

	KAYALAR KIMYA SAN.VE TIC.A.S.	Revision nr. 4 Dated 20/12/2023 Printed on 26/02/2024 Page n. 1/18 Replaced revision:3 (Printed on: 27/10/2016)
	HHP1053.00.0000 POLYURETHANE HARDENER	

Safety Data Sheet

According to Annex II to REACH - Regulation (EU) 2020/878 and to Annex II to UK REACH

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

1.1. Product identifier	
Code:	HHP1053.00.0000
Product name	POLYURETHANE HARDENER
1.2. Relevant identified uses of the substance or mixture and uses advised against	
Intended use	Wood coatings
1.3. Details of the supplier of the safety data sheet	
Name	KAYALAR KIMYA SAN.VE TIC.A.S.
Full address	Tepeören Kimya Sanayicileri O.S.B, Tem Yanyol F1 Blok
District and Country	34956 İstanbul (Tuzla) TURKEY
	Tel. +90 216-5930727
	Fax +90 216-5931850
e-mail address of the competent person responsible for the Safety Data Sheet Supplier:	help@kayalarkimya.com.tr Kayalar Kimya San. Ve Tic. A.S.
1.4. Emergency telephone number	
For urgent inquiries refer to	HEADQUARTERS: KAYALAR KIMYA SAN.VE TIC. A.Ş. TURKEY TEL:+90 216-5930727

SECTION 2. Hazards identification

2.1. Classification of the substance or mixture

The product is classified as hazardous pursuant to the provisions set forth in (EC) Regulation 1272/2008 (CLP) (and subsequent amendments and supplements). The product thus requires a safety datasheet that complies with the provisions of (EU) Regulation 2020/878.
Any additional information concerning the risks for health and/or the environment are given in sections 11 and 12 of this sheet.

Hazard classification and indication:

Flammable liquid, category 2	H225	Highly flammable liquid and vapour.
Eye irritation, category 2	H319	Causes serious eye irritation.
Skin irritation, category 2	H315	Causes skin irritation.
Skin sensitization, category 1	H317	May cause an allergic skin reaction.
Specific target organ toxicity - single exposure, category 3	H336	May cause drowsiness or dizziness.

2.2. Label elements

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Hazard labelling pursuant to EC Regulation 1272/2008 (CLP) and subsequent amendments and supplements.

Hazard pictograms:



Signal words: Danger

Hazard statements:

- | | |
|---------------|---|
| H225 | Highly flammable liquid and vapour. |
| H319 | Causes serious eye irritation. |
| H315 | Causes skin irritation. |
| H317 | May cause an allergic skin reaction. |
| H336 | May cause drowsiness or dizziness. |
| EUH204 | Contains isocyanates. May produce an allergic reaction. |

Precautionary statements:

- | | |
|------------------|--|
| P210 | Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. |
| P280 | Wear protective gloves/ protective clothing / eye protection / face protection. |
| P370+P378 | In case of fire: use foam, fire-extinguishing powder, carbonsioxide to extinguish. |
| P261 | Avoid breathing dust / fume / gas / mist / vapours / spray. |
| P233 | Keep container tightly closed. |
| P312 | Call a POISON CENTRE / doctor if you feel unwell. |

Contains: AROMATIC POLYISOCYANATE
 ETHYL METHYL KETONE
 ETHYL ACETATE

2.3. Other hazards

On the basis of available data, the product does not contain any PBT or vPvB in percentage ≥ than 0,1%.

The product does not contain substances with endocrine disrupting properties in concentration ≥ 0.1%.

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SECTION 3. Composition/information on ingredients

3.2. Mixtures

Contains:

