin Irritation 2
H315 Causes skin irritation.
Eye Irrit. 2 Eye irritation, category 2
H319 Causes serious eye irritation.
STOT SE 3 Specific target organ toxicity — single exposure, category 3
H335 May cause respiratory irritation.
H336 May cause drowsiness or dizziness.
STOT RE 2 Specific target organ toxicity — repeated exposure, category 2
H373 Causes damage to organs through prolonged or repeated exposure.
Asp. Tox. 1 Aspiration hazard, category 1
H304 May be fatal if swallowed and enters airways.

Environmental hazards: **Aquatic Chronic 3** Hazardous to the aquatic environment — Chronic Hazard, category 3
H412 Harmful to aquatic life with long lasting effects.

2.2. Label elements

Labeling according to Regulation (EC) No. 1272/2008 (CLP)

Pictogram



Signal word **DANGER**

Hazard statements: **H225** Highly flammable liquid and vapour.
H304 May be fatal if swallowed and enters airways.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H332 Harmful if inhaled.
H335 May cause respiratory irritation.
H336 May cause drowsiness or dizziness.
H373 May cause damage to organs through prolonged or repeated exposure.
H412 Harmful to aquatic life with long lasting effects.

Supplemental label elements: **Not applicable.**



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Phrases specifying the conditions of safe use:

P102 Keep out of reach of children.
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. Do not smoke.
P260 Do not breathe dust / fume / gas / mist / vapors / spray.
P301+P310 IF SWALLOWED: Immediately call a POISON CENTER / doctor.
P302+P352 IF ON SKIN: wash with plenty of water.
P501 Dispose of contents / container to companies with the necessary permission in accordance with national regulations.

2.3. Other hazards

None of the substances in the mixture satisfies the PBT or vPvB requirements according to the appendix XIII to regulation (WE) no. 1907/2006. May form explosive mixtures with air. None of the substances mentioned in this Safety Data Sheet was included in the list established in accordance with Article 59 for having endocrine disrupting properties, and none of the substances in this mixture is 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.

3. SECTION 3: Composition/information on ingredients

3.1. Substances

This is a mixture - not applicable. See details in section 3.2.

3.2. Mixtures

Name of substance: <u>Xylene</u>				
Index number:	CAS No.:	EC number:	Registration No.:	Concentration [% w/w]:
--	1330-20-7	215-535-7	--	36-45
Hazards resulting from the physicochemical properties:	Flam. Liq. 3 Flammable liquids, category 3 H226 Flammable liquid and vapour.			
Hazards to humans:	Asp. Tox. 1 Aspiration hazard, category 1 H304 May be fatal if swallowed and enters airways. Acute Tox. 4 Acute toxicity, category 4 H312 Harmful in contact with skin. Skin Irrit. 2 Skin Irritation 2 H315 Causes skin irritation. Acute Tox. 4 Acute toxicity, category 4 H332 Harmful if inhaled. STOT RE 2 Specific target organ toxicity — repeated exposure, category 2 H373 Causes damage to organs through prolonged or repeated exposure.			
Environmental hazards:	Not classified.			
Specific concentration limits:	Not applicable.			
M-Factors:	Not applicable.			
ATE:	LC50 (inhalation, rat, 4h)			12,09
	LD50 (oral, rat)			>2000
	LD50 (skin, rabbit)			1466,67



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Particle characteristics for substances in nanoform:

Not applicable.

Name of substance: **Reaction mixture of ethylbenzene and xylene**

Index number:	CAS No.:	EC number:	Registration No.:	Concentration [% w/w]:
--	--	905-588-0	01-2119488216-32-0028	32-36

Hazards resulting from the physicochemical properties:

Flam. Liq. 3 Flammable liquids, category 3
H226 Flammable liquid and vapour.

Hazards to humans:

Acute Tox. 4 Acute toxicity, category 4
H312 Harmful in contact with skin.
Skin Irrit. 2 Skin Irritation 2
H315 Causes skin irritation.
Eye Irrit. 2 Eye irritation, category 2
H319 Causes serious eye irritation.
Asp. Tox. 1 Aspiration hazard, category 1
H304 May be fatal if swallowed and enters airways.
Acute Tox. 4 Acute toxicity, category 4
H332 Harmful if inhaled.
STOT SE 3 Specific target organ toxicity — single exposure, category 3
H335 May cause respiratory irritation.
STOT RE 2 Specific target organ toxicity — repeated exposure, category 2
H373 Causes damage to organs through prolonged or repeated exposure.

Environmental hazards:

Not classified.

Specific concentration limits:

Not applicable.

M-Factors:

Not applicable.

ATE:

LC50 (inhalation, rat) 27124 mg/m³
LD50 (oral, rat) 3523 mg/kg
LD50 (skin, rabbit) > 4200 mg/kg

Particle characteristics for substances in nanoform:

Not applicable.

