

**HA/8045**  
**Solvent based Hardeners**

**SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING**

- 1.1 Product identifier:** HA/8045  
Solvent based Hardeners
- Other means of identification:**  
Non-applicable
- 1.2 Relevant identified uses of the substance or mixture and uses advised against:**  
Relevant uses: Hardener for coatings. For 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:**  
BERNARDO ECENARRO, S.A.  
Ugarte Industrialdea, 147  
20720 Azkoitia - Gipuzkoa - Spain  
Phone: +34 943 74 28 00 - Fax: +34 943 74 06 03  
msds@besa.es  
http://www.besa.es
- 1.4 Emergency telephone number:** +34 943742800 (8:00-13:00) (14:30-17:30)

**SECTION 2: HAZARDS IDENTIFICATION \*\***

- 2.1 Classification of the substance or mixture:**  
**CLP Regulation (EC) No 1272/2008:**  
Classification of this product has been carried out in accordance with CLP Regulation (EC) No 1272/2008.  
Acute Tox. 4: Acute inhalation toxicity, Category 4, H332  
Aquatic Chronic 3: Hazardous to the aquatic environment, long-term hazard, Category 3, H412  
Eye Irrit. 2: Eye irritation, Category 2, H319  
Flam. Liq. 3: Flammable liquids, Category 3, H226  
Skin Irrit. 2: Skin irritation, Category 2, H315  
Skin Sens. 1: Sensitisation, skin, Category 1, H317  
STOT RE 2: Specific target organ toxicity — Repeated exposure, Hazard Category 2 (Oral), H373  
STOT SE 3: Respiratory tract toxicity, single exposure, Category 3, H335

**2.2 Label elements:**

**CLP Regulation (EC) No 1272/2008:**

**Warning**



**Hazard statements:**

Acute Tox. 4: H332 - Harmful if inhaled.  
Aquatic Chronic 3: H412 - Harmful to aquatic life with long lasting effects.  
Eye Irrit. 2: H319 - Causes serious eye irritation.  
Flam. Liq. 3: H226 - Flammable liquid and vapour.  
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.

**Precautionary statements:**

P210: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.  
P280: Wear protective gloves/protective clothing/respiratory protection/eye protection/protective footwear.  
P304+P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P370+P378: In case of fire: Use ABC powder extinguisher to extinguish.  
P501: Dispose of the contents/containers in accordance with the current legislation on waste treatment

**Supplementary information:**

\*\* Changes with regards to the previous version

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**SECTION 2: HAZARDS IDENTIFICATION \*\* (continued)**

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); Xylene; Hydrocarbons, C9, aromatics

**2.3 Other hazards:**

Product fails to meet PBT/vPvB criteria

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

\*\* Changes with regards to the previous version

**SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS \*\***

**3.1 Substance:**

Non-applicable

**3.2 Mixture:**

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

**Components:**

In accordance with Annex II of Regulation (EC) No 1907/2006 (point 3), the product contains:

Identification	Chemical name/Classification		Concentration
CAS: 28182-81-2 EC: 931-274-8 Index: Non-applicable REACH: 01-2119485796-17-XXXX	<b>Hexamethylene diisocyanate, oligomers (&lt;0.1 % O=C=N-R-N=C=O)</b> <sup>1</sup>	Self-classified	25 - <50 %
	Regulation 1272/2008	Acute Tox. 4: H332; Skin Sens. 1: H317; STOT SE 3: H335 - Warning	
CAS: 1330-20-7 EC: 215-535-7 Index: 601-022-00-9 REACH: 01-2119488216-32-XXXX	<b>Xylene</b> <sup>1</sup>	Self-classified	10 - <25 %
	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	
CAS: 128601-23-0 EC: 918-668-5 Index: Non-applicable REACH: 01-2119455851-35-XXXX	<b>Hydrocarbons, C9, aromatics</b> <sup>1</sup>	Self-classified	5 - <10 %
	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	
CAS: 64742-95-6 EC: 265-199-0 Index: 649-356-00-4 REACH: 01-2119486773-24-XXXX	<b>Solvent naphtha (petroleum), light arom., &lt; 0.1 % EC 200-753-7</b> <sup>1</sup>	ATP ATP01	2,5 - <5 %
	Regulation 1272/2008	Aquatic Chronic 2: H411; Asp. Tox. 1: H304; Flam. Liq. 3: H226; Skin Irrit. 2: H315; STOT SE 3: H336; EUH066 - Danger	
CAS: 123-86-4 EC: 204-658-1 Index: 607-025-00-1 REACH: 01-2119485493-29-XXXX	<b>N-butyl acetate</b> <sup>2</sup>	ATP CLP00	2,5 - <5 %
	Regulation 1272/2008	Flam. Liq. 3: H226; STOT SE 3: H336; EUH066 - Warning	