Identification	x = Conc. %	Classification (EC) 1272/2008 (CLP)
ETHYL METHYL KETONE		
INDEX 606-002-00-3	30 ≤ x < 40	Flam. Liq. 2 H225, Eye Irrit. 2 H319, STOT SE 3 H336, EUH066
EC 201-159-0		
CAS 78-93-3		
REACH Reg. 01-2119457290-43-XXXX		
AROMATIC POLYISOCYANATE		
INDEX	20 ≤ x < 30	Eye Irrit. 2 H319, Skin Sens. 1 H317
EC		
CAS 53317-61-6		
XYLENE		
INDEX 601-022-00-9	20 ≤ x < 30	Flam. Liq. 3 H226, Acute Tox. 4 H312, Acute Tox. 4 H332, Skin Irrit. 2 H315, Classification note according to Annex VI to the CLP Regulation: C ATE Dermal: 1100 mg/kg, ATE Inhalation vapours: 11 mg/l
EC 215-535-7		
CAS 1330-20-7		
REACH Reg. 01-2119488216-32-XXXX		
2-METHOXY-1-METHYLETHYL ACETATE		
INDEX 607-195-00-7	10 ≤ x < 20	Flam. Liq. 3 H226
EC 203-603-9		
CAS 108-65-6		
REACH Reg. 01-2119475791-29-XXXX		
ETHYL ACETATE		
INDEX 607-022-00-5	5 ≤ x < 10	Flam. Liq. 2 H225, Eye Irrit. 2 H319, STOT SE 3 H336, EUH066
EC 205-500-4		
CAS 141-78-6		
REACH Reg. 01-2119475103-46-XXXX		
TOLUENE-DIISOCYANATE		
INDEX 615-006-00-4	0 ≤ x < 0,1	Carc. 2 H351, Acute Tox. 1 H330, Eye Irrit. 2 H319, Skin Irrit. 2 H315, STOT SE 3 H335, Resp. Sens. 1 H334, Skin Sens. 1 H317, Aquatic Chronic 3 H412, Classification note according to Annex VI to the CLP Regulation: C Resp. Sens. 1 H334: ≥ 0,1% ATE Inhalation vapours: 0,05 mg/l
EC 247-722-4		
CAS 26471-62-5		
REACH Reg. 01-2119454791-34-XXXX		

The full wording of hazard (H) phrases is given in section 16 of the sheet.

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SECTION 4. First aid measures

4.1. Description of first aid measures

EYES: Remove contact lenses, if present. Wash immediately with plenty of water for at least 15 minutes, opening the eyelids fully. If problem persists, seek medical advice.
 SKIN: Remove contaminated clothing. Rinse skin with a shower immediately. Get medical advice/attention immediately. Wash contaminated clothing before using it again.
 INHALATION: Remove to open air. If the subject stops breathing, administer artificial respiration. Get medical advice/attention immediately.
 INGESTION: Get medical advice/attention immediately. Do not induce vomiting. Do not administer anything not explicitly authorised by a doctor.

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

Specific information on symptoms and effects caused by the product are unknown.

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

SECTION 5. Firefighting measures

5.1. Extinguishing media

SUITABLE EXTINGUISHING EQUIPMENT
 Extinguishing substances are: carbon dioxide, foam, chemical powder. For product loss or leakage that has not caught fire, water spray can be used to disperse flammable vapours and protect those trying to stem the leak.
 UNSUITABLE EXTINGUISHING EQUIPMENT
 Do not use jets of water. Water is not effective for putting out fires but can be used to cool containers exposed to flames to prevent explosions.

5.2. Special hazards arising from the substance or mixture

HAZARDS CAUSED BY EXPOSURE IN THE EVENT OF FIRE
 Excess pressure may form in containers exposed to fire at a risk of explosion. Do not breathe combustion products.

5.3. Advice for firefighters

GENERAL INFORMATION
 Use jets of water to cool the containers to prevent product decomposition and the development of substances potentially hazardous for health. Always wear full fire prevention gear. Collect extinguishing water to prevent it from draining into the sewer system. Dispose of contaminated water used for extinction and the remains of the fire according to applicable regulations.
 SPECIAL PROTECTIVE EQUIPMENT FOR FIRE-FIGHTERS
 Normal fire fighting clothing i.e. fire kit (BS EN 469), gloves (BS EN 659) and boots (HO specification A29 and A30) in combination with self-contained open circuit positive pressure compressed air breathing apparatus (BS EN 137).

SECTION 6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Block the leakage if there is no hazard.
 Wear suitable protective equipment (including personal protective equipment referred to under Section 8 of the safety data sheet) to prevent any contamination of skin, eyes and personal clothing. These indications apply for both processing staff and those involved in emergency procedures.

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Send away individuals who are not suitably equipped. Use explosion-proof equipment. Eliminate all sources of ignition (cigarettes, flames, sparks, etc.) from the leakage site.

6.2. Environmental precautions

The product must not penetrate into the sewer system or come into contact with surface water or ground water.

6.3. Methods and material for containment and cleaning up

Collect the leaked product into a suitable container. Evaluate the compatibility of the container to be used, by checking section 10. Absorb the remainder with inert absorbent material.
Make sure the leakage site is well aired. Contaminated material should be disposed of in compliance with the provisions set forth in point 13.