Name of substance: **Hydrocarbons C7-C9, n-alkanes, isoalkanes, cyclic**

Index number:	CAS No.:	EC number:	Registration No.:	Concentration [% w/w]:
--	--	920-750-0	01-2119473851-33-0006	18-23

Hazards resulting from the physicochemical properties:

Flam. Liq. 2 Flammable liquids, category 2
H225 Highly flammable liquid and vapour.

Hazards to humans:

EUH066 Repeated exposure may cause skin dryness or cracking.
STOT SE 3 Specific target organ toxicity — single exposure, category 3
H336 May cause drowsiness or dizziness.
Asp. Tox. 1 Aspiration hazard, category 1
H304 May be fatal if swallowed and enters airways.

Environmental hazards:

Aquatic Chronic 2 Hazardous to the aquatic environment — Chronic Hazard, category 2
H411 Toxic to aquatic life with long lasting effects.

UVCB substance. Content of components:



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Specific concentration limits:	Benzene: <0,01 %, nr CAS: 71-43-2; toluene: <0,01%, nr CAS: 108-88-3; n-hexane: 1-3%, nr CAS: 110-54-3; cyclohexane: <5%, CAS:110-82-7.		
M-Factors:	Not applicable.		
ATE:	LD50 (oral, rat)	>5840 mg/kg	
	LD50 (skin, rat)	>2920 mg/kg	
	LD50 (inhalation, rat)	>23300 mg/m ³	
Particle characteristics for substances in nanoform:	Not applicable.		

Name of substance: Ethylbenzene				
Index number:	CAS No.:	EC number:	Registration No.:	Concentration [% w/w]:
--	100-41-4	202-849-4	01-2119489370-35-XXXX	5-9
Hazards resulting from the physicochemical properties:	Flam. Liq. 2 Flammable liquids, category 2 H225 Highly flammable liquid and vapour.			
Hazards to humans:	Acute Tox. 4 Acute toxicity, category 4 H332 Harmful if inhaled. STOT RE 2 Specific target organ toxicity — repeated exposure, category 2 H373 Causes damage to organs through prolonged or repeated exposure. Asp. Tox. 1 Aspiration hazard, category 1 H304 May be fatal if swallowed and enters airways.			
Environmental hazards:	Not classified.			
Specific concentration limits:	Not applicable.			
M-Factors:	Not applicable.			
ATE:	LC50 (inhalation)	17400 mg/m ³		
	LD50 (skin)	17800 mg/kg mc		
	LD50 (oral)	3500 mg/kg mc		
Particle characteristics for substances in nanoform:	Not applicable.			

Name of substance: Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, <2% aromatics				
Index number:	CAS No.:	EC number:	Registration No.:	Concentration [% w/w]:
--	--	919-857-5	01-2119463258-33-XXXX	1-5
Hazards resulting from the physicochemical properties:	Flam. Liq. 3 Flammable liquids, category 3 H226 Flammable liquid and vapour.			
Hazards to humans:	STOT SE 3 Specific target organ toxicity — single exposure, category 3 H336 May cause drowsiness or dizziness. Asp. Tox. 1 Aspiration hazard, category 1 H304 May be fatal if swallowed and enters airways.			
Environmental hazards:	Not classified.			
Specific concentration limits:	Not applicable.			
M-Factors:	Not applicable.			



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ATE:	LC50 (inhalation, rat, 8h, OECD 403)	>5000 mg/m ³
	LD50 (skin, rabbit, 24h, OECD 402)	>5000 mg/kg
	LD50 (oral, rat, wg OECD 401)	>5000 mg/kg
Particle characteristics for substances in nanoform:	Not applicable.	

Name of substance: Toluene				
Index number:	CAS No .:	EC number:	Registration No .:	Concentration [% w/w]:
601-021-00-3	108-88-3	203-625-9	01-2119471310-51-XXXX	<1
Hazards resulting from the physicochemical properties:	Flam. Liq. 2 Flammable liquids, category 2 H225 Highly flammable liquid and vapour.			
Hazards to humans:	Asp. Tox. 1 Aspiration hazard, category 1 H304 May be fatal if swallowed and enters airways. Skin Irrit. 2 Skin Irritation 2 H315 Causes skin irritation. STOT SE 3 Specific target organ toxicity — single exposure, category 3 H336 May cause drowsiness or dizziness. Repr. 2 Reproductive toxicity, category 2 H361 Suspected of damaging fertility or the unborn child. STOT RE 2 Specific target organ toxicity — repeated exposure, category 2 H373 Causes damage to organs through prolonged or repeated exposure.			
Environmental hazards:	Not classified.			
Specific concentration limits:	Not applicable.			
M-Factors:	Not applicable.			
ATE:	LOAEC (inhalation)	>222 mg/m ³		
	LD50 (acute toxicity, oral, rat)	>2000 mg/kg		
	LD50 (acute toxicity, skin, rabbit)	>2000 mg/kg		
	LC50 (acute toxicity, inhalation, rat, 4h)	>25 mg/L		
	NOAEC (inhalation, rat)	4522 mg/m ³		
Particle characteristics for substances in nanoform:	Not applicable.			