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

<sup>2</sup> Voluntarily-listed substance failing to meet any of the criteria set out in Regulation (EU) No. 2020/878

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

\*\* Changes with regards to the previous version

**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:**

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**SECTION 4: FIRST AID MEASURES (continued)**

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 water for at least 15 minutes. If the injured person uses contact lenses, these should be removed unless they are stuck to the eyes, in which case removal could cause further damage. In all cases, after cleaning, a doctor should be consulted as quickly as possible with the SDS for 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:**

Non-applicable

**SECTION 5: FIREFIGHTING MEASURES**

**5.1 Extinguishing media:**

**Suitable extinguishing media:**

If possible use polyvalent powder fire extinguishers (ABC powder), alternatively use foam or carbon dioxide extinguishers (CO<sub>2</sub>).

**Unsuitable extinguishing media:**

IT IS RECOMMENDED NOT to use full jet water as an extinguishing agent.

**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 (SCBA). Minimum emergency facilities and equipment should be available (fire blankets, portable first aid kit,...) in accordance with Directive 89/654/EC.

**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:

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**SECTION 6: ACCIDENTAL RELEASE MEASURES (continued)**

Absorb the spillage using sand or inert absorbent and move it to a safe place. Do not absorb in sawdust or other combustible absorbents. For any concern related to disposal consult section 13.

**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.- Technical measures for storage

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		
	IOELV (8h)	50 ppm	241 mg/m <sup>3</sup>
N-butyl acetate CAS: 123-86-4 EC: 204-658-1	IOELV (STEL)	150 ppm	723 mg/m <sup>3</sup>
Xylene CAS: 1330-20-7 EC: 215-535-7	IOELV (8h)	50 ppm	221 mg/m <sup>3</sup>
	IOELV (STEL)	100 ppm	442 mg/m <sup>3</sup>

**DNEL (Workers):**

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**SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION (continued)**

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	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Dermal	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Inhalation	Non-applicable	1 mg/m <sup>3</sup>	Non-applicable	0,5 mg/m <sup>3</sup>
Xylene CAS: 1330-20-7 EC: 215-535-7	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Dermal	Non-applicable	Non-applicable	212 mg/kg	Non-applicable
	Inhalation	442 mg/m <sup>3</sup>	442 mg/m <sup>3</sup>	221 mg/m <sup>3</sup>	221 mg/m <sup>3</sup>
Hydrocarbons, C9, aromatics CAS: 128601-23-0 EC: 918-668-5	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Dermal	Non-applicable	Non-applicable	25 mg/kg	Non-applicable
	Inhalation	Non-applicable	Non-applicable	150 mg/m <sup>3</sup>	Non-applicable
Solvent naphtha (petroleum), light arom., < 0.1 % EC 200-753-7 CAS: 64742-95-6 EC: 265-199-0	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Dermal	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Inhalation	1286,4 mg/m <sup>3</sup>	1066,67 mg/m <sup>3</sup>	Non-applicable	837,5 mg/m <sup>3</sup>
N-butyl acetate CAS: 123-86-4 EC: 204-658-1	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Dermal	11 mg/kg	Non-applicable	11 mg/kg	Non-applicable
	Inhalation	600 mg/m <sup>3</sup>	600 mg/m <sup>3</sup>	300 mg/m <sup>3</sup>	300 mg/m <sup>3</sup>

