

SECURITY DATA SHEET

Updating date: 12.02.2025

Version: 11

(**)Indicates changes from the previous version

SECTION 1. IDENTIFICATION OF THE SUBSTANCE / MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product identifier: Hardener HS Medium (VOC) 0,5l
Other forms of identification: 010008
UFI: H5W3-2064-4009-6YGS

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

Relevant uses (Professional users): Hardener for coatings.

Relevant uses (Industrial user): Hardener for coatings.

For Professional users/Industrial user only.

Uses advised against: All uses not specified in this section or in section 7.3.

1.3 Details of the supplier of the safety data sheet:

BOSSAUTO INNOVA, S.A.U.
C/ Londres, 10
08401 Granollers, Barcelona - Spain
t: +34 938 604 923
info@bossauto.com.
<http://www.bossauto.com>.

1.4 Emergency telephone: +34 91 562 04 20 (National Emergency Telephone Number of Spanish Poison Centre)

SECTION 2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture:

CLP Regulation (EC) No1272/2008

Classification of this product has been carried out in accordance with CLP Regulation (EC) No.1272/2008.

Aquatic Chronic 2: Hazardous to the aquatic environment, long-term hazard, Category 2, H411.

Flam. Liq. 3: Flammable liquids, Category 3, H226.

Skin Sens. 1: Sensitisation, skin, Category 1, H317.

STOT SE 3: Respiratory tract toxicity, single exposure, Category 3, H335.

STOT SE 3: Specific toxicity causing drowsiness and dizziness, single exposure, Category 3, H336.

2.2 Label elements:

CLP Regulation (EC) No1272/2008

Warning:



Hazard Statements:

Aquatic Chronic 2: H411 - Toxic to aquatic life with long lasting effects.

Flam. Liq. 3: H226 - Flammable liquid and vapour.

Skin Sens. 1: H317 - May cause an allergic skin reaction.

STOT SE 3: H335 - May cause respiratory irritation.

STOT SE 3: H336 - May cause drowsiness or dizziness.

Precautionary Statements:

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

P280: Wear protective gloves/face protection/protective clothing/respiratory protection/protective footwear.

P302+P352: IF ON SKIN: Wash with plenty of water.



P304+P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P370+P378: In case of fire: Use Foam extinguisher (AB), Dry Chemical Powder (ABC) Fire Extinguisher, Carbon dioxide extinguisher (BC) to extinguish.

P501: Dispose of the contents/containers in accordance with the current legislation on waste treatment.

Supplementary information:

EUH066: Repeated exposure may cause skin dryness or cracking.

EUH204: Contains isocyanates. May produce an allergic reaction.

Substances that contribute to the classification:

Hexamethylene diisocyanate, oligomers (<0.1 % O=C=N-R-N=C=O); Hydrocarbons, C9, aromatics; Xylene.

Additional Labeling:

As from 24 August 2023 adequate training is required before industrial or professional use.

2.3 Other hazards:

Product does not meet PBT/vPvB criteria.

Endocrine-disrupting properties: The product does not meet the criteria.

SECTION 3. COMPOSITION/ INFORMATION ON INGREDIENTS

3.1 Substance:

Non relevant.

3.2 Mixtures:

Chemical description: Mixture composed of additives and resins in solvents.

Components:

In accordance with Annex II of Regulation (EC) No1907/2006 (point 3), the product contains:

Identification		Chemical name/ Classification		Concentration
CAS:	28182-81-2	Hexamethylene diisocyanate, oligomers (<0.1% O=C=N-R-N=C=O) ¹		Self-classified
EC:	931-274-8	Regulation 1272/2008	Acute Tox.4: H332; Skin Sens.1: H317; STOT SE 3: H335 - Warning	25-<50%
Index:	Not relevant			
REACH:	01-2119485796-17-XXXX			
CAS:	108-65-6	2-methoxy-1-methylethyl acetate ²		ATP ATP01
EC:	203-603-9	Regulation 1272/2008	Flam. Liq. 3: H226 - Warning	25-<50%
Index:	607-195-00-7			
REACH:	01-2119475791-29-XXXX			
CAS:	128601-23-0	Hydrocarbons, C9, aromatics ¹		Self-classified
EC:	918-668-5	Regulation 1272/2008	Aquatic Chronic 2: H411; Asp.Tox.1: H304; Flam.Liq.3: H226; STOT SE 3: H335; STOT SE 3: H336; EUH066 - Danger	25 - <50%
Index:	Not relevant			
REACH:	01-2119455851-35-XXXX			
CAS:	1330-20-7	Xylene ¹		Self-classified
EC:	215-535-7	Regulation 1272/2008	Acute Tox. 4: H312+H332; Aquatic Chronic 3: H412; Asp. Tox. 1: H304; Eye Irrit. 2: H319; Flam. Liq. 3: H226; Skin Irrit. 2: H315; STOT RE 2: H373; STOT SE 3: H335 - Danger	5 - <10%
Index:	601-022-00-9			
REACH:	01-2119488216-32-XXXX			
CAS :	822-06-0	Hexamethylene-di-isocyanate ¹		ATP CLP00
EC:	212-485-8	Regulation 1272/2008	Acute Tox.3: H331; Eye Irrit.2: H319; Resp.Sens.1: H334; Skin Irrit.2: H315; Skin Sens.1: H317; STOT SE 3: H335 - Danger	0,1 - <0,25%
Index:	615-011-00-1			
REACH	01-2119457571-37-XXXX			

¹Substances presenting a health or environmental hazard which meet criteria laid down in Regulation (EU) No.2020/878.

²Substance with a Union workplace exposure limit.

To obtain more information on the hazards of the substances consult sections 11, 12 and 16.