4. SECTION 4: First aid measures

4.1. Description of first aid measures

Airways:	Move the victim out of the exposure area to fresh air. Keep calm and warm, loosen tight parts of clothing. Conscious person should be placed in a semi-sitting position, place unconscious person in recovery position. Control and maintain airway patency. Give oxygen in the event of dyspnoea. In case of lack of breath, apply artificial respiration with the AMBU apparatus. In the case of persistent discomfort or malaise, obtain medical assistance.
Skin contact:	Immediately remove contaminated clothing and shoes. Rinse contaminated skin thoroughly with water. Consult a doctor if any symptoms appear and persist.



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Contact with eyes: Immediately flush contaminated eyes with a continuous stream of water, remove contact lenses (if present) and continue rinsing for approx. 15 minutes. When rinsing, keep the eyelids wide open and move the eyeball. If irritation symptoms occur and persist, consult a physician. **CAUTION:** Avoid strong water jet as it may damage the corneal.

Digestive tract: Get medical attention immediately. DO NOT induce vomiting – the risk of aspiration to the lungs. Prevent victim from collapsing. Do not induce vomiting without recommended of the doctor. Give oxygen in the event of dyspnoea.

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

Product vapors may cause: eye irritation, nose, throat, excitation, narcotic effects, depressive effect on central nervous system, headache and dizziness, cramps, loss of consciousness, coma, respiratory arrest, **Contact with skin may cause:** degreasing, dry skin, **Eye contact may cause:** irritation, pain, **After ingestion may cause:** nausea, vomiting, There is also risk of aspiration in the event of vomiting.

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

Unconscious person do not give anything by mouth or induce vomiting. **Medical personnel** show the safety data sheet, label or packaging to the person giving the aid. **Directions for the doctor:** symptomatic treatment.

5. SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media: Carbon dioxide, extinguishing powders, spray water jets, alcohol-resistant foam.

Inappropriate extinguishing media: Water jets.

5.2. Special hazards arising from the substance or mixture

Highly flammable liquid and vapor. Incomplete combustion products may contain carbon monoxide. Vapors are heavier than air, therefore spread near the ground and can be ignited from a distance. Vapors can form explosive mixtures with air.

5.3. Advice for firefighters

Follow the procedures for extinguishing chemical fires. In the event of fire of large amounts of the product, keep all persons not involved in the emergency action away from the hazardous area. Extinguish the fire from a safe distance, behind shields or using unmanned parcels. Call rescue teams. Closed containers exposed to fire or high temperatures should be cooled with dispersed steams of water from a safe distance (explosion risk), and if possible and safe removed from the danger zone. After removed from danger zone, continue to spray them until completely cool. Do not allow the fire water to reach the sewage system and water reservoirs. The resulting fire waste and residues should be disposed of in accordance with applicable regulations. Persons involved in the fire fighting actions should be properly trained, equipped with a self-contained breathing apparatus, and should wear full protective gear.



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6. SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Remove all sources of ignition - extinguish open fire, do not smoke, do not use tools and sparking devices, protect packages against heating - risk of explosion. Dilute steam with water spray. Avoid direct contact with released product. Avoid skin and eye contamination, inhalation of vapors. Provide effective ventilation. Keep all persons not involved in the emergency action away from the hazardous area. If necessary, order evacuation. Call the National Fire Brigade, rescue teams and the State Police. **NOTE:** Potentially explosive area. Vapors may spread near the floor/ground to distant ignition sources and create a hazard due to the retreating flame.

6.2. Environmental precautions

Do not allow product to reach water systems, sewage, manholes and soil. In the event of a release of large amounts of the product, inform appropriate OSH, rescue and environmental protection crews and administrative organs.

6.3. Methods and material for containment and cleaning up

If it is possible and safe, eliminate or limit the release of the product (limit the liquid inflow, seal, place damaged packaging in an emergency packaging). Contain the spread of liquid by embanking the spill area. Pump out large quantities of collected liquid. Cover small spills with non-combustible absorbent material (e.g., earth, sand, vermiculite) and remove into closed waste containers. If necessary, enlist the help of companies authorised to transport and dispose of waste.

6.4. Reference to other sections

Also refer to sections 8 and 13 of safety data sheet.