**DNEL (General population):**

Identification		Short exposure		Long exposure	
		Systemic	Local	Systemic	Local
Xylene CAS: 1330-20-7 EC: 215-535-7	Oral	Non-applicable	Non-applicable	12,5 mg/kg	Non-applicable
	Dermal	Non-applicable	Non-applicable	125 mg/kg	Non-applicable
	Inhalation	260 mg/m <sup>3</sup>	260 mg/m <sup>3</sup>	65,3 mg/m <sup>3</sup>	65,3 mg/m <sup>3</sup>
Hydrocarbons, C9, aromatics CAS: 128601-23-0 EC: 918-668-5	Oral	Non-applicable	Non-applicable	11 mg/kg	Non-applicable
	Dermal	Non-applicable	Non-applicable	11 mg/kg	Non-applicable
	Inhalation	Non-applicable	Non-applicable	32 mg/m <sup>3</sup>	Non-applicable
Solvent naphtha (petroleum), light arom., < 0.1 % EC 200-753-7 CAS: 64742-95-6 EC: 265-199-0	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Dermal	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Inhalation	1152 mg/m <sup>3</sup>	640 mg/m <sup>3</sup>	Non-applicable	178,57 mg/m <sup>3</sup>
N-butyl acetate CAS: 123-86-4 EC: 204-658-1	Oral	2 mg/kg	Non-applicable	2 mg/kg	Non-applicable
	Dermal	6 mg/kg	Non-applicable	6 mg/kg	Non-applicable
	Inhalation	300 mg/m <sup>3</sup>	300 mg/m <sup>3</sup>	35,7 mg/m <sup>3</sup>	35,7 mg/m <sup>3</sup>

**PNEC:**

Identification				
Hexamethylene diisocyanate, oligomers (<0.1 % O=C=N-R-N=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	Non-applicable	Sediment (Marine water)	26670 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	Non-applicable	Sediment (Marine water)	12,46 mg/kg
N-butyl acetate CAS: 123-86-4 EC: 204-658-1	STP	35,6 mg/L	Fresh water	0,18 mg/L
	Soil	0,09 mg/kg	Marine water	0,018 mg/L
	Intermittent	0,36 mg/L	Sediment (Fresh water)	0,981 mg/kg
	Oral	Non-applicable	Sediment (Marine water)	0,098 mg/kg

**8.2 Exposure controls:**

A.- Individual protection measures, such as personal protective equipment



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**SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION (continued)**

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		EN 149:2001+A1:2009 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)		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	Panoramic glasses against splash/projections.		EN 166:2002 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	Antistatic and fireproof protective clothing		EN 1149-1:2006 EN 1149-2:1997 EN 1149-3:2004 EN 168:2002 EN ISO 14116:2015 EN 1149-5:2018	Limited protection against flames.
 Mandatory foot protection	Safety footwear with antistatic and heat resistant properties		EN ISO 13287:2020 EN ISO 20345:2011	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:**

In accordance with the community legislation for the protection of the environment it is recommended to avoid environmental spillage of both the product and its container. For additional information see subsection 7.1.D

**Volatile organic compounds:**

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

- V.O.C. (Supply): 50,45 % weight
- V.O.C. density at 20 °C: 519,64 kg/m<sup>3</sup> (519,64 g/L)
- Average carbon number: 7,45

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**SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION (continued)**

Average molecular weight: 132,64 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:	Non-applicable *

**Volatility:**

Boiling point at atmospheric pressure:	156 °C
Vapour pressure at 20 °C:	366 Pa
Vapour pressure at 50 °C:	2123,69 Pa (2,12 kPa)
Evaporation rate at 20 °C:	Non-applicable *

**Product description:**

Density at 20 °C:	1020 - 1040 kg/m <sup>3</sup>
Relative density at 20 °C:	1,02 - 1,04
Dynamic viscosity at 20 °C:	40 - 20 cP
Kinematic viscosity at 20 °C:	29 mm <sup>2</sup> /s
Kinematic viscosity at 40 °C:	Non-applicable *
Concentration:	Non-applicable *
pH:	Non-applicable *
Vapour density at 20 °C:	Non-applicable *
Partition coefficient n-octanol/water 20 °C:	Non-applicable *
Solubility in water at 20 °C:	Non-applicable *
Solubility properties:	Immiscible
Decomposition temperature:	Non-applicable *
Melting point/freezing point:	Non-applicable *

