




**HA/8065**  
**Solvent based Hardeners**

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

- 1.1 Product identifier:** HA/8065  
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.  
Contains Dibutyltin Dilaurate.

**Substances that contribute to the classification**

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

**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		25 - <50 %
	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: 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		10 - <25 %
	Regulation 1272/2008	Flam. Liq. 3: H226; STOT SE 3: H336; EUH066 - Warning  	
CAS: 108-65-6 EC: 203-603-9 Index: 607-195-00-7 REACH: 01-2119475791-29-XXXX	<b>2-methoxy-1-methylethyl acetate</b> <sup>2</sup> ATP ATP01		2,5 - <5 %
	Regulation 1272/2008	Flam. Liq. 3: H226 - Warning 	
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: 77-58-7 EC: 201-039-8 Index: 050-030-00-3 REACH: 01-2119496068-27-XXXX	<b>Dibutyltin Dilaurate</b> <sup>1</sup> Self-classified		<0,2 %
	Regulation 1272/2008	Aquatic Acute 1: H400; Aquatic Chronic 1: H410; Eye Irrit. 2: H319; Muta. 2: H341; Repr. 1B: H360; Skin Sens. 1: H317; STOT RE 1: H372; STOT SE 1: H370 - Danger   	

<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:**

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

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 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:**

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

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:

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)	IOELV (STEL)	IOELV (STEL)
N-butyl acetate CAS: 123-86-4 EC: 204-658-1	50 ppm	150 ppm	241 mg/m <sup>3</sup> 723 mg/m <sup>3</sup>
2-methoxy-1-methylethyl acetate CAS: 108-65-6 EC: 203-603-9	50 ppm	100 ppm	275 mg/m <sup>3</sup> 550 mg/m <sup>3</sup>

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

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		
	Xylene CAS: 1330-20-7 EC: 215-535-7	IOELV (8h)	50 ppm
	IOELV (STEL)	100 ppm	442 mg/m <sup>3</sup>

**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	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>
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>
2-methoxy-1-methylethyl acetate CAS: 108-65-6 EC: 203-603-9	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Dermal	Non-applicable	Non-applicable	796 mg/kg	Non-applicable
	Inhalation	Non-applicable	550 mg/m <sup>3</sup>	275 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>
Dibutyltin Dilaurate CAS: 77-58-7 EC: 201-039-8	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Dermal	2,08 mg/kg	Non-applicable	0,43 mg/kg	Non-applicable
	Inhalation	0,059 mg/m <sup>3</sup>	Non-applicable	0,02 mg/m <sup>3</sup>	Non-applicable

**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>
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>
2-methoxy-1-methylethyl acetate CAS: 108-65-6 EC: 203-603-9	Oral	Non-applicable	Non-applicable	36 mg/kg	Non-applicable
	Dermal	Non-applicable	Non-applicable	320 mg/kg	Non-applicable
	Inhalation	Non-applicable	Non-applicable	33 mg/m <sup>3</sup>	33 mg/m <sup>3</sup>
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>
Dibutyltin Dilaurate CAS: 77-58-7 EC: 201-039-8	Oral	0,02 mg/kg	Non-applicable	0,003 mg/kg	Non-applicable
	Dermal	0,5 mg/kg	Non-applicable	0,16 mg/kg	Non-applicable
	Inhalation	0,04 mg/m <sup>3</sup>	Non-applicable	0,005 mg/m <sup>3</sup>	Non-applicable

**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

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



Identification				
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
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	Non-applicable	Sediment (Marine water)	0,329 mg/kg
Dibutyltin Dilaurate CAS: 77-58-7 EC: 201-039-8	STP	100 mg/L	Fresh water	0 mg/L
	Soil	0,041 mg/kg	Marine water	0 mg/L
	Intermittent	0,005 mg/L	Sediment (Fresh water)	0,05 mg/kg
	Oral	0,0002 g/kg	Sediment (Marine water)	0,005 mg/kg

**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		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.



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

Pictogram	PPE	Labelling	CEN Standard	Remarks
 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):	50,29 % weight
V.O.C. density at 20 °C:	502,91 kg/m <sup>3</sup> (502,91 g/L)
Average carbon number:	7,35
Average molecular weight:	112,07 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:	136 °C
Vapour pressure at 20 °C:	812 Pa
Vapour pressure at 50 °C:	4328,8 Pa (4,33 kPa)
Evaporation rate at 20 °C:	Non-applicable *

**Product description:**

Density at 20 °C:	990 - 1010 kg/m <sup>3</sup>
Relative density at 20 °C:	0,99 - 1,01
Dynamic viscosity at 20 °C:	39 - 19 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 *