Other information:

Identification	Specific concentration limit
Hexamethylene-di-isocyanate CAS: 822-06-0 EC: 212-485-8	% (w/w) >=0,5: Resp. Sens. 1 - H334 % (w/w) >=0,5: Skin Sens. 1 - H317

Acute toxicity estimate for the substance in Part 3 of Annex VI to Regulation (EC) No.1272/2008 or as determined in accordance with Annex I to that Regulation:

Identification	Acute toxicity		Genus
Hydrocarbons, C9, aromatics CAS: 128601-23-0 EC: 918-668-5	LD50 oral	3492 mg/kg	Rat
	LD50 dermal	3160 mg/kg	Rabbit
	LC50 inhalation vapour	6193 mg/L (4h)	Rat
Hexamethylene-di-isocyanate CAS: 822-06-0 EC: 212-485-8	LD50 oral	Not relevant	
	LD50 dermal	Not relevant	
	LC50 inhalation vapour	3 mg/L	
Xylene CAS: 1330-20-7 EC: 215-535-7	LD50 oral	Not relevant	
	LD50 dermal	1100 mg/L	Rat
	LC50 inhalation vapour	17 mg/L	Rat
Hexamethylene-diisocyanate oligomers (<0.1 % O=C=N-R-N=C=O) CAS: 28182-81-2 EC: 931-274-8	LD50 oral	Not relevant	
	LD50 dermal	Not relevant	
	LC50 inhalation vapour	11 mg/L	

SECTION 4. FIRST AID MEASURES

4.1 Description of first-aid measures:

The symptoms resulting from intoxication can appear after exposure, therefore, in case of doubt, seek medical attention for direct exposure to the chemical product or persistent discomfort, showing the SDS of this product.

By inhalation:

Remove the person affected from the area of exposure, provide with fresh air and keep at rest. In serious cases such as cardiorespiratory failure, artificial resuscitation techniques will be necessary (mouth to mouth resuscitation, cardiac massage, oxygen supply, etc.) requiring immediate medical assistance.

By skin contact:

Remove contaminated clothing and footwear, rinse skin or shower the person affected if appropriate with plenty of cold water and neutral soap. In serious cases see a doctor. If the product causes burns or freezing, clothing should not be removed as this could worsen the injury caused if it is stuck to the skin. If blisters form on the skin, these should never be burst as this will increase the risk of infection.

By eye contact:

Rinse eyes thoroughly with lukewarm water for at least 15 minutes. Do not allow the person affected to rub or close their eyes. If the injured person uses contact lenses, these should be removed unless they are stuck to the eyes, in which case this could cause further damage. In all cases, after cleaning, a doctor should be consulted as quickly as possible with the SDS of the product.

By ingestion/aspiration:

Do not induce vomiting, but if it does happen keep the head down to avoid aspiration. Keep the person affected at rest. Rinse out the mouth and throat, as they may have been affected during ingestion.

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

Acute and delayed effects are indicated in sections 2 and 11.

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

Not relevant.

SECTION 5. FIREFIGHTING MEASURES

5.1 Extinguishing media:

Suitable extinguishing media:

Foam extinguisher (AB), Dry Chemical Powder (ABC) Fire Extinguisher, Carbon dioxide extinguisher (BC).

Unsuitable extinguishing media:

Water jet.

5.2 Special hazards arising from the substance or mixture:

As a result of combustion or thermal decomposition reactive sub-products are created that can become highly toxic and, consequently, can present a serious health risk.

5.3 Advice for firefighters:

Depending on the magnitude of the fire it may be necessary to use full protective clothing and Self Contained Breathing Apparatus. Minimum emergency facilities and equipment should be available (fire blankets, portable first aid kit...).

Additional provisions:

Act in accordance with the Internal Emergency Plan and the Information Sheets on actions to take after an accident or other emergencies. Eliminate all sources of ignition. In case of fire, cool the storage containers and tanks for products susceptible to combustion, explosion or BLEVE as a result of high temperatures. Avoid spillage of the products used to extinguish the fire into an aqueous medium.

SECTION 6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures:

For non-emergency personnel:

Isolate leaks provided that there is no additional risk for the people performing this task. Evacuate the area and keep out those without protection. Personal protection equipment must be used against potential contact with the spilt product (See section 8). Above all prevent the formation of any vapour-air flammable mixtures, through either ventilation or the use of an inert medium. Remove any source of ignition. Eliminate electrostatic charges by interconnecting all the conductive surfaces on which static electricity could form, and also ensuring that all surfaces are connected to the ground.

For emergency responders:

Wear protective equipment. Keep unprotected persons away. See section 8.

6.2 Environmental precautions:

Avoid at all cost any type of spillage into an aqueous medium. Contain the product absorbed appropriately in hermetically sealed containers. Notify the relevant authority in case of exposure to the general public or the environment.

6.3 Methods and material for containment and cleaning up:

It is recommended:

Prevent the entrance of product in drains, sewers or watercourses. Absorb the spill using sand or inert absorbent and move it to a safe place. Do not absorb in sawdust or other combustible absorbents. Collect the product in appropriate containers and manage it according to current legislation.

Spillages in water or sea:

Small spillages:

Contain spillage using barriers or similar equipment. Use suitable absorbents for collection and treat the waste in accordance with current regulations.

Large spillages:

If possible, contain spillage in open water using barriers or similar equipment. If this is not possible, try to control its spread and collect the product with suitable mechanical means. Always consult experts before using dispersants and make sure you have the necessary approvals if they are to be used. Treat the waste according to current regulations.

6.4 Reference to other sections:

See sections 8 and 13.

SECTION 7. HANDLING AND STORAGE

7.1 Precautions for safe handling:

A. - General precautions for safe use:

Comply with the current legislation concerning the prevention of industrial risks. Keep containers hermetically sealed. Control spills and residues, destroying them with safe methods (section 6). Avoid leakages from the container. Maintain order and cleanliness where dangerous products are used.