**Flammability:**

Flash Point:	45 °C
Flammability (solid, gas):	Non-applicable *
Autoignition temperature:	377 °C
Lower flammability limit:	Not available
Upper flammability limit:	Not available

**Particle characteristics:**

Median equivalent diameter:	Non-applicable
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**9.2 Other information:**

**Information with regard to physical hazard classes:**

Explosive properties:	Non-applicable *
Oxidising properties:	Non-applicable *
Corrosive to metals:	Non-applicable *
Heat of combustion:	Non-applicable *

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

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**SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES (continued)**

Aerosols-total percentage (by mass) of flammable components: Non-applicable \*

**Other safety characteristics:**

Surface tension at 20 °C: Non-applicable \*

Refraction index: Non-applicable \*

\*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.

**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 (CO<sub>2</sub>), 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: The consumption of a considerable dose can cause irritation in the throat, abdominal pain, nausea and vomiting.

B- Inhalation (acute effect):

- Acute toxicity : Exposure in high concentration can interfere with the central nervous system causing headache, dizziness, vertigo, nausea, vomiting, confusion, and in serious cases, loss of consciousness.
- 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: Produces skin inflammation.
- Contact with the eyes: Produces eye damage after contact.

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

\*\* Changes with regards to the previous version



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**SECTION 11: TOXICOLOGICAL INFORMATION \*\* (continued)**

- 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: Solvent naphtha (petroleum), light arom., < 0.1 % EC 200-753-7 (3); Xylene (3); Hydrocarbons, C9, aromatics (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, as it does not contain substances classified as hazardous 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: Exposure in high concentration can interfere with the central nervous system causing headache, dizziness, vertigo, nausea, vomiting, confusion, and in serious cases, loss of consciousness.
- Skin: Based on available data, the classification criteria are not met. However, it does contain substances which are classified as dangerous due to repetitive exposure. For more information see section 3.

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:**

Non-applicable

**Specific toxicology information on the substances:**

Identification	Acute toxicity		Genus
N-butyl acetate CAS: 123-86-4 EC: 204-658-1	LD50 oral	12789 mg/kg	Rat
	LD50 dermal	14112 mg/kg	Rabbit
	LC50 inhalation	23,4 mg/L (4 h)	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	11 mg/L (ATEi)	
Solvent naphtha (petroleum), light arom., < 0.1 % EC 200-753-7 CAS: 64742-95-6 EC: 265-199-0	LD50 oral	2100 mg/kg	Rat
	LD50 dermal	2000 mg/kg	Rabbit
	LC50 inhalation	>20 mg/L	
Xylene CAS: 1330-20-7 EC: 215-535-7	LD50 oral	2100 mg/kg	Rat
	LD50 dermal	1100 mg/kg	Rat
	LC50 inhalation	11 mg/L (ATEi)	
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	6193 mg/L (4 h)	Rat

**Acute Toxicity Estimate (ATE mix):**

	ATE mix	Ingredient(s) of unknown toxicity
Oral	>2000 mg/kg (Calculation method)	Non-applicable
Dermal	9554,83 mg/kg (Calculation method)	0 %
Inhalation	18,49 mg/L (4 h) (Calculation method)	0 %

**11.2 Information on other hazards:**

**Endocrine disrupting properties**

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

**Other information**

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**SECTION 11: TOXICOLOGICAL INFORMATION \*\* (continued)**