6.4. Reference to other sections

Any information on personal protection and disposal is given in sections 8 and 13.

SECTION 7. Handling and storage

7.1. Precautions for safe handling

Keep away from heat, sparks and naked flames; do not smoke or use matches or lighters. Without adequate ventilation, vapours may accumulate at ground level and, if ignited, catch fire even at a distance, with the danger of backfire. Avoid bunching of electrostatic charges. When performing transfer operations involving large containers, connect to an earthing system and wear antistatic footwear. Vigorous stirring and flow through the tubes and equipment may cause the formation and accumulation of electrostatic charges. In order to avoid the risk of fires and explosions, never use compressed air when handling. Open containers with caution as they may be pressurised. Do not eat, drink or smoke during use. Avoid leakage of the product into the environment.

7.2. Conditions for safe storage, including any incompatibilities

Store only in the original container. Store the containers sealed, in a well ventilated place, away from direct sunlight. Store in a cool and well ventilated place, keep far away from sources of heat, naked flames and sparks and other sources of ignition. Keep containers away from any incompatible materials, see section 10 for details.

2-METHOXY-1-METHYLETHYL ACETATE
Store in an inert atmosphere, sheletered from moisture because it hydrolises easily.

7.3. Specific end use(s)

Information not available

SECTION 8. Exposure controls/personal protection

8.1. Control parameters

Regulatory references:

BGR	България	НАРЕДБА № 13 ОТ 30 ДЕКЕМВРИ 2003 Г. ЗА ЗАЩИТА НА РАБОТЕЩИТЕ ОТ РИСКОВЕ, СВЪРЗАНИ С ЕКСПОЗИЦИЯ НА ХИМИЧНИ АГЕНТИ ПРИ РАБОТА (изм. ДВ. бр.5 от 17 Януари 2020г.)
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ESP	España	Límites de exposición profesional para agentes químicos en España 2021 Ohtlike kemikaalide ja neid sisaldavate materjalide kasutamise töötervishoiu ja tööohutuse nõuded ning töökeskkonna keemiliste ohutegurite piirnormid [RT I, 17.10.2019, 1 - jõust. 17.01.2020] Decreto Legislativo 9 Aprile 2008, n.81 Decreto-Lei n.º 1/2021 de 6 de janeiro, valores-limite de exposição profissional indicativos para os agentes químicos. Decreto-Lei n.º 35/2020 de 13 de julho, proteção dos trabalhadores contra os riscos ligados à exposição durante o trabalho a agentes cancerígenos ou mutagénicos Rozporządzenie ministra rozwoju, pracy i technologii z dnia 18 lutego 2021 r. Zmieniające rozporządzenie w sprawie najwyższych dopuszczalnych stężeń i natężeń czynników szkodliwych dla zdrowia w środowisku pracy Hotărârea nr. 53/2021 pentru modificarea hotărârii guvernului nr. 1.218/2006, precum și pentru modificarea și completarea hotărârii guvernului nr. 1.093/2006 Kimyasal Maddelerle Çalışmalarda Sağlık ve Güvenlik Önlemleri Hakkında Yönetmelik 12.08.2013 / 28733 EH40/2005 Workplace exposure limits (Fourth Edition 2020) Directive (EU) 2022/431; Directive (EU) 2019/1831; Directive (EU) 2019/130; Directive (EU) 2019/983; Directive (EU) 2017/2398; Directive (EU) 2017/164; Directive 2009/161/EU; Directive 2006/15/EC; Directive 2004/37/EC; Directive 2000/39/EC; Directive 98/24/EC; Directive 91/322/EEC. ACGIH 2022
EST	Eesti	
ITA	Italia	
PRT	Portugal	
POL	Polska	
ROU	România	
TUR	Türkiye	
GBR	United Kingdom	
EU	OEL EU	
	TLV-ACGIH	

XYLENE						
Threshold Limit Value						
Type	Country	TWA/8h		STEL/15min		Remarks / Observations
		mg/m3	ppm	mg/m3	ppm	
TLV	BGR	221	50	442	100	SKIN
VLA	ESP	221	50	442	100	SKIN
TLV	EST	200	50	450	100	SKIN
VLEP	ITA	221	50	442	100	SKIN
VLE	PRT	221	50	442	100	SKIN
NDS/NDSch	POL	100		200		SKIN
TLV	ROU	221	50	442	100	SKIN
ESD	TUR	221	50	442	100	SKIN
WEL	GBR	220	50	441	100	SKIN
OEL	EU	221	50	442	100	SKIN
TLV-ACGIH			20			