B. - Technical recommendations for the prevention of fires and explosions:

Transfer in well ventilated areas, preferably through localized extraction. Fully control sources of ignition (mobile phones, sparks...) and ventilate during cleaning operations. Avoid the existence of dangerous atmospheres inside containers, applying inertization systems where possible. Transfer at a slow speed to avoid the creation of electrostatic charges.

Against the possibility of electrostatic charges: ensure a perfect equipotential connection, always use groundings, do not wear work clothes made of acrylic fibres, preferably wearing cotton clothing and conductive footwear. Comply with the essential security requirements for equipment and systems defined in Directive 2014/34/EC (ATEX 100) and with the minimum requirements for protecting the security and health of workers under the selection criteria of Directive 1999/92/EC (ATEX 137). Consult section 10 for conditions and materials that should be avoided

C. - Technical recommendations on general occupational hygiene:

Do not eat or drink during the process, washing hands afterwards with suitable cleaning products.

D. - Technical recommendations to prevent environmental risks:

Due to the danger of this product for the environment it is recommended to use it within an area containing contamination control barriers in case of spillage, as well as having absorbent material in close proximity.

7.2 Conditions for safe storage, including any incompatibilities:

A. - Specific storage requirements:

Minimum Temp.: 5°C.

Maximum Temp.: 30°C.

Maximum time: 12 Months.

B. - General conditions for storage

Avoid sources of heat, radiation, static electricity and contact with food. For additional information see subsection 10.5.

7.3 Specific end use(s):

Except for the instructions already specified it is not necessary to provide any special recommendation regarding the uses of this product.

SECTION 8. EXPOSURE CONTROLS/ PERSONAL PROTECTION

8.1 Control parameters:

Substances whose occupational exposure limits have to be monitored in the workplace (European OEL, not country-specific legislation):

Directive (EU) 2000/39, Directive 2004/37/EC, Directive (EU) 2006/15, Directive (EU) 2009/161, Directive (EU) 2017/164, Directive (EU) 2019/1831:

Identification	Occupational exposure limits		
2-methoxy-1-methylethyl acetate ⁽¹⁾ CAS: 108-65-6 EC: 203-603-9	IOELV (8h)	50 ppm	275 mg/m ³
	IOELV (STEL)	100 ppm	550 mg/m ³
Xylene ⁽¹⁾ CAS: 1330-20-7 EC: 215-535-7	IOELV (8h)	50 ppm	221 mg/m ³
	IOELV (STEL)	100 ppm	442 mg/m ³

⁽¹⁾ Skin.

DNEL (Workers):

Identification		Short exposure		Long exposure	
		Systemic	Local	Systemic	Local
Hexamethylene diisocyanate, oligomers (<0.1% O=C=N- R-N=C=O) CAS: 28182-81-2 EC: 931-274-8	Oral	Not relevant	Not relevant	Not relevant	Not relevant
	Dermal	Not relevant	Not relevant	Not relevant	Not relevant
	Inhalation	Not relevant	1 mg/m ³	Not relevant	0,5 mg/m ³
2-methoxy-1-methylethyl acetate CAS: 108-65-6 EC: 203-603-9	Oral	Not relevant	Not relevant	Not relevant	Not relevant
	Dermal	Not relevant	Not relevant	796 mg/kg	Not relevant
	Inhalation	Not relevant	550 mg/m ³	275 mg/m ³	Not relevant
Hydrocarbons, C9, aromatics CAS: 128601-23-0 EC: 918-668-5	Oral	Not relevant	Not relevant	Not relevant	Not relevant
	Dermal	Not relevant	Not relevant	25 mg/kg	Not relevant
	Inhalation	Not relevant	Not relevant	150 mg/m ³	Not relevant
Xylene CAS: 1330-20-7 EC: 215-535-7	Oral	Not relevant	Not relevant	Not relevant	Not relevant
	Dermal	Not relevant	Not relevant	212 mg/kg	Not relevant
	Inhalation	442 mg/m ³	442 mg/m ³	221 mg/m ³	221 mg/m ³
Hexamethylene-di-isocyanate CAS: 822-06-0 EC: 212-485-8	Oral	Not relevant	Not relevant	Not relevant	Not relevant
	Dermal	Not relevant	Not relevant	Not relevant	Not relevant
	Inhalation	Not relevant	0,07 mg/m ³	Not relevant	0,035 mg/m ³

DNEL (General population):

Identification		Short exposure		Long exposure	
		Systemic	Local	Systemic	Local
2-methoxy-1-methylethyl acetate CAS: 108-65-6 EC: 203-603-9	Oral	Not relevant	Not relevant	36 mg/kg	Not relevant
	Dermal	Not relevant	Not relevant	320 mg/kg	Not relevant
	Inhalation	Not relevant	Not relevant	33 mg/m ³	33 mg/m ³
Hydrocarbons, C9, aromatics CAS: 128601-23-0 EC: 918-668-5	Oral	Not relevant	Not relevant	11 mg/kg	Not relevant
	Dermal	Not relevant	Not relevant	11 mg/kg	Not relevant
	Inhalation	Not relevant	Not relevant	32 mg/m ³	Not relevant
Xylene CAS: 1330-20-7 EC: 215-535-7	Oral	Not relevant	Not relevant	12,5 mg/kg	Not relevant
	Dermal	Not relevant	Not relevant	125 mg/kg	Not relevant
	Inhalation	260 mg/m ³	260 mg/m ³	65,3 mg/m ³	65,3 mg/m ³

PNEC:

Identification				
Hexamethylene diisocyanate, oligomers (<0.1% O=C=N- R=C=O) CAS: 28182-81-2 EC: 931-274-8	STP	88 mg/L	Fresh water	0,127 mg/L
	Soil	53183 mg/kg	Marine water	0,013 mg/L
	Intermittent	1,27 mg/L	Sediment (Fresh water)	266701 mg/kg
	Oral	Not relevant	Sediment (Marine water)	26670 mg/kg
2-methoxy-1-methylethyl acetate CAS: 108-65-6 EC: 203-603-9	STP	100 mg/L	Fresh water	0,635 mg/L
	Soil	0,29 mg/kg	Marine water	0,064 mg/L
	Intermittent	6,35 mg/L	Sediment (Fresh water)	3,29 mg/kg
	Oral	Not relevant	Sediment (Marine water)	0,329 mg/kg
Xylene CAS: 1330-20-7 EC: 215-535-7	STP	6,58 mg/L	Fresh water	0,327 mg/L
	Soil	2,31 mg/kg	Marine water	0,327 mg/L
	Intermittent	0,327 mg/L	Sediment (Fresh water)	12,46 mg/kg
	Oral	Not relevant	Sediment (Marine water)	12,46 mg/kg
Hexamethylene-di-isocyanate CAS: 822-06-0 EC: 212-485-8	STP	8,42 mg/L	Fresh water	Not relevant
	Soil	Not relevant	Marine water	Not relevant
	Intermittent	Not relevant	Sediment (Fresh water)	Not relevant
	Oral	Not relevant	Sediment (Marine water)	Not relevant



8.2 Exposure controls:
A. - Individual protection measures, such as personal protective equipment:

As a preventative measure it is recommended to use basic Personal Protective Equipment, with the corresponding <<CE marking>> in accordance with Regulation (EU) 2016/425. For more information on Personal Protective Equipment (storage, use, cleaning, maintenance, class of protection...) consult the information leaflet provided by the manufacturer. For more information see subsection 7.1. All information contained herein is a recommendation which needs some specification from the labour risk prevention services as it is not known whether the company has additional measures at its disposal.

B. - Respiratory protection:



Pictogram	PPE	Labelling	CEN Standard	Remarks
 Mandatory respiratory tract protection	Filter mask for gases, vapours and particles (Filter type: A)	 CAT III	EN 149:2001+A1:2010 EN 405:2002+A1:2010 EN ISO 136:1998	Replace when an increase in resistance to breathing is observed and/or a smell or taste of the contaminant is detected.

C. - Specific protection for the hands:





Pictogram	PPE	Labelling	CEN Standard	Remarks
 Mandatory hand protection	Chemical protective gloves (Material: Linear low-density polyethylene (LLDPE), Breakthrough time: >480 min, Thickness: 0.062 mm)	 CAT III	EN ISO 21420:2020	Replace the gloves at any sign of deterioration.

As the product is a mixture of several substances, the resistance of the glove material can not be calculated in advance with total reliability and has therefore to be checked prior to the application.


D. - Eye and face protection:

Pictogram	PPE	Labelling	CEN Standard	Remarks
 Mandatory face protection	Face shield		EN 166:2002 UNE-EN ISO 18526-1 al 4:2020 UNE-EN ISO 18526-1 al 4:2020 EN ISO 4007:2018	Clean daily and disinfect periodically according to the manufacturer's instructions. Use if there is a risk of splashing.

E. - Body protection:

Pictogram	PPE	Labelling	CEN Standard	Remarks
 Mandatory complete body protection	Disposable clothing for protection against chemical risks, with antistatic and fireproof properties		EN 1149-1,2,3 EN 13034:2005+A1:2009 EN ISO 13982- 1:2005/A1:2011 EN ISO 6529:2013 EN ISO 6530:2005 EN ISO 13688:2013 EN 464:1995	For professional use only. Clean periodically according to the manufacturer's instructions.
 Mandatory foot protection	Safety footwear for protection against chemical risk, with antistatic and heat resistant properties		EN ISO 13287:2020 EN ISO 20345:2022 EN 13832-1:2019	Replace boots at any sign of deterioration.

F. - Additional emergency measures:

Emergency measure	Standards	Emergency measure	Standards
 Emergency shower	ANSI Z358-1 ISO 3864-1:2011, ISO 3864-4:2011	 Eyewash stations	DIN 12 899 ISO 3864-1:2011, ISO 3864-4:2011

Environmental exposure controls:

To comply with environmental protection regulations, it is recommended to prevent any spillage of the product and its container. For more detailed information, please refer to subsection 7.1.D.

Volatile organic compounds:

With regard to Directive 2010/75/EU, this product has the following characteristics:

V.O.C. (Supply):	62, 38% weight.
V.O.C. density at 20°C:	617, 51 kg/m ³ (617, 51 g/L).
Average carbon number:	7, 39.
Average molecular weight:	124, 91 g/mol.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties:

For complete information see the product datasheet:

Appearance:

Physical state at 20°C:

Liquid.

Appearance:

Fluid.

Colour:

Colourless.

Odour:

Solvent.

Odour threshold:

Not relevant*.

Volatility:

Boiling point at atmospheric pressure:

152°C.

Vapour pressure at 20°C:

351 Pa.

Vapour pressure at 50°C:

2125,41 Pa (2,13 kPa).

Evaporation rate at 20°C:

Not relevant*.

Product description:

Density at 20°C:	980 - 1000 kg/m ³ .
Relative density at 20°C:	0,98 – 1.
Dynamic viscosity at 20°C:	38 - 20 mPa.s.
Kinematic viscosity at 20°C:	29 mm ² /s
Kinematic viscosity at 40°C:	Not relevant*.
Concentration:	Not relevant*.
pH:	Not relevant*.
Vapour density at 20°C:	Not relevant*.
Partition coefficient n-octanol/water 20°C:	Not relevant*.
Solubility in water at 20°C:	Not relevant*.
Solubility properties:	Immiscible.
Decomposition temperature:	Not relevant*.
Melting point/freezing point:	Not relevant*.