Non-applicable

*\*\* Changes with regards to the previous version*

**SECTION 12: ECOLOGICAL INFORMATION \*\***

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

**12.1 Toxicity:**

**Acute toxicity:**

Identification	Concentration		Species	Genus
	LC50	EC50		
Hexamethylene diisocyanate, oligomers (<0.1 % O=C=N-R-N=C=O) CAS: 28182-81-2 EC: 931-274-8	LC50	Non-applicable		
	EC50	Non-applicable		
	EC50	1000 mg/L (72 h)	Scenedesmus subspicatus	Algae
Xylene CAS: 1330-20-7 EC: 215-535-7	LC50	>10 - 100 mg/L (96 h)		Fish
	EC50	>10 - 100 mg/L (48 h)		Crustacean
	EC50	>10 - 100 mg/L (72 h)		Algae
Hydrocarbons, C9, aromatics CAS: 128601-23-0 EC: 918-668-5	LC50	>1 - 10 mg/L (96 h)		Fish
	EC50	>1 - 10 mg/L (48 h)		Crustacean
	EC50	>1 - 10 mg/L (72 h)		Algae
Solvent naphtha (petroleum), light arom., < 0.1 % EC 200-753-7 CAS: 64742-95-6 EC: 265-199-0	LC50	>1 - 10 mg/L (96 h)		Fish
	EC50	>1 - 10 mg/L (48 h)		Crustacean
	EC50	>1 - 10 mg/L (72 h)		Algae
N-butyl acetate CAS: 123-86-4 EC: 204-658-1	LC50	Non-applicable		
	EC50	Non-applicable		
	EC50	675 mg/L (72 h)	Scenedesmus subspicatus	Algae

**Chronic toxicity:**

Identification	Concentration		Species	Genus
	NOEC	EC50		
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
N-butyl acetate CAS: 123-86-4 EC: 204-658-1	NOEC	Non-applicable		
	NOEC	23,2 mg/L	Daphnia magna	Crustacean

**12.2 Persistence and degradability:**

**Substance-specific information:**

Identification	Degradability		Biodegradability	
	BOD5	COD	Concentration	Period
Xylene CAS: 1330-20-7 EC: 215-535-7	BOD5	Non-applicable	Concentration	Non-applicable
	COD	Non-applicable	Period	28 days
	BOD5/COD	Non-applicable	% Biodegradable	88 %
Solvent naphtha (petroleum), light arom., < 0.1 % EC 200-753-7 CAS: 64742-95-6 EC: 265-199-0	BOD5	0,19 g O2/g	Concentration	Non-applicable
	COD	0,44 g O2/g	Period	Non-applicable
	BOD5/COD	0,43	% Biodegradable	Non-applicable
N-butyl acetate CAS: 123-86-4 EC: 204-658-1	BOD5	Non-applicable	Concentration	Non-applicable
	COD	Non-applicable	Period	5 days
	BOD5/COD	Non-applicable	% Biodegradable	84 %

**12.3 Bioaccumulative potential:**

**Substance-specific information:**

Identification	Bioaccumulation potential	
	BCF	Pow Log
Xylene CAS: 1330-20-7 EC: 215-535-7	BCF	9
	Pow Log	2,77
	Potential	Low

*\*\* Changes with regards to the previous version*

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**SECTION 12: ECOLOGICAL INFORMATION \*\* (continued)**

Identification	Bioaccumulation potential	
Solvent naphtha (petroleum), light arom., < 0.1 % EC 200-753-7 CAS: 64742-95-6 EC: 265-199-0	BCF	
	Pow Log	4
	Potential	
N-butyl acetate CAS: 123-86-4 EC: 204-658-1	BCF	4
	Pow Log	1.78
	Potential	Low

**12.4 Mobility in soil:**

Identification	Absorption/desorption		Volatility	
Xylene CAS: 1330-20-7 EC: 215-535-7	Koc	202	Henry	524,86 Pa·m <sup>3</sup> /mol
	Conclusion	Moderate	Dry soil	Yes
	Surface tension	Non-applicable	Moist soil	Yes
N-butyl acetate CAS: 123-86-4 EC: 204-658-1	Koc	Non-applicable	Henry	Non-applicable
	Conclusion	Non-applicable	Dry soil	Non-applicable
	Surface tension	2,478E-2 N/m (25 °C)	Moist soil	Non-applicable

**12.5 Results of PBT and vPvB assessment:**

Product fails to meet PBT/vPvB criteria

**12.6 Endocrine disrupting properties:**

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

**12.7 Other adverse effects:**

Not described

\*\* Changes with regards to the previous version

**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	Dangerous

**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, HP4 Irritant — skin irritation and eye damage

**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) No 1357/2014

**SECTION 14: TRANSPORT INFORMATION**

**Transport of dangerous goods by land:**

With regard to ADR 2021 and RID 2021:

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**SECTION 14: TRANSPORT INFORMATION (continued)**