2-METHOXY-1-METHYLETHYL ACETATE						
Threshold Limit Value						
Type	Country	TWA/8h		STEL/15min		Remarks / Observations
		mg/m3	ppm	mg/m3	ppm	
TLV	BGR	275	50	550	100	SKIN
VLA	ESP	275	50	550	100	SKIN
TLV	EST	275	50	550	100	SKIN
VLEP	ITA	275	50	550	100	SKIN
VLE	PRT	275	50	550	100	SKIN
NDS/NDSch	POL	260		520		SKIN
TLV	ROU	275	50	550	100	SKIN
ESD	TUR	275	50	550	100	SKIN
WEL	GBR	274	50	548	100	SKIN

OEL	EU	275	50	550	100	SKIN
ETHYL METHYL KETONE						
Threshold Limit Value						
Type	Country	TWA/8h	STEL/15min		Remarks / Observations	
		mg/m3	ppm	mg/m3	ppm	
TLV	BGR	590		885		
VLA	ESP	600	200	900	300	
TLV	EST	600	200	900	300	
VLEP	ITA	600	200	900	300	
VLE	PRT	600	200	900	300	
NDS/NDSch	POL	450		900		SKIN
TLV	ROU	600	200	900	300	
ESD	TUR	600	200	900	300	
WEL	GBR	600	200	899	300	SKIN
OEL	EU	600	200	900	300	
TLV-ACGIH		590	200	885	300	
ETHYL ACETATE						
Threshold Limit Value						
Type	Country	TWA/8h	STEL/15min		Remarks / Observations	
		mg/m3	ppm	mg/m3	ppm	
TLV	BGR	734	200	1468	400	
VLA	ESP	734	200	1468	400	
TLV	EST	500	150	1100	300	
VLEP	ITA	734	200	1468	400	
VLE	PRT	734	200	1468	400	
NDS/NDSch	POL	734		1468		
TLV	ROU	734	200	1468	400	
WEL	GBR	734	200	1468	400	
OEL	EU	734	200	1468	400	
TLV-ACGIH		1441	400			

Legend:

(C) = CEILING ; INHAL = Inhalable Fraction ; RESP = Respirable Fraction ; THORA = Thoracic Fraction.

8.2. Exposure controls

As the use of adequate technical equipment must always take priority over personal protective equipment, make sure that the workplace is well aired

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through effective local aspiration.
When choosing personal protective equipment, ask your chemical substance supplier for advice.
Personal protective equipment must be CE marked, showing that it complies with applicable standards.

Provide an emergency shower with face and eye wash station.

HAND PROTECTION
Protect hands with category III work gloves.
The following should be considered when choosing work glove material (see standard EN 374): compatibility, degradation, permeability time.
The work gloves' resistance to chemical agents should be checked before use, as it can be unpredictable. The gloves' wear time depends on the duration and type of use.

SKIN PROTECTION
Wear category II professional long-sleeved overalls and safety footwear (see Regulation 2016/425 and standard EN ISO 20344). Wash body with soap and water after removing protective clothing.

Consider the appropriateness of providing antistatic clothing in the case of working environments in which there is a risk of explosion.

EYE PROTECTION
Wear airtight protective goggles (see standard EN ISO 16321).

RESPIRATORY PROTECTION
Respiratory protection devices must be used if the technical measures adopted are not suitable for restricting the worker's exposure to the threshold values considered. Use a mask with a type AX filter whose class (1, 2 or 3) must be chosen according to the limit of use concentration. (see standard EN 14387).
If the substance considered is odourless or its olfactory threshold is higher than the corresponding TLV-TWA and in the case of an emergency, wear open-circuit compressed air breathing apparatus (in compliance with standard EN 137) or external air-intake breathing apparatus (in compliance with standard EN 138). For a correct choice of respiratory protection device, see standard EN 529.

ENVIRONMENTAL EXPOSURE CONTROLS
The emissions generated by manufacturing processes, including those generated by ventilation equipment, should be checked to ensure compliance with environmental standards.