Flammability:

Flash Point:	41°C.
Flammability (solid, gas):	Not relevant*.
Autoignition temperature:	315°C.
Lower flammability limit:	Not relevant*.
Upper flammability limit:	Not relevant*.

Particle characteristics:

Median equivalent diameter:	Not relevant*.
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*Not relevant due to the nature of the product, not providing information property of its hazards.

9.2 Other information:
Information with regard to physical hazard classes:

Explosive properties:	Not relevant*.
Oxidising properties:	Not relevant*.
Corrosive to metals:	Not relevant*.
Heat of combustion:	Not relevant*.
Aerosols-total percentage (by mass) of flammable components:	Not relevant*.

Other safety characteristics:

Surface tension at 20°C:	Not relevant*.
Refraction index:	Not relevant*.

*Not relevant due to the nature of the product, not providing information property of its hazards.

SECTION 10. STABILITY AND REACTIVITY

10.1 Reactivity:

No hazardous reactions are expected because the product is stable under recommended storage conditions.

See section 7 from Safety Data Sheet.

10.2 Chemical stability:

Chemically stable under the indicated conditions of storage, handling and use.

10.3 Possibility of hazardous reactions:

Under the specified conditions, hazardous reactions that lead to excessive temperatures or pressure are not expected.

10.4 Conditions to avoid:

Applicable for handling and storage at room temperature:

Shock and friction	Contact with air	Increase in temperature	Sunlight	Humidity
Not applicable	Not applicable	Risk of combustion	Avoid direct impact	Not applicable

10.5 Incompatible materials:

Acids	Water	Oxidising materials	Combustible materials	Others
Avoid strong acids	Not applicable	Avoid direct impact	Not applicable	Avoid alkalis or strong bases

10.6 Hazardous decomposition products:

See subsection 10.3, 10.4 and 10.5 to find out the specific decomposition products. Depending on the decomposition conditions, complex mixtures of chemical substances can be released: carbon dioxide (CO₂), carbon monoxide and other organic compounds.

SECTION 11. TOXICOLOGICAL INFORMATION

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

The experimental information related to the toxicological properties of the product itself is not available

Dangerous health implications:

In case of exposure that is repetitive, prolonged or at concentrations higher than the recommended occupational exposure limits, adverse effects on health may result, depending on the means of exposure:

A- Ingestion (acute effect):

-Acute toxicity: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for consumption. For more information see section 3.

-Corrosivity/Irritability: Based on available data, the classification criteria are not met. However, it does contain substances classified as hazardous for this effect. For more information see section 3.

B- Inhalation (acute effect):

-Acute toxicity: Based on available data, the classification criteria are not met. However, it contains substances classified as hazardous for inhalation. For more information see section 3.

-Corrosivity/Irritability: Causes irritation in respiratory passages, which is normally reversible and limited to the upper respiratory passages.

C- Contact with the skin and the eyes (acute effect):

-Contact with the skin: Based on available data, the classification criteria are not met. However, it contains substances classified as hazardous for skin contact. For more information see section 3.

-Contact with the eyes: Based on available data, the classification criteria are not met. However, it does contain substances classified as hazardous for this effect. For more information see section 3.

D- CMR effects (carcinogenicity, mutagenicity and toxicity to reproduction):

-Carcinogenicity: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for the effects mentioned. For more information see section 3.

IARC: Hydrocarbons, C9, aromatics (3); Xylene (3).

-Mutagenicity: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for this effect. For more information see section 3.

-Reproductive toxicity: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for this effect. For more information see section 3.

E- Sensitizing effects:

-Respiratory: Based on available data, the classification criteria are not met. However, it contains substances classified as dangerous with sensitising effects. For more information see section 3.

-Skin: Prolonged contact with the skin can result in episodes of allergic contact dermatitis.

F- Specific target organ toxicity (STOT) - single exposure:

Causes irritation in respiratory passages, which is normally reversible and limited to the upper respiratory passages.

G- Specific target organ toxicity (STOT)-repeated exposure:

-Specific target organ toxicity (STOT)-repeated exposure: Based on available data, the classification criteria are not met. However, it does contain substances classified as hazardous for this effect. For more information see section 3.

-Skin: Repeated exposure may cause skin dryness or cracking.

H- Aspiration hazard:

Based on available data, the classification criteria are not met. However, it does contain substances classified as hazardous for this effect. For more information see section 3.

Other information:

Not relevant.

Specific toxicology information on the substances:

Identification	Acute toxicity		Genus
2-methoxy-1-methylethyl acetate CAS: 108-65-6 EC: 203-603-9	LD50 oral	8532 mg/kg	Rat
	LD50 dermal	5100 mg/kg	Rat
	LC50 inhalation vapour	30 mg/L (4h)	Rat
Hydrocarbons, C9, aromatics CAS: 128601-23-0 EC: 918-668-5	LD50 oral	3492 mg/kg	Rat
	LD50 dermal	3160 mg/kg	Rabbit
	LC50 inhalation vapour	6193 mg/L (4h)	Rat
Xylene CAS: 1330-20-7 EC: 215-535-7	LD50 oral	2100 mg/kg	Rat
	LD50 dermal	1100 mg/kg	Rat
	LC50 inhalation vapour	17 mg/L	Rat
Hexamethylene diisocyanate, oligomers (<0.1% O=C=N-R-N=C=O) CAS: 28182-81-2 EC: 931-274-8	LD50 oral	2660 mg/kg	Rat
	LD50 dermal	>2000 mg/kg	
	LC50 inhalation vapour	11 mg/L	
Hexamethylene-di-isocyanate CAS: 822-06-0 EC: 212-485-8	LD50 oral	>2000 mg/kg	
	LD50 dermal	>2000 mg/kg	
	LC50 inhalation vapour	3 mg/L	

Acute Toxicity Estimate (ATE mix):

ATE mix		Ingredient(s) of unknown toxicity
Oral	>2000 mg/kg (Calculation method)	0%.
Dermal	19130,43 mg/kg (Calculation method)	0%.
LC50 inhalation vapour	26,39 mg/L (4h) (Calculation method)	0%.