7. SECTION 7: Handling and storage

7.1. Precautions for safe handling

Prevention of fire and explosion:

Avoid the formation of flammable/explosive vapor concentrations in the air. Eliminate sources of ignition - do not use open fire, do not smoke, do not use sparking tools and clothes made of fabrics susceptible to electrification. Protect tanks against heating, install electrical equipment in explosion-proof version, use bridging and earthing. Work in well-ventilated rooms. Ensure easy access to extinguishing agents and emergency equipment at the place of use and storage (in the event of fire, spillage, leakage, etc.). **NOTE:** Empty, uncleaned containers may contain product residues (liquid, vapors) and may constitute a fire/explosion hazard. Exercise caution. Uncleaned packages / tanks can not be cut, drilled, grinded, welded, or performed in their vicinity.

Prevention of poisoning:

Avoid eye contamination. Avoid inhaling vapors. Prevent the formation of harmful vapour concentrations in the air. Work in well-ventilated rooms. Follow the basic hygiene rules: do not eat, do not drink, do not smoke in the workplace, wash hands with soap and water each time after finishing work, do not allow contamination of clothing. Product is perfectly absorbed through the skin. Do not allow the product to be doused, especially large areas of the body. Take off contaminated and soaked clothes and remove them to a safe place, away from heat and ignition



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sources. Wash them before re-use. Use personal protective equipment in accordance with the information in section 8 of the safety data sheet. Provide easy access to emergency equipment (in case of fire, release etc.).

7.2. Conditions for safe storage, including any incompatibilities

Store in original, tightly closed and properly labeled packages or containers intended for this product. Protect packages with the product against sunlight. The storage surface should be non-absorbent. Provide adequate ventilation and earthing. No smoking or use of open fire in warehouse area. Storage conditions also apply to empty, uncleaned packages. People which have contact with the product should be train in filed of the physicochemical properties and the resulting hazards.

7.3. Specific end use(s)

See section 1.2.

8. SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Information on the procedures for monitoring the content of hazardous components in the air:	<u>Xylene</u> <u>Reaction mixture of ethylbenzene and xylene</u> Not applicable <u>Hydrocarbons C7-C9, n-alkanes, isoalkanes, cyclic</u> <u>Ethylbenzene</u> <u>Auminium powder (stabilised)</u>	
	CMA (8h)	3 mg/m ³
	CMA (15 min)	10 mg/m ³
	<u>Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, <2% aromatics</u> <u>Toluene</u>	
	STEL (15 min):	192 mg/m ³
	TWA (8h):	50 ppm
	TWA (8h):	384 mg/m ³
	STEL (15 min):	100 ppm
DNEL and PNEC values:	<u>Xylene</u>	
	DNEL population (inhalation, long-term exposure, local effects)	65,3
	DNEL population (oral, long-term exposure, systematic effects)	12,5
	DNEL population (inhalation, long-term exposure, systematic effects)	65,3
	DNEL population (skin, long-term exposure, systematic effects)	125
	DNEL population (inhalation, short-term exposure, systematic effects)	260
	DNELworker (skin, long-term exposure, systematic effects)	212
	DNELworker (inhalation, short-term exposure, systematic effects)	442
	DNELworker (inhalation, long-term exposure, systematic effects)	221
	DNELworker (inhalation, long-term exposure, local effects)	221
	PNEC fresh water	0,327
	PNEC marine water	0,327



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PNEC fresh water sediment	12,46
PNEC marine water sediment	12,46
PNEC soil	2,31
PNEC sewage treatment plant	6,58
<u>Reaction mixture of ethylbenzene and xylene</u>	
DNELconsumer (inhalation, long-term exposure, local and systematic effects)	442 mg/m ³
DNELworker (inhalation, acute toxicity, local and systematic effects)	442 mg/m ³
DNELworker (inhalation, long-term exposure, local and systematic effects)	212 mg/kg/24h
DNELconsumer (oral, long-term exposure, systemic disorders)	12,5 mg/kg/24h
DNEL (inhalation, acute toxicity, local and systematic effects)	260 mg/m ³
DNELworker (skin, long-term exposure, systemic disorders)	221 mg/m ³
DNELconsumer (skin, long-term exposure, systemic disorders)	125 mg/kg/24h
PNEC fresh water	0,327 mg/L
PNEC marine water	0,327 mg/L
PNEC fresh water sediment	12,46 mg/kg
PNEC marine water sediment	12,46 mg/kg
PNEC soil	2,31 mg/kg
<u>Hydrocarbons C7-C9, n-alkanes, isoalkanes, cyclic</u>	
DNELworker (inhalation, chronic toxicity)	2035 mg/m ³
DNELworker (skin, chronic toxicity)	773 mg/kg/24h
DNELconsumer (skin, chronic toxicity)	699 mg/kg/24h
DNELconsumer (inhalation, chronic toxicity, 24h)	608 mg/m ³
DNELconsumer (oral, chronic toxicity)	699 mg/kg/24h
PNEC values: No hazard identified.	
<u>Ethylbenzene</u>	
DNELworker (inhalation, short-term exposure, systematic effects)	442 mg/m ³
DNELworker (inhalation, short-term exposure, local effects)	884 mg/m ³
DNELworker (inhalation, long-term exposure, systematic effects)	442 mg/m ³
DNELworker (inhalation, long-term exposure, local effects)	884 mg/m ³
PNEC fresh water sediment	0,1 mg/L
PNEC marine water sediment	0,1 mg/L
<u>Aluminium powder (stabilised)</u>	
DNEL population (oral, long-term exposure, systematic effects)	7,9 mg/kg mc/24h
DNELworker (inhalation, long-term exposure, systematic effects)	3,72 mg/m ³
DNELworker (inhalation, long-term exposure, local effects)	3,72 mg/m ³
PNEC values: No hazard identified.	
<u>Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, <2% aromatics</u>	
DNELworker (skin, chronic toxicity, systemic disorders)	208 mg/kg mc/24h
DNELconsumer (skin, chronic toxicity, systemic disorders)	125 mg/kg mc/24h
DNELconsumer (oral, chronic toxicity, systemic disorders)	125 mg/kg mc/24h
DNELconsumer (inhalation, chronic toxicity, systemic disorders, 8h)	185 mg/m ³
DNELworker (inhalation, chronic toxicity, systemic disorders, 8h)	871 mg/m ³