SECTION 9. Physical and chemical properties

9.1. Information on basic physical and chemical properties

Properties	Value	Information
Appearance	liquid	
Colour	colourless	
Odour	characteristic of solvent	
Melting point / freezing point	not available	
Initial boiling point	> 35 °C	
Flammability	not available	
Lower explosive limit	not available	
Upper explosive limit	not available	
Flash point	< 23 °C	
Auto-ignition temperature	not available	
Decomposition temperature	not available	

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pH	not available
Kinematic viscosity	not available
Solubility	soluble in organic solvents
Partition coefficient: n-octanol/water	not available
Vapour pressure	not available
Density and/or relative density	0,93-0,95 Kg/l
Relative vapour density	not available
Particle characteristics	not applicable

9.2. Other information

9.2.1. Information with regard to physical hazard classes

Information not available

9.2.2. Other safety characteristics

Information not available

SECTION 10. Stability and reactivity

10.1. Reactivity

There are no particular risks of reaction with other substances in normal conditions of use.

2-METHOXY-1-METHYLETHYL ACETATE

Stable in normal conditions of use and storage.

With the air it may slowly develop peroxides that explode with an increase in temperature.

ETHYL METHYL KETONE

Reacts with: light metals,strong oxidants.Attacks various types of plastic materials.Decomposes under the effect of heat.

ETHYL ACETATE

Decomposes slowly into acetic acid and ethanol under the effect of light, air and water.

10.2. Chemical stability

The product is stable in normal conditions of use and storage.

10.3. Possibility of hazardous reactions

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The vapours may also form explosive mixtures with the air.

XYLENE

Stable in normal conditions of use and storage.Reacts violently with: strong oxidants,strong acids,nitric acid,perchlorates.May form explosive mixtures with: air.

2-METHOXY-1-METHYLETHYL ACETATE

May react violently with: oxidising substances,strong acids,alkaline metals.

ETHYL METHYL KETONE

May form peroxides with: air,light,strong oxidising agents.Risk of explosion on contact with: hydrogen peroxide,nitric acid,sulphuric acid.May react dangerously with: oxidising agents,trichloromethane,alkalis.Forms explosive mixtures with: air.

ETHYL ACETATE

Risk of explosion on contact with: alkaline metals,hydrides,oleum.May react violently with: fluorine,strong oxidising agents,chlorosulphuric acid,potassium tert-butoxide.Forms explosive mixtures with: air.

10.4. Conditions to avoid

Avoid overheating. Avoid bunching of electrostatic charges. Avoid all sources of ignition.

ETHYL METHYL KETONE

Avoid exposure to: sources of heat.

ETHYL ACETATE

Avoid exposure to: light,sources of heat,naked flames.

10.5. Incompatible materials

2-METHOXY-1-METHYLETHYL ACETATE

Incompatible with: oxidising substances,strong acids,alkaline metals.

ETHYL METHYL KETONE

Incompatible with: strong oxidants,inorganic acids,ammonia,copper,chloroform.

ETHYL ACETATE

Incompatible with: acids,bases,strong oxidants,chlorosulphuric acid.

10.6. Hazardous decomposition products

In the event of thermal decomposition or fire, gases and vapours that are potentially dangerous to health may be released.

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SECTION 11. Toxicological information

In the absence of experimental data for the product itself, health hazards are evaluated according to the properties of the substances it contains, using the criteria specified in the applicable regulation for classification.
It is therefore necessary to take into account the concentration of the individual hazardous substances indicated in section 3, to evaluate the toxicological effects of exposure to the product.

Metabolism, toxicokinetics, mechanism of action and other information

2-METHOXY-1-METHYLETHYL ACETATE
The main route of entry is the skin, whereas the respiratory route is less important due to the low vapour pressure of the product.

Information on likely routes of exposure

XYLENE
WORKERS: inhalation; contact with the skin.
POPULATION: ingestion of contaminated food or water; inhalation of ambient air.

2-METHOXY-1-METHYLETHYL ACETATE
WORKERS: inhalation; contact with the skin.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

XYLENE
Toxic effect on the central nervous system (encephalopathy); irritating for the skin, conjunctiva, cornea and respiratory apparatus.

2-METHOXY-1-METHYLETHYL ACETATE
Above 100 ppm causes irritation of the eye, nose and oropharynx mucous membranes. At 1000 ppm, disturbance of equilibrium and severe eye irritation can be noticed. Clinical and biological examinations carried out on exposed volunteers revealed no anomalies. Acetate produces greater skin and eye irritation with direct contact. No chronic effects on humans have been reported (INCR, 2010).