\*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)**

Solubility in water at 20 °C: Non-applicable \*  
 Solubility properties: Immiscible  
 Decomposition temperature: Non-applicable \*  
 Melting point/freezing point: Non-applicable \*

**Flammability:**

Flash Point: 27 °C  
 Flammability (solid, gas): Non-applicable \*  
 Autoignition temperature: 315 °C  
 Lower flammability limit: Not available  
 Upper flammability limit: Not available

**Particle characteristics:**

Median equivalent diameter: Non-applicable

**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 \*  
 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 \*\***

\*\* Changes with regards to the previous version

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

**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):**

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

**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
	LD50 oral	LD50 dermal	
N-butyl acetate	12789 mg/kg	14112 mg/kg	Rat
CAS: 123-86-4			Rabbit
EC: 204-658-1	LC50 inhalation	23,4 mg/L (4 h)	Rat

\*\* Changes with regards to the previous version

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

Identification	Acute toxicity		Genus
	LD50 oral	LD50 dermal	
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	
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	30 mg/L (4 h)	Rat
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)	
Dibutyltin Dilaurate CAS: 77-58-7 EC: 201-039-8	LD50 oral	2071 mg/kg	Rat
	LD50 dermal	>2000 mg/kg	
	LC50 inhalation	>20 mg/L	

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

ATE mix		Ingredient(s) of unknown toxicity
Oral	>2000 mg/kg (Calculation method)	Non-applicable
Dermal	3508,49 mg/kg (Calculation method)	0 %
Inhalation	13,86 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**

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
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
2-methoxy-1-methylethyl acetate CAS: 108-65-6 EC: 203-603-9	LC50	161 mg/L (96 h)	Pimephales promelas	Fish
	EC50	481 mg/L (48 h)	Daphnia sp.	Crustacean
	EC50	Non-applicable		
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

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

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

Identification	Concentration		Species	Genus
Dibutyltin Dilaurate CAS: 77-58-7 EC: 201-039-8	LC50	>0.1 - 1 mg/L (96 h)		Fish
	EC50	>0.1 - 1 mg/L (48 h)		Crustacean
	EC50	>0.1 - 1 mg/L (72 h)		Algae

**Chronic toxicity:**

Identification	Concentration		Species	Genus
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
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

**12.2 Persistence and degradability:**

**Substance-specific information:**

Identification	Degradability		Biodegradability	
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 %
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 %
2-methoxy-1-methylethyl acetate CAS: 108-65-6 EC: 203-603-9	BOD5	Non-applicable	Concentration	785 mg/L
	COD	Non-applicable	Period	8 days
	BOD5/COD	Non-applicable	% Biodegradable	100 %
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
Dibutyltin Dilaurate CAS: 77-58-7 EC: 201-039-8	BOD5	0 g O2/g	Concentration	100 mg/L
	COD	Non-applicable	Period	28 days
	BOD5/COD	Non-applicable	% Biodegradable	50 %

**12.3 Bioaccumulative potential:**

**Substance-specific information:**

Identification	Bioaccumulation potential	
Xylene CAS: 1330-20-7 EC: 215-535-7	BCF	9
	Pow Log	2.77
	Potential	Low
N-butyl acetate CAS: 123-86-4 EC: 204-658-1	BCF	4
	Pow Log	1.78
	Potential	Low
2-methoxy-1-methylethyl acetate CAS: 108-65-6 EC: 203-603-9	BCF	1
	Pow Log	0.43
	Potential	Low
Solvent naphtha (petroleum), light arom., < 0.1 % EC 200-753-7 CAS: 64742-95-6 EC: 265-199-0	BCF	
	Pow Log	4
	Potential	
Dibutyltin Dilaurate CAS: 77-58-7 EC: 201-039-8	BCF	31
	Pow Log	3.12
	Potential	Moderate

**12.4 Mobility in soil:**

\*\* Changes with regards to the previous version

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

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



- 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

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

**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 2023:



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

**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:**

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

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.:**

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

- New declared substances  
Dibutyltin Dilaurate (77-58-7)

CLP Regulation (EC) No 1272/2008 (SECTION 2, SECTION 16):

- Supplementary information

**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:**

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

Acute Tox. 4: H332 - Harmful if inhaled.

Aquatic Acute 1: H400 - Very toxic to aquatic life.

Aquatic Chronic 1: H410 - Very toxic to aquatic life with long lasting effects.

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.

Muta. 2: H341 - Suspected of causing genetic defects.

Repr. 1B: H360 - May damage fertility or the unborn child.

Skin Irrit. 2: H315 - Causes skin irritation.

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

STOT RE 1: H372 - Causes damage to organs through prolonged or repeated exposure. (Oral).

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

STOT SE 1: H370 - Causes damage to organs.

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

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**Solvent based Hardeners****SECTION 16: OTHER INFORMATION (continued)****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 -