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PNEC values: No hazard identified.	
<u>Toluene</u>	
DNEL population (skin, long-term exposure, systemic disorders)	226 mg/kg mc
DNEL population (inhalation, long-term exposure, systemic disorders)	56,5 mg/m ³
DNEL population (inhalation, acute toxicity, local effects)	226 mg/kg mc
DNEL population (oral, long-term exposure, systemic disorders)	8,13 mg/kg mc
DNELworker (oral, long-term exposure, local effects)	192 mg/m ³
DNELworker (skin, long-term exposure, systemic disorders)	384 mg/kg/24h
DNELworker (inhalation, long-term exposure, systemic disorders)	192 mg/m ³
DNELworker (inhalation, acute toxicity, systemic disorders)	384 mg/m ³
PNEC sediment	16,39 mg/kg
PNEC fresh water	0,68 mg/L
PNEC marine water	0,68 mg/L
PNEC soil	2,89 mg/kg
PNEC sewage treatment plant	13,61 mg/kg

Information on procedures to monitor airborne concentrations of hazardous ingredients:

- *PN-ISO 4225:1999 Air quality. General aspects. Vocabulary.*
- *PN-EN 689+AC:2019-06 Exposure at work stations - Measurements of inhalation exposure to chemical agents - Strategy for testing compliance with limit values.*

8.2. Exposure controls

Appropriate engineering controls: It is recommended that general ventilation and /or local exhaust be used to keep harmful agent concentrations below applicable maximum exposure limits. Local exhaust ventilation systems are the preferred method, because allow to controll emissions at source and preventing contaminants from spreading throughout the work area.

Individual protection measures:

Eye or face protection: In the case of long-term exposure or risk of liquid splashing into the eye, use glasses in tight housing (goggles). Recommended equipment of the workplace with water spray for rinsing eyes.

Skin protection: Wear protective gloves, e.g. made of Viton or PAV, 0.7 mm thick, penetration time> 480 minutes. Gloves should be changed regularly, or immediately if any signs of wear or damage show (if torn, punctured) or appearance changes (in terms of colour, flexibility, shape). Protective clothing consisting of shirt buttoned at the neck, fastened cuffs and trousers lined on shoes. Oil-resistant, anti-skid safety shoes. In places where there is potentially explosive atmosphere, both outer clothing and shoes should be able to discharge electrostatic charges. Trousers lined on shoes. • *EN ISO 374-1:2017 Protective gloves against dangerous chemicals and micro-organisms – Part 1: Terminology and performance requirements.* • *EN 16523-1+A1:2018-11 Determination of material resistance to permeation by chemicals – Part 1: Permeation of potentially hazardous liquid chemical substances under continuous contact conditions.*

Respiratory protection: Under normal conditions and with sufficient ventilation, they are not required. In case of exposed to concentrations to vapors exceeding the permissible values, use mask with A2 filter (brown) to protect the respiratory tract against organic gases and vapors of organic substances with boiling point above 65°C (cyclohexane, diethyl ether, isobutane, acetone, toluene, xylenes). In the event of work in a confined space / insufficient oxygen content in the air / large, uncontrolled emission / all circumstances when the mask with the absorber does not provide sufficient protection, use a



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Environmental exposure controls:	breathing apparatus with an independent air supply.
	Prevent the substance from entering soil, sewerage systems and water courses.

9. SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

a) Physical state	Liquid
b) Color	Silver, metallic
c) Odour	Solvent based
d) Melting point/freezing point	No data
e) Boiling point or initial boiling point and boiling range	>35 °C
f) Flammability	Flammable
g) Lower and upper explosion limit	No data
h) Flash point	<23 °C
i) Auto-ignition temperature	No data
j) Decomposition temperature	No data
k) pH	Not applicable
l) Kinematic viscosity	>20,5 mm ² /s at 40°C
m) Solubility	Insoluble in water, soluble in organic solvents
n) Partition coefficient n-octanol/water (log value)	Not applicable to mixtures
o) Vapour pressure	No data
p) Density	0,95±0,02 g/cm ³ at 20°C
q) Relative vapour density	No data
r) Particle characteristics	Only applicable for solids

9.2. Other information:

Information with regard to physical hazard classes:	See section 9.1
Other safety characteristics:	Not applicable

10. SECTION 10: Stability and reactivity

10.1. Reactivity	Mixture is not reactive under normal conditions of temperature and pressure, while adhering to the recommendations regarding the conditions of use and storage.
10.2. Chemical stability	There are no dangerous reactions when stored and used according to the instructions.
10.3. Possibility of hazardous reactions	Not known.



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10.4. Conditions to avoid	Flames, static electricity, sparks, hot surfaces, other ignition sources, and high temperature.
10.5. Incompatible materials	strong oxidants;
10.6. Hazardous decomposition products	Under normal conditions, it does not decompose when used as intended. Carbon monoxide and carbon dioxide on combustion.

11. SECTION 11: Toxicological information

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

A) Acute toxicity:	Based on available data, the classification criteria are not met. ATEmix (skin, calculated value) = 1474,3 mg/kg ATEmix (inhalation, calculated value) = 13,0 mg/L
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Xylene

LC50 (inhalation, rat, 4h)	12,09
LD50 (oral, rat)	>2000
LD50 (skin, rabbit)	1466,67

Reaction mixture of ethylbenzene and xylene

LC50 (inhalation, rat)	27124 mg/m ³
LD50 (oral, rat)	3523 mg/kg
LD50 (skin, rabbit)	> 4200 mg/kg

Hydrocarbons C7-C9, n-alkanes, isoalkanes, cyclic

LD50 (oral, rat)	>5840 mg/kg
LD50 (skin, rat)	>2920 mg/kg
LD50 (inhalation, rat)	>23300 mg/m ³

Ethylbenzene

LC50 (inhalation)	17400 mg/m ³
LD50 (skin)	17800 mg/kg mc
LD50 (oral)	3500 mg/kg mc

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

LD50 (oral, rat, wg OECD 401)	>5000 mg/kg
LD50 (skin, rabbit, 24h, OECD 402)	>5000 mg/kg
LC50 (inhalation, rat, 8h, OECD 403)	>5000 mg/m ³

Toluene

LOAEC (inhalation)	>222 mg/m ³
LD50 (acute toxicity, oral, rat)	>2000 mg/kg
LD50 (acute toxicity, skin, rabbit)	>2000 mg/kg
LC50 (acute toxicity, inhalation, rat, 4h)	>25 mg/L
NOAEC (inhalation, rat)	4522 mg/m ³

B) Skin corrosion/irritation:	Causes skin irritation.
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C) Serious eye damage/irritation:	Causes serious eye irritation.
D) Respiratory or skin sensitisation:	May cause respiratory irritation.
E) Germ cell mutagenicity:	Based on available data, the classification criteria are not met.
F) Carcinogenicity:	Based on available data, the classification criteria are not met.
G) Reproductive toxicity:	Suspected of damaging fertility or the unborn child.
H) STOT – single exposure:	May cause drowsiness or dizziness.
I) STOT– repeated exposure:	Causes damage to organs through prolonged or repeated exposure.
J) Aspiration hazard:	May be fatal if swallowed and enters airways.

11.2. Information on other hazards

Information on adverse health effects caused by endocrine disrupting properties	not applicable
Other information:	not applicable