Interactive effects

XYLENE
Intake of alcohol interferes with the metabolism of the substance, inhibiting it. Ethanol consumption (0.8 g/kg) before a 4-hour exposure to xylene vapours (145 and 280 ppm) causes a 50% reduction in the excretion of methyl hippuric acid, whereas the concentration of xylenes in the blood increases approx. 1.5-2 times. At the same time there is an increase in the secondary side effects of the ethanol. The metabolism of the xylenes is increased by phenobarbital and 3-methyl-colantrene type enzyme inducers. Aspirin and xylenes mutually inhibit their conjugation with the glycine, which results in a decrease in urinary excretion of methyl hippuric acid. Other industrial products can interfere with the metabolism of xylenes.

<u>ACUTE TOXICITY</u> ATE (Inhalation - vapours) of the mixture:		> 20 mg/l
ATE (Oral) of the mixture:		Not classified (no significant component)
ATE (Dermal) of the mixture:		>2000 mg/kg
XYLENE		
LD50 (Dermal):	4350 mg/kg Rabbit	
ATE (Dermal):	1100 mg/kg estimate from table 3.1.2 of Annex I of the CLP (figure used for calculation of the acute toxicity estimate of the mixture)	
LD50 (Oral):	3523 mg/kg Rat	
LC50 (Inhalation vapours):	26 mg/l/4h Rat	
ATE (Inhalation vapours):	11 mg/l estimate from table 3.1.2 of Annex I of the CLP (figure used for calculation of the acute toxicity estimate of the mixture)	

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2-METHOXY-1-METHYLETHYL ACETATE
LD50 (Dermal): > 5000 mg/kg Rat
LD50 (Oral): 8530 mg/kg Rat

ETHYL METHYL KETONE
LD50 (Dermal): 6480 mg/kg Rabbit
LD50 (Oral): 2737 mg/kg Rat
LC50 (Inhalation vapours): 23,5 mg/l/8h Rat

TOLUENE-DIISOCYANATE
LD50 (Dermal): > 9400 mg/kg Rabbit
LD50 (Oral): 4130 mg/kg Mouse
LC50 (Inhalation vapours): 0,48 mg/l Rat

SKIN CORROSION / IRRITATION

Causes skin irritation

SERIOUS EYE DAMAGE / IRRITATION

Causes serious eye irritation

RESPIRATORY OR SKIN SENSITISATION

Sensitising for the skin

GERM CELL MUTAGENICITY

Does not meet the classification criteria for this hazard class

CARCINOGENICITY

Does not meet the classification criteria for this hazard class

XYLENE
Classified in Group 3 (not classifiable as a human carcinogen) by the International Agency for Research on Cancer (IARC).
The US Environmental Protection Agency (EPA) affirms that "the data is inadequate for an assessment of the carcinogenic potential".

REPRODUCTIVE TOXICITY

Does not meet the classification criteria for this hazard class

STOT - SINGLE EXPOSURE

May cause drowsiness or dizziness

STOT - REPEATED EXPOSURE

Does not meet the classification criteria for this hazard class

ASPIRATION HAZARD

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Does not meet the classification criteria for this hazard class

Based on the available data, the product does not contain substances listed in the main European lists of potential or suspected endocrine disruptors with human health effects under evaluation.

SECTION 12. Ecological information

Use this product according to good working practices. Avoid littering. Inform the competent authorities, should the product reach waterways or contaminate soil or vegetation.

12.1. Toxicity

TOLUENE-DIISOCYANATE	
LC50 - for Fish	133 mg/l/96h Oncorhynchus mykiss
EC50 - for Crustacea	18,3 mg/l/48h Americamysis babia
EC50 - for Algae / Aquatic Plants	4000 mg/l/72h Chlorella vulgaris

12.2. Persistence and degradability

XYLENE	
Solubility in water	100 - 1000 mg/l
Rapidly degradable	
2-METHOXY-1-METHYLETHYL ACETATE	
Solubility in water	> 10000 mg/l
Rapidly degradable	
ETHYL METHYL KETONE	
Solubility in water	> 10000 mg/l
Rapidly degradable	
ETHYL ACETATE	
Solubility in water	> 10000 mg/l
Rapidly degradable	
TOLUENE-DIISOCYANATE	
Solubility in water	0,1 mg/l
Entirely degradable	

12.3. Bioaccumulative potential

XYLENE	
Partition coefficient: n-octanol/water	3,12
BCF	25,9
2-METHOXY-1-METHYLETHYL ACETATE	
Partition coefficient: n-octanol/water	1,2
ETHYL METHYL KETONE	
Partition coefficient: n-octanol/water	0,3

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ETHYL ACETATE
Partition coefficient: n-octanol/water 0,68
BCF 30

TOLUENE-DIISOCYANATE
Partition coefficient: n-octanol/water 3,43

12.4. Mobility in soil

XYLENE
Partition coefficient: soil/water 2,73

12.5. Results of PBT and vPvB assessment

On the basis of available data, the product does not contain any PBT or vPvB in percentage $\geq$ than 0,1%.