- 14.1 UN number or ID number:** UN1263
- 14.2 UN proper shipping name:** PAINT RELATED MATERIAL
- 14.3 Transport hazard class(es):** 3  
Labels: 3
- 14.4 Packing group:** III
- 14.5 Environmental hazards:** No
- 14.6 Special precautions for user**  
Special regulations: 163, 367, 650  
Tunnel restriction code: D/E  
Physico-Chemical properties: see section 9  
Limited quantities: 5 L
- 14.7 Maritime transport in bulk according to IMO instruments:** Non-applicable

**Transport of dangerous goods by sea:**

With regard to IMDG 40-20:



- 14.1 UN number or ID number:** UN1263
- 14.2 UN proper shipping name:** PAINT RELATED MATERIAL
- 14.3 Transport hazard class(es):** 3  
Labels: 3
- 14.4 Packing group:** III
- 14.5 Marine pollutant:** No
- 14.6 Special precautions for user**  
Special regulations: 163, 223, 955, 367  
EmS Codes: F-E, S-E  
Physico-Chemical properties: see section 9  
Limited quantities: 5 L  
Segregation group: Non-applicable
- 14.7 Maritime transport in bulk according to IMO instruments:** Non-applicable

**Transport of dangerous goods by air:**

With regard to IATA/ICAO 2022:



- 14.1 UN number or ID number:** UN1263
- 14.2 UN proper shipping name:** PAINT RELATED MATERIAL
- 14.3 Transport hazard class(es):** 3  
Labels: 3
- 14.4 Packing group:** III
- 14.5 Environmental hazards:** No
- 14.6 Special precautions for user**  
Physico-Chemical properties: see section 9
- 14.7 Maritime transport in bulk according to IMO instruments:** Non-applicable

**SECTION 15: REGULATORY INFORMATION**

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

Candidate substances for authorisation under the Regulation (EC) No 1907/2006 (REACH): Non-applicable  
Substances included in Annex XIV of REACH ("Authorisation List") and sunset date: Non-applicable  
Regulation (EC) No 1005/2009, about substances that deplete the ozone layer: Non-applicable  
Article 95, REGULATION (EU) No 528/2012: Non-applicable

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**SECTION 15: REGULATORY INFORMATION (continued)**

REGULATION (EU) No 649/2012, in relation to the import and export of hazardous chemical products: Non-applicable

**Seveso III:**

Section	Description	Lower-tier requirements	Upper-tier requirements
P5c	FLAMMABLE LIQUIDS	5000	50000

**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.

**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.:**

COMMISSION REGULATION (EU) 2020/878

COMPOSITION/INFORMATION ON INGREDIENTS (SECTION 3, SECTION 11, SECTION 12):

- New declared substances  
Hexamethylene diisocyanate, oligomers (<0.1 % O=C=N-R-N=C=O) (28182-81-2)
- Removed substances  
Hexamethylene diisocyanate, oligomers (28182-81-2)

Substances that contribute to the classification (SECTION 2):

- New declared substances  
Hexamethylene diisocyanate, oligomers (<0.1 % O=C=N-R-N=C=O) (28182-81-2)
- Removed substances  
Hexamethylene diisocyanate, oligomers (28182-81-2)

**Texts of the legislative phrases mentioned in section 2:**

- H317: May cause an allergic skin reaction.
- H335: May cause respiratory irritation.
- H315: Causes skin irritation.
- H412: Harmful to aquatic life with long lasting effects.
- H373: May cause damage to organs through prolonged or repeated exposure (Oral).
- H332: Harmful if inhaled.
- H226: Flammable liquid and vapour.
- H319: Causes serious eye irritation.

**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:**

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**SECTION 16: OTHER INFORMATION (continued)**

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.  
 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:**

Skin Sens. 1: Calculation method  
 STOT SE 3: Calculation method  
 Skin Irrit. 2: Calculation method  
 Aquatic Chronic 3: Calculation method  
 STOT RE 2: Calculation method  
 Acute Tox. 4: Calculation method  
 Flam. Liq. 3: Calculation method (2.6.4.3)  
 Eye Irrit. 2: Calculation method

**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.

- END OF SAFETY DATA SHEET -