11.2 Information on other hazards:
Endocrine disrupting properties:

Endocrine-disrupting properties: The product fails to meet the criteria.

Other information:

Not relevant.

SECTION 12. ECOLOGICAL INFORMATION

The experimental information related to the eco-toxicological properties of the product itself is not available.
Toxic to aquatic life with long lasting effects.

12.1 Toxicity:
Acute toxicity:

Identification	Concentration		Species	Genus
Hexamethylene diisocyanate, oligomers (<0.1% O=C=N-R-N=C=O) CAS: 28182-81-2 EC: 931-274-8	LC50	Not relevant		
	EC50	Not relevant		
	EC50	1000 mg/L (72h)	Scenedesmus subspicatus	Algae
2-methoxy-1-methylethyl acetate CAS: 108-65-6 EC: 203-603-9	LC50	161 mg/L (96h)	Pimephales promelas	Fish
	EC50	481 mg/L (48h)	Daphnia sp.	Crustacean
	EC50	Not relevant		
Hydrocarbons, C9, aromatics CAS: 128601-23-0 EC: 918-668-5	LC50	>1 - 10 mg/L (96h)		Fish
	EC50	>1 - 10 mg/L (48h)		Crustacean
	EC50	>1 - 10 mg/L (72h)		Algae
Xylene CAS: 1330-20-7 EC: 215-535-7	LC50	>10 - 100 mg/L (96h)		Fish
	EC50	>10 - 100 mg/L (48h)		Crustacean
	EC50	>10 - 100 mg/L (72h)		Algae

Chronic toxicity:

Identification	Concentration	Species	Genus
2-methoxy-1-methylethyl acetate CAS: 108-65-6 EC: 203-603-9	NOEC 47,5 mg/L	Oryzias latipes	Fish
	NOEC 100 mg/L	Daphnia magna	Crustacean
Xylene CAS: 1330-20-7 EC: 215-535-7	NOEC 1,3 mg/L	Oncorhynchus mykiss	Fish
	NOEC 1,17 mg/L	Ceriodaphnia dubia	Crustacean

12.2 Persistence and degradability:
Substance-specific information:

Identification	Degradability	Biodegradability
2-methoxy-1-methylethyl acetate CAS: 108-65-6 EC: 203-603-9	BOD5	Not relevant.
	COD	Not relevant
	BOD5/COD	Not relevant
Xylene CAS: 1330-20-7 EC: 215-535-7	BOD5	Not relevant
	COD	Not relevant
	BOD5/COD	Not relevant
Hexamethylene-di-isocyanate CAS: 822-06-0 EC: 212-485-8	BOD5	Not relevant
	COD	Not relevant
	BOD5/COD	Not relevant

12.3 Bioaccumulative potential:
Substance-specific information:

Identification	Bioaccumulation potential
2-methoxy-1-methylethyl acetate CAS: 108-65-6 EC: 203-603-9	BCF
	Pow Log
	Potential
Xylene CAS: 1330-20-7 EC: 215-535-7	BCF
	Pow Log
	Potential

12.4 Mobility in soil:

Identification	Absorption/desorption		Volatility	
Xylene CAS: 1330-20-7 EC: 215-535-7	Koc	202	Henry	524,86 Pa·m³/mol
	Conclusion	Moderate	Dry soil	Yes
	Surface tension	Not relevant	Moist soil	Yes

12.5 Results of PBT and vPvB assessment:

Product does not meet PBT/vPvB criteria.

12.6 Endocrine disrupting properties:

Endocrine-disrupting properties: The product does not meet the criteria.

12.7 Other adverse effects:

Not described.

SECTION 13. DISPOSAL CONSIDERATIONS
13.1 Waste treatment methods:

Code	Description	Waste class (Regulation (EU) No 1357/2014)
08 01 11 *	Waste paint and varnish containing organic solvents or other hazardous substances.	Hazardous

**Type of waste (Regulation (EU) No.1357/2014):**

HP14 Ecotoxic, HP3 Flammable, HP5 Specific Target Organ Toxicity (STOT)/Aspiration Toxicity, HP6 Acute Toxicity, HP13 Sensitising.

Waste management (disposal and evaluation):

Consult the authorized waste service manager on the assessment and disposal operations in accordance with Annex 1 and Annex 2 (Directive 2008/98/EC). As under 15 01 (2014/955/EC) of the code and in case the container has been in direct contact with the product, it will be processed the same way as the actual product. Otherwise, it will be processed as non-dangerous residue. Waste should not be disposed of to drains. See paragraph 6.2.

Regulations related to waste management:

In accordance with Annex II of Regulation (EC) No.1907/2006 (REACH) the community or state provisions related to waste management are stated.

Community legislation: Directive 2008/98/EC, 2014/955/EU, Regulation (EU) No1357/2014.

SECTION 14. TRANSPORT INFORMATION

Transport of dangerous goods by land:

With regard to ADR 2023 and RID 2023:



14.1 UN number or ID number:

14.2 UN proper shipping name:

14.3 Transport hazard class(es):

Labels:

14.4 Packing group:

14.5 Environmental hazards:

14.6 Special precautions for user:

Special regulations:

Tunnel restriction code:

Physico-Chemical properties:

Limited quantities:

14.7 Maritime transport in bulk according to IMO instruments:

UN1263.