12.6. Endocrine disrupting properties

Based on the available data, the product does not contain substances listed in the main European lists of potential or suspected endocrine disruptors with environmental effects under evaluation.

12.7. Other adverse effects

Information not available

SECTION 13. Disposal considerations

13.1. Waste treatment methods

Reuse, when possible. Product residues should be considered special hazardous waste. The hazard level of waste containing this product should be evaluated according to applicable regulations.
Disposal must be performed through an authorised waste management firm, in compliance with national and local regulations.
Waste transportation may be subject to ADR restrictions.
CONTAMINATED PACKAGING
Contaminated packaging must be recovered or disposed of in compliance with national waste management regulations.

SECTION 14. Transport information

14.1. UN number or ID number

ADR / RID, IMDG, IATA: 1263

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14.2. UN proper shipping name

ADR / RID:	PAINT or PAINT RELATED MATERIAL
IMDG:	PAINT or PAINT RELATED MATERIAL
IATA:	PAINT or PAINT RELATED MATERIAL

14.3. Transport hazard class(es)

ADR / RID:	Class: 3	Label: 3
IMDG:	Class: 3	Label: 3
IATA:	Class: 3	Label: 3



14.4. Packing group

ADR / RID, IMDG, IATA:	II
------------------------	----

14.5. Environmental hazards

ADR / RID:	NO
IMDG:	NO
IATA:	NO

14.6. Special precautions for user

ADR / RID:	HIN - Kemler: 33	Limited Quantities: 5 L	Tunnel restriction code: (D/E)
	Special provision: 163, 367, 640D, 650		
IMDG:	EMS: F-E, <u>S-E</u>	Limited Quantities: 5 L	
IATA:	Cargo:	Maximum quantity: 60 L	Packaging instructions: 364
	Passengers:	Maximum quantity: 5 L	Packaging instructions: 353
	Special provision:	A3, A72, A192	

14.7. Maritime transport in bulk according to IMO instruments

Information not relevant

SECTION 15. Regulatory information

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

Seveso Category - Directive 2012/18/EU: P5c

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Restrictions relating to the product or contained substances pursuant to Annex XVII to EC Regulation 1907/2006

Product
Point 3 - 40

Contained substance

Point 75

Regulation (EU) 2019/1148 - on the marketing and use of explosives precursors

not applicable

Substances in Candidate List (Art. 59 REACH)

On the basis of available data, the product does not contain any SVHC in percentage $\geq$ than 0,1%.

Substances subject to authorisation (Annex XIV REACH)

None

Substances subject to exportation reporting pursuant to Regulation (EU) 649/2012:

None

Substances subject to the Rotterdam Convention:

None

Substances subject to the Stockholm Convention:

None

Healthcare controls

Workers exposed to this chemical agent must not undergo health checks, provided that available risk-assessment data prove that the risks related to the workers' health and safety are modest and that the 98/24/EC directive is respected.

15.2. Chemical safety assessment

A chemical safety assessment has not been performed for the preparation/for the substances indicated in section 3.

SECTION 16. Other information

Text of hazard (H) indications mentioned in section 2-3 of the sheet:

Flam. Liq. 2 Flammable liquid, category 2

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Flam. Liq. 3	Flammable liquid, category 3
Carc. 2	Carcinogenicity, category 2
Acute Tox. 1	Acute toxicity, category 1
Acute Tox. 4	Acute toxicity, category 4
Eye Irrit. 2	Eye irritation, category 2
Skin Irrit. 2	Skin irritation, category 2
STOT SE 3	Specific target organ toxicity - single exposure, category 3
Resp. Sens. 1	Respiratory sensitization, category 1
Skin Sens. 1	Skin sensitization, category 1
Aquatic Chronic 3	Hazardous to the aquatic environment, chronic toxicity, category 3
H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
H351	Suspected of causing cancer.
H330	Fatal if inhaled.
H312	Harmful in contact with skin.
H332	Harmful if inhaled.
H319	Causes serious eye irritation.
H315	Causes skin irritation.
H335	May cause respiratory irritation.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H317	May cause an allergic skin reaction.
H336	May cause drowsiness or dizziness.
H412	Harmful to aquatic life with long lasting effects.
EUH066	Repeated exposure may cause skin dryness or cracking.
EUH204	Contains isocyanates. May produce an allergic reaction.