12. SECTION 12: Ecological information

12.1. Toxicity

<u>Xylene</u>	
LC50 (acute toxicity, freshwater fish – Poecilia reticulata, 96h)	34,7
IC50 (acute toxicity, algae, 72h)	2,2
LC50 (acute toxicity, freshwater fish – Carrasius auratus 96h)	16,9
LC50 (acute toxicity, freshwater fish – Lepomis macrochius, 96h)	20,9
LC50 (acute toxicity, freshwater fish- Pimephales promelas, 96h)	26,7
EC50 (acute toxicity, freshwater crustaceans- Daphnia magna, 48h)	1
<u>Reaction mixture of ethylbenzene and xylene</u>	
LC50 (acute toxicity, freshwater fish- Oncorhynchus mykiss, 96h)	2,6 mg/L
EC50 (toxicity, algae- Pseudokirchneriella subcapitata, 72h)	2,2 mg/L
EC50 (acute toxicity, activated sludge, 3h)	> 157 mg/L
<u>Hydrocarbons C7-C9, n-alkanes, isoalkanes, cyclic</u>	
EL50 (acute toxicity, algae – Pseudokirchneriella subcapitata, 72h)	10 mg/L
LL50 (acute toxicity, freshwater fish – Oncorhynchus mykiss, 96h)	3,0 mg/L
NOEC (chronic toxicity, freshwater invertebrates- Daphnia magna, 21 days)	0,17 mg/L
NOEL (chronic toxicity, freshwater fish – Oncorhynchus mykiss, 28 days)	0,574 mg/L
EL50 (acute toxicity, freshwater invertebrates- Daphnia magna, 48h)	4,6 mg/L
<u>Ethylbenzene</u>	
no data.	
<u>Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, <2% aromatics</u>	
LL50 (acute toxicity, freshwater fish- Oncorhynchus mykiss, 96h, acc. to OECD 203)	>1000 mg/L
EL50 (acute toxicity, freshwater invertebrates- Daphnia magna, 48h, acc. to OECD 202)	>1000 mg/L
Erl50 (acute toxicity, algae- Pseudokirchneriella subcapitata, 72h, acc. to OECD 201)	>1000 mg/L



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EbL50 (acute toxicity, algae- *Pseudokirchneriella subcapitata*, 72h, acc. to OECD 201) >1000 mg/L

Toluene

NOEC (toxicity, fish, 40 days) 1,4 mg/L

NOEC (toxicity, freshwater invertebrates- *Daphnia magna*, 7 days) 0,74 mg/L

EC50 (toxicity, aquatic invertebrates- *Daphnia magna*, 48h) 3,78 mg/L

EC50 (toxicity, microorganisms- activated sludge, 24h) 84 mg/L

NOEC (toxicity, water plants, 72h) 10 mg/L

LC50 (toxicity, fish, 96h) 5,5 mg/L

Other information: Not applicable.

12.2. Persistence and degradability

Xylene

Easily biodegradable in water. After 5 days under aerobic conditions in municipal sewage, degree of biodegradation was = 50- 70 Half-life in groundwater = 20- 116 Half-life in soil = 2- 7 Atmospheric half-life = 8- 14

Reaction mixture of ethylbenzene and xylene

Expected, that substance is degrade by indirect photolysis in air. Easily biodegradable(s).

Hydrocarbons C7-C9, n-alkanes, isoalkanes, cyclic

Activated sludge simulation test: Not applicable- UVCB substance. Hydrolysis as function of pH: does not occur. Photolysis: Does not occur. Biodegradable after 28 days = >74 %

Ethylbenzene

No data.

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

Easily biodegradable. Manometric respirometry (OECD 301 F- sewage organisms, 28 days) 80 %

Toluene

Does not hydrolysis in environment. No hydrolyzing functional groups. Easily biodegradable(s). Degradation half-time (DT50) is: 2,59 days

Other information: Not applicable.

12.3. Bioaccumulative potential

Xylene

BCF <100 for all components

Reaction mixture of ethylbenzene and xylene

Bioconcentration factor (BCF) = 25,9 n-octanol/water partition coefficient (Kow/logKow) <3,2 Bioaccumulation is not expected.

Hydrocarbons C7-C9, n-alkanes, isoalkanes, cyclic

Not applicable- UVCB substance.

Ethylbenzene

No data.

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

Bioaccumulation is not expected.

Toluene

Bioaccumulation factor Log Pow = 2,73 Bioconcentration factor (BCF) = 90 Bioaccumulation is not expected.

Other information: Not applicable.

12.4. Mobility in soil



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Xylene

High to moderate. KOC from 48 for o-xylene to 540 for p-xylene and 520 for ethylbenzene. Evaporation from soil (80 days) = 6- 12%

Reaction mixture of ethylbenzene and xylene

Soil and sediment sorption capacity.

Hydrocarbons C7-C9, n-alkanes, isoalkanes, cyclic

Not applicable- UVCB substance. Should not penetrate into groundwater.

Ethylbenzene

No data.

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

No data.

Toluene

No data available.

Other information: Not applicable.

12.5. Results of PBT and vPvB assessment

None of the substances in the mixture satisfies the PBT or vPvB requirements according to the appendix XIII to regulation (WE) no. 1907/2006.

12.6. Endocrine disrupting properties

Information on adverse effects on the environment caused by endocrine disrupting properties: not applicable

12.7. Other adverse effects

No data.

13. SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste code: **08 01 11* Adhesive and sealant sludges containing organic solvents or other dangerous substances.**

Do not dispose of to sewage system. Avoid contamination of surface and ground waters. Do not store at municipal landfills. Consider the possibility of use. Recovery or neutralization of waste product should be carried out in accordance with applicable regulations by authorized entities. Recommended method of neutralization: D10 Incineration on land

Waste code: **15 01 10* Packaging containing residues of or contaminated by dangerous substances.**

The recovery or disposal of waste product should be carried out in accordance with applicable regulations. Reusable containers should be reused after cleaning Packaging waste should be disposed of in professional licensed incineration facilities or waste treatment/neutralisation plants. Recommended neutralization process: Recommended recovery process: R4 Recycling or recovery of metals and metal compounds.