PAINT RELATED MATERIAL.

3.

3.

III.

Yes.

163, 367, 650.

D/E.

See section 9.

5 L.

Not relevant.

Transport of dangerous goods by sea:

With regard to IMDG 41-22:



14.1 UN number or ID number:

14.2 UN proper shipping name:

14.3 Transport hazard class(es):

Labels:

14.4 Packing group:

14.5 Marine pollutant:

14.1 Special precautions for user:

Special regulations:

EmS Codes:

Physico-Chemical properties:

Limited quantities:

Segregation group:

14.2 Maritime transport in bulk according to IMO instruments:

UN1263.

PAINT RELATED MATERIAL.

3.

3.

III.

Yes.

163, 223, 955, 367.

F-E, S-E.

See section 9.

5 L.

Not relevant.

Not relevant.

Transport of dangerous goods by air:

With regard to IATA/ICAO 2024:



14.1 UN number or ID number:

14.2 UN proper shipping name:

14.3 Transport hazard class(es):

Labels:

14.4 Packing group:

14.5 Environmental hazards:

14.6 Special precautions for user:

Physico-Chemical properties:

14.7 Maritime transport in bulk according to IMO instruments:

UN1263.

PAINT RELATED MATERIAL.

3.

3.

III.

Yes.

See section 9.

Not relevant.

SECTION 15. REGULATORY INFORMATION

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

-Article 95, REGULATION (EU) No 528/2012: Not relevant.

-Candidate substances for authorisation under the Regulation (EC) No 1907/2006 (REACH): Not relevant.

-Regulation (EU) 2019/1021 on persistent organic pollutants: Not relevant.

-Regulation (EU) No 2024/590, about substances that deplete the ozone layer: Not relevant.

-REGULATION (EU) No 649/2012, in relation to the import and export of hazardous chemical products: Not relevant.

-Substances included in Annex XIV of REACH ("Authorisation List") and sunset date: Not relevant.

Seveso III:

Section	Description	Lower-tier requirements	Upper-tier requirements
P5c	FLAMMABLE LIQUIDS	5000	50000
E2	ENVIRONMENTAL HAZARDS	200	500

Limitations to commercialisation and the use of certain dangerous substances and mixtures (Annex XVII REACH, etc....):

Shall not be used in:

-ornamental articles intended to produce light or colour effects by means of different phases, for example in ornamental lamps and ashtrays.

-tricks and jokes.

-games for one or more participants, or any article intended to be used as such, even with ornamental aspects.

Contains more than 0.1 % of diisocyanates by weight.

1. Shall not be used as substances on their own, as a constituent in other substances or in mixtures for industrial and professional use(s) after 24 August 2023, unless:

a) the concentration of diisocyanates individually and in combination is less than 0,1% by weight, or b) the employer or self-employed ensures that industrial or professional user(s) have successfully completed training on the safe use of diisocyanates prior to the use of the substance(s) or mixture(s).

2. Shall not be placed on the market as substances on their own, as a constituent in other substances or in mixtures for industrial and professional use(s) after 24 February 2022, unless:

a) the concentration of diisocyanates individually and in combination is less than 0,1% by weight, or b) the supplier ensures that the recipient of the substance(s) or mixture(s) is provided with information on the requirements referred to in point (b) of paragraph 1 and the following statement is placed on the packaging, in a manner that is visibly distinct from the rest of the label information: "As from 24 August 2023 adequate training is required before industrial or professional use".

3. For the purpose of this entry "industrial and professional user(s)" means any worker or self-employed worker handling diisocyanates on their own, as a constituent in other substances or in mixtures for industrial and professional use(s) or supervising these tasks.

4. The training referred to in point (b) of paragraph 1 shall include the instructions for the control of dermal and inhalation exposure to diisocyanates at the workplace without prejudice to any national occupational exposure limit value or other appropriate risk management measures at national level. Such training shall be conducted by an expert on occupational safety and health with competence acquired by relevant vocational training. That training shall cover as a minimum:

a) the training elements in point (a) of paragraph 5 for all industrial and professional use(s).

b) the training elements in points (a) and (b) of paragraph 5 for the following uses:

- handling open mixtures at ambient temperature (including foam tunnels).
- spraying in a ventilated booth.
- application by roller.
- application by brush.
- application by dipping and pouring.
- mechanical post treatment (e.g. cutting) of not fully cured articles which are not warm anymore.
- cleaning and waste.
- any other uses with similar exposure through the dermal and/or inhalation route.

c) the training elements in points (a), (b) and (c) of paragraph 5 for the following uses:

- handling incompletely cured articles (e.g. freshly cured, still warm.).
- foundry applications.
- maintenance and repair that needs access to equipment.
- open handling of warm or hot formulations (>45°C).
- spraying in open air, with limited or only natural ventilation (includes large industry working halls) and spraying with high energy (e.g. foams, elastomers).
- and any other uses with similar exposure through the dermal and/or inhalation route.

5. Training elements:

a) general training, including on-line training, on:

- chemistry of diisocyanates.
- toxicity hazards (including acute toxicity).
- exposure to diisocyanates.
- occupational exposure limit values.
- how sensitisation can develop.
- odour as indication of hazard.
- importance of volatility for risk.
- viscosity, temperature, and molecular weight of diisocyanates.
- personal hygiene.
- personal protective equipment needed, including practical instructions for its correct use and its limitations.
- risk of dermal contact and inhalation exposure.
- risk in relation to application process used.
- skin and inhalation protection scheme.
- ventilation.
- cleaning, leakages, maintenance.
- discarding empty packaging.
- protection of bystanders.
- identification of critical handling stages.
- specific national code systems (if applicable).
- behaviour-based safety.
- certification or documented proof that training has been successfully completed.

b) intermediate level training, including on-line training, on:

- additional behaviour-based aspects.
- maintenance.
- management of change.
- evaluation of existing safety instructions.
- risk in relation to application process used.
- certification or documented proof that training has been successfully completed.

c) advanced training, including on-line training, on:

- any additional certification needed for the specific uses covered.
- spraying outside a spraying booth.
- open handling of hot or warm formulations (>45°C).
- certification or documented proof that training has been successfully completed.