- LEGEND:
- ADR: European Agreement concerning the carriage of Dangerous goods by Road
 - ATE: Acute Toxicity Estimate
 - CAS: Chemical Abstract Service Number
 - CE50: Effective concentration (required to induce a 50% effect)
 - CE: Identifier in ESIS (European archive of existing substances)
 - CLP: Regulation (EC) 1272/2008
 - DNEL: Derived No Effect Level
 - EmS: Emergency Schedule
 - GHS: Globally Harmonized System of classification and labeling of chemicals
 - IATA DGR: International Air Transport Association Dangerous Goods Regulation
 - IC50: Immobilization Concentration 50%
 - IMDG: International Maritime Code for dangerous goods
 - IMO: International Maritime Organization
 - INDEX: Identifier in Annex VI of CLP
 - LC50: Lethal Concentration 50%
 - LD50: Lethal dose 50%
 - OEL: Occupational Exposure Level
 - PBT: Persistent bioaccumulative and toxic as REACH Regulation
 - PEC: Predicted environmental Concentration
 - PEL: Predicted exposure level
 - PNEC: Predicted no effect concentration
 - REACH: Regulation (EC) 1907/2006
 - RID: Regulation concerning the international transport of dangerous goods by train

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- TLV: Threshold Limit Value
- TLV CEILING: Concentration that should not be exceeded during any time of occupational exposure.
- TWA: Time-weighted average exposure limit
- TWA STEL: Short-term exposure limit
- VOC: Volatile organic Compounds
- vPvB: Very Persistent and very Bioaccumulative as for REACH Regulation
- WGK: Water hazard classes (German).

GENERAL BIBLIOGRAPHY

1. Regulation (EC) 1907/2006 (REACH) of the European Parliament
 2. Regulation (EC) 1272/2008 (CLP) of the European Parliament
 3. Regulation (EU) 2020/878 (II Annex of REACH Regulation)
 4. Regulation (EC) 790/2009 (I Atp. CLP) of the European Parliament
 5. Regulation (EU) 286/2011 (II Atp. CLP) of the European Parliament
 6. Regulation (EU) 618/2012 (III Atp. CLP) of the European Parliament
 7. Regulation (EU) 487/2013 (IV Atp. CLP) of the European Parliament
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 10. Regulation (EU) 2015/1221 (VII Atp. CLP) of the European Parliament
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- The Merck Index. - 10th Edition
 - Handling Chemical Safety
 - INRS - Fiche Toxicologique (toxicological sheet)
 - Patty - Industrial Hygiene and Toxicology
 - N.I. Sax - Dangerous properties of Industrial Materials-7, 1989 Edition
 - IFA GESTIS website
 - ECHA website
 - Database of SDS models for chemicals - Ministry of Health and ISS (Istituto Superiore di Sanità) - Italy

Note for users:

The information contained in the present sheet are based on our own knowledge on the date of the last version. Users must verify the suitability and thoroughness of provided information according to each specific use of the product.

This document must not be regarded as a guarantee on any specific product property.

The use of this product is not subject to our direct control; therefore, users must, under their own responsibility, comply with the current health and safety laws and regulations. The producer is relieved from any liability arising from improper uses.

Provide appointed staff with adequate training on how to use chemical products.

CALCULATION METHODS FOR CLASSIFICATION

Chemical and physical hazards: Product classification derives from criteria established by the CLP Regulation, Annex I, Part 2. The data for evaluation of chemical-physical properties are reported in section 9.

Health hazards: Product classification is based on calculation methods as per Annex I of CLP, Part 3, unless determined otherwise in Section 11.

Environmental hazards: Product classification is based on calculation methods as per Annex I of CLP, Part 4, unless determined otherwise in Section 12.

Changes to previous review:

The following sections were modified:

01 / 02 / 03 / 04 / 06 / 07 / 08 / 09 / 10 / 11 / 12 / 14 / 15 / 16.