

E-344
Solvent based Hardeners

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

1.1 Product identifier: E-344
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 (7:00-15:00)

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 toxicity, Category 4, H312+H332

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

Eye Dam. 1: Serious eye damage, Category 1, H318

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

Skin Irrit. 2: Skin irritation, Category 2, H315

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

Danger



Hazard statements:

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

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

Eye Dam. 1: H318 - Causes serious eye damage.

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

Skin Irrit. 2: H315 - Causes skin irritation.

Skin Sens. 1A: 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

Substances that contribute to the classification

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SECTION 2: HAZARDS IDENTIFICATION (continued)

Xylene; Fatty acids, C18-unsatd., dimers, oligomeric reaction products with tall-oil fatty acids and triethylenetetramine; butan-1-ol; 2-butoxyethanol

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-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: 1330-20-7 EC: 215-535-7 Index: 601-022-00-9 REACH: 01-2119488216-32-XXXX	Xylene ¹ 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	Self-classified 50 - <100 %
CAS: 68082-29-1 EC: 500-191-5 Index: Non-applicable REACH: 01-2119972320-44-XXXX	Fatty acids, C18-unsatd., dimers, oligomeric reaction products with tall-oil fatty acids and triethylenetetramine ¹ Regulation 1272/2008 Aquatic Chronic 2: H411; Eye Dam. 1: H318; Skin Irrit. 2: H315; Skin Sens. 1A: H317 - Danger	Self-classified 25 - <50 %
CAS: 71-36-3 EC: 200-751-6 Index: 603-004-00-6 REACH: 01-2119484630-38-XXXX	butan-1-ol ¹ Regulation 1272/2008 Acute Tox. 4: H302; Eye Dam. 1: H318; Flam. Liq. 3: H226; Skin Irrit. 2: H315; STOT SE 3: H335; STOT SE 3: H336 - Danger	ATP CLP00 2,5 - <5 %
CAS: 90-72-2 EC: 202-013-9 Index: 603-069-00-0 REACH: 01-2119560597-27-XXXX	2,4,6-tris(dimethylaminomethyl)phenol ¹ Regulation 1272/2008 Acute Tox. 4: H302; Eye Irrit. 2: H319; Skin Irrit. 2: H315 - Warning	ATP CLP00 1 - <2,5 %
CAS: 111-76-2 EC: 203-905-0 Index: 603-014-00-0 REACH: 01-2119475108-36-XXXX	2-butoxyethanol ¹ Regulation 1272/2008 Acute Tox. 3: H331; Acute Tox. 4: H302; Eye Irrit. 2: H319; Skin Irrit. 2: H315 - Danger	ATP ATP18 1 - <2,5 %
CAS: 107-98-2 EC: 203-539-1 Index: 603-064-00-3 REACH: 01-2119457435-35-XXXX	1-methoxy-2-propanol ² Regulation 1272/2008 Flam. Liq. 3: H226; STOT SE 3: H336 - Warning	ATP ATP01 0,5 - <1 %

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

² Substance with a Union workplace exposure limit

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

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
Xylene CAS: 1330-20-7 EC: 215-535-7	LD50 oral	Non-applicable
	LD50 dermal	1100 mg/kg (ATEi)
	LC50 inhalation	11 mg/L (ATEi)
2,4,6-tris(dimethylaminomethyl)phenol CAS: 90-72-2 EC: 202-013-9	LD50 oral	1200 mg/kg (ATEi)
	LD50 dermal	Non-applicable
	LC50 inhalation	Non-applicable
2-butoxyethanol CAS: 111-76-2 EC: 203-905-0	LD50 oral	1200 mg/kg (ATEi)
	LD50 dermal	Non-applicable
	LC50 inhalation	3 mg/L (ATEi)

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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:

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 (CO₂).

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:

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SECTION 6: ACCIDENTAL RELEASE MEASURES (continued)

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:

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:

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SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION (continued)

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	
Xylene 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-methoxy-2-propanol CAS: 107-98-2 EC: 203-539-1	IOELV (8h)	100 ppm	375 mg/m ³
	IOELV (STEL)	150 ppm	568 mg/m ³
2-butoxyethanol CAS: 111-76-2 EC: 203-905-0	IOELV (8h)	20 ppm	98 mg/m ³
	IOELV (STEL)	50 ppm	246 mg/m ³

DNEL (Workers):