6. The training shall comply with the provisions set by the Member State in which the industrial or professional user(s) operate. Member States may implement or continue to apply their own national requirements for the use of the substance(s) or mixture (s), as long as the minimum requirements set out in paragraphs 4 and 5 are met.

7. The supplier referred to in point (b) of paragraph 2 shall ensure that the recipient is provided with training material and courses pursuant to paragraphs 4 and 5 in the official language(s) of the Member State(s) where the substance(s) or mixture(s) are supplied. The training shall take into consideration the specificity of the products supplied, including composition, packaging, and design.

8. The employer or self-employed shall document the successful completion of the training referred to in paragraphs 4 and 5. The training shall be renewed at least every five years.

9. Member States shall include in their reports pursuant to Article 117(1) the following information:

a) any established training requirements and other risk management measures related to the industrial and professional uses of diisocyanates foreseen in national law.

b) the number of cases of reported and recognised occupational asthma and occupational respiratory and dermal diseases in relation to diisocyanates.

c) national exposure limits for diisocyanates, if there are any.

d) information about enforcement activities related to this restriction.

10. This restriction shall apply without prejudice to other Union legislation on the protection of safety and health of workers at the workplace.

Specific provisions in terms of protecting people or the environment:

It is recommended to use the information included in this safety data sheet as a basis for conducting workplace-specific risk assessments in order to establish the necessary risk prevention measures for the handling, use, storage and disposal of this product.

Other legislation:

The product could be affected by sectorial legislation.

15.2 Chemical Safety Assessment:

The supplier has not carried out evaluation of chemical safety.

SECTION 16. OTHER INFORMATION

Legislation related to safety data sheets:

The SDS shall be supplied in an official language of the country where the product is placed on the market. This safety data sheet has been designed in accordance with ANNEX II-Guide to the compilation of safety data sheets of Regulation (EC) No.1907/2006 (COMMISSION REGULATION (EU) 2020/878).

Modifications related to the previous Safety Data Sheet which concerns the ways of managing risks:

Not relevant.

Texts of the legislative phrases mentioned in section 2:

H335: May cause respiratory irritation.

H336: May cause drowsiness or dizziness.

H411: Toxic to aquatic life with long lasting effects.

H317: May cause an allergic skin reaction.

H226: Flammable liquid and vapour.

Texts of the legislative phrases mentioned in section 3:

The phrases indicated do not refer to the product itself; they are present merely for informative purposes and refer to the individual components which appear in section 3.

CLP Regulation (EC) No 1272/2008:

Acute Tox. 3: H331 - Toxic if inhaled.

Acute Tox. 4: H312+H332 - Harmful in contact with skin or if inhaled.

Acute Tox. 4: H332 - Harmful if inhaled.

Aquatic Chronic 2: H411 - Toxic to aquatic life with long lasting effects.

Aquatic Chronic 3: H412 - Harmful to aquatic life with long lasting effects.

Asp. Tox. 1: H304 - May be fatal if swallowed and enters airways.

Eye Irrit. 2: H319 - Causes serious eye irritation.

Flam. Liq. 3: H226 - Flammable liquid and vapour.

Resp. Sens. 1: H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Skin Irrit. 2: H315 - Causes skin irritation.

Skin Sens. 1: H317 - May cause an allergic skin reaction.

STOT RE 2: H373 - May cause damage to organs through prolonged or repeated exposure (Oral).

STOT SE 3: H335 - May cause respiratory irritation.

STOT SE 3: H336 - May cause drowsiness or dizziness.

Classification procedure:

STOT SE 3: Calculation method.

STOT SE 3: Calculation method.

Aquatic Chronic 2: Calculation method.

Skin Sens. 1: Calculation method.

Flam. Liq. 3: Calculation method (2.6.4.3).

Advice related to training:

Training is recommended in order to prevent industrial risks for staff using this product and to facilitate their comprehension and interpretation of this safety data sheet, as well as the label on the product.

Principal bibliographical sources:

<http://echa.europa.eu>.

<http://eur-lex.europa.eu>.

Abbreviations and acronyms:

ADR: European agreement concerning the international carriage of dangerous goods by road.

IMDG: International maritime dangerous goods code.

IATA: International Air Transport Association.

ICAO: International Civil Aviation Organisation.

COD: Chemical Oxygen Demand.

BOD5: 5day biochemical oxygen demand.

BCF: Bioconcentration factor.

LD50: Lethal Dose 50.

LC50: Lethal Concentration 50.

EC50: Effective concentration 50.

LogPOW: Octanolwater partition coefficient.

Koc: Partition coefficient of organic carbon.

UFI: unique formula identifier.

IARC: International Agency for Research on Cancer.

The information contained in this safety data sheet is based on sources, technical knowledge and current legislation at European and state level, without being able to guarantee its accuracy. This information cannot be considered a guarantee of the properties of the product, it is simply a description of the security requirements. The occupational methodology and conditions for users of this product are not within our awareness or control, and it is ultimately the responsibility of the user to take the necessary measures to obtain the legal requirements concerning the manipulation, storage, use and disposal of chemical products. The information on this safety data sheet only refers to this product, which should not be used for needs other than those specified.