14. SECTION 14: Transport information

Mixture is subject to regulations of transport of dangerous goods contained in: ADR (road transport); RID (rail transport); IMDG (sea transport); ICAO / IATA (air transport);

14.1. UN number or ID number

UN 1139



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14.2. UN proper shipping name	COATING SOLUTION
14.3. Transport hazard class(es)	3
14.4. Packing group	II
14.5. Environmental hazards	Not applicable
14.6. Special precautions for user	Not applicable
14.7. Maritime transport in bulk according to IMO instruments	Not applicable
Tunnel restriction code	D/E

15. SECTION 15: Regulatory information

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

- Commission Directive 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 on the protection of the health and safety of workers from the risks related to chemical agents at work (EC 2000, No. 39, as amended).
- PN-ISO 4225:1999 Air quality. General aspects. Vocabulary;
- PN-EN 689+AC:2019-06 Exposure at work stations - Measurements of inhalation exposure to chemical agents - Strategy for testing compliance with limit values.
- REGULATION (EU) 2016/425 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 9 March 2016 on personal protective equipment and repealing Council Directive 89/686/EEC
- EN ISO 374-1:2017 Protective gloves against dangerous chemicals and micro-organisms – Part 1: Terminology and performance requirements.
- EN 16523-1+A1:2018-11 Determination of material resistance to permeation by chemicals – Part 1: Permeation of potentially hazardous liquid chemical substances under continuous contact conditions.
- PN-EN 14387+A1:2010 Respiratory protective devices. Gas filter(s) and combined filter(s). Requirements, testing, marking.
- 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, 93/67/EEC, 93/105/EC and 2000/21/EC (corrigendum OJ L 133 of 29 May 2007, as amended).
- Commission Regulation (EU) No. 2015/830 of 28 May 2015, amending Regulation (EC) No. 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) (OJ L 132 of 29 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, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006 (OJ L 353 of 31 December 2008, as amended).
- Regulations Concerning the International Transport of Dangerous Goods by Rail (RID) (Journal of Laws of 2009, No. 167, Item. 1318, as amended).
- European Agreement concerning the International Carriage of Dangerous Goods by Road (ADR) (Appendix to the Journal of Laws of 2009, No. 27, Item. 162).
- REGULATION (EU) 2016/425 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 9 March 2016 on personal protective equipment and repealing Council Directive 89/686/EEC.
- COMMISSION REGULATION (EU) 2020/878 of 18 June 2020 amending Annex II to Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)
- Regulation (EC) No 273/2004 of the European Parliament and of the Council of 11 February 2004 on drug precursors.
- Council regulation (EC) No 111/2005 of 22 December 2004 laying down rules for the monitoring of trade between the



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Community and third countries in drug precursors.

15.2. Chemical safety assessment

The manufacturer has not carried out a chemical safety assessment.

16. SECTION 16: Other information

Other information: This safety data sheet was prepared on the basis of information contained in safety data sheets provided by the manufacturers of substances and the currently applicable regulations.
The mixture has been classified on the basis of calculations and results of the flash point and boiling point tests.
Other data sources:
IUCALID Data Bank (European Commission – European Chemicals Bureau)
ESIS- European Chemical Substances Information System (European Chemicals Bureau)
The information contained in this safety data sheet applies only to the title product and may not be valid or sufficient for the product used in combination with other materials or different applications.
The user of the product is obliged to observe all applicable standards and regulations, as well as take responsibility arising from the misuse of the information contained in the safety data sheet or improper application of the product.
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Card issue history

Update:	Scope of updates	Version:
2022-11-28	Recipe change/data update.	15.0

Explanation of abbreviations and acronyms in the safety data sheet:

- vPvB – Very persistent and very bioaccumulative (substance)
- PBT – Persistent, bioaccumulative and toxic (substance)
- PNEC – Predictable No-Effect Concentration
- DNEL – Derived No-Effect Level
- BCF – Bioconcentration factor
- LD50 – Lethal dosage at which the death of 50% of the tested animals is observed
- LC50 – Lethal concentration at which the death of 50% of the tested animals is observed
- ECX – Concentration associated with X% growth rate response
- IC50 – Inhibitory concentration at which 50% inhibition of the tested parameter is observed
- RID – Regulation concerning international carriage of dangerous goods by rail
- ADR – European agreement concerning the international carriage of dangerous goods by road
- IMDG – International Maritime Dangerous Goods Code
- IATA – International Air Transport Association
- SDS- Safety Data Sheet

Training: Concerning handling, health and safety at work with hazardous substances and mixtures.



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--- The end of the safety data sheet.---

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