Identification		Short exposure		Long exposure	
		Systemic	Local	Systemic	Local
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 ³	442 mg/m ³	221 mg/m ³	221 mg/m ³
Fatty acids, C18-unsatd., dimers, oligomeric reaction products with tall-oil fatty acids and triethylenetetramine CAS: 68082-29-1 EC: 500-191-5	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Dermal	Non-applicable	Non-applicable	1,1 mg/kg	Non-applicable
	Inhalation	Non-applicable	Non-applicable	3,9 mg/m ³	Non-applicable
butan-1-ol CAS: 71-36-3 EC: 200-751-6	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Dermal	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Inhalation	Non-applicable	Non-applicable	Non-applicable	310 mg/m ³
2,4,6-tris(dimethylaminomethyl)phenol CAS: 90-72-2 EC: 202-013-9	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Dermal	Non-applicable	Non-applicable	0,15 mg/kg	Non-applicable
	Inhalation	Non-applicable	Non-applicable	0,53 mg/m ³	Non-applicable
2-butoxyethanol CAS: 111-76-2 EC: 203-905-0	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Dermal	89 mg/kg	Non-applicable	125 mg/kg	Non-applicable
	Inhalation	1091 mg/m ³	246 mg/m ³	98 mg/m ³	Non-applicable
1-methoxy-2-propanol CAS: 107-98-2 EC: 203-539-1	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Dermal	Non-applicable	Non-applicable	183 mg/kg	Non-applicable
	Inhalation	553,5 mg/m ³	553,5 mg/m ³	369 mg/m ³	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 ³	260 mg/m ³	65,3 mg/m ³	65,3 mg/m ³
Fatty acids, C18-unsatd., dimers, oligomeric reaction products with tall-oil fatty acids and triethylenetetramine CAS: 68082-29-1 EC: 500-191-5	Oral	Non-applicable	Non-applicable	0,56 mg/kg	Non-applicable
	Dermal	Non-applicable	Non-applicable	0,56 mg/kg	Non-applicable
	Inhalation	Non-applicable	Non-applicable	0,97 mg/m ³	Non-applicable
butan-1-ol CAS: 71-36-3 EC: 200-751-6	Oral	Non-applicable	Non-applicable	1,562 mg/kg	Non-applicable
	Dermal	Non-applicable	Non-applicable	3,125 mg/kg	Non-applicable
	Inhalation	Non-applicable	Non-applicable	55,357 mg/m ³	155 mg/m ³
2,4,6-tris(dimethylaminomethyl)phenol CAS: 90-72-2 EC: 202-013-9	Oral	Non-applicable	Non-applicable	0,075 mg/kg	Non-applicable
	Dermal	Non-applicable	Non-applicable	0,075 mg/kg	Non-applicable
	Inhalation	Non-applicable	Non-applicable	0,13 mg/m ³	Non-applicable
2-butoxyethanol CAS: 111-76-2 EC: 203-905-0	Oral	Non-applicable	Non-applicable	6,3 mg/kg	Non-applicable
	Dermal	89 mg/kg	Non-applicable	75 mg/kg	Non-applicable
	Inhalation	426 mg/m ³	147 mg/m ³	59 mg/m ³	Non-applicable
1-methoxy-2-propanol CAS: 107-98-2 EC: 203-539-1	Oral	Non-applicable	Non-applicable	33 mg/kg	Non-applicable
	Dermal	Non-applicable	Non-applicable	78 mg/kg	Non-applicable
	Inhalation	Non-applicable	Non-applicable	43,9 mg/m ³	Non-applicable

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SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION (continued)

PNEC:



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
Fatty acids, C18-unsatd., dimers, oligomeric reaction products with tall-oil fatty acids and triethylenetetramine CAS: 68082-29-1 EC: 500-191-5	STP	3,84 mg/L	Fresh water	0,004 mg/L
	Soil	86,78 mg/kg	Marine water	0 mg/L
	Intermittent	0,043 mg/L	Sediment (Fresh water)	434,02 mg/kg
	Oral	Non-applicable	Sediment (Marine water)	43,4 mg/kg
butan-1-ol CAS: 71-36-3 EC: 200-751-6	STP	2476 mg/L	Fresh water	0,082 mg/L
	Soil	0,017 mg/kg	Marine water	0,008 mg/L
	Intermittent	2,25 mg/L	Sediment (Fresh water)	0,324 mg/kg
	Oral	Non-applicable	Sediment (Marine water)	0,032 mg/kg
2,4,6-tris(dimethylaminomethyl)phenol CAS: 90-72-2 EC: 202-013-9	STP	0,2 mg/L	Fresh water	0,046 mg/L
	Soil	0,025 mg/kg	Marine water	0,005 mg/L
	Intermittent	0,46 mg/L	Sediment (Fresh water)	0,262 mg/kg
	Oral	Non-applicable	Sediment (Marine water)	0,026 mg/kg
2-butoxyethanol CAS: 111-76-2 EC: 203-905-0	STP	463 mg/L	Fresh water	8,8 mg/L
	Soil	2,33 mg/kg	Marine water	0,88 mg/L
	Intermittent	26,4 mg/L	Sediment (Fresh water)	34,6 mg/kg
	Oral	0,02 g/kg	Sediment (Marine water)	3,46 mg/kg
1-methoxy-2-propanol CAS: 107-98-2 EC: 203-539-1	STP	100 mg/L	Fresh water	10 mg/L
	Soil	4,59 mg/kg	Marine water	1 mg/L
	Intermittent	100 mg/L	Sediment (Fresh water)	52,3 mg/kg
	Oral	Non-applicable	Sediment (Marine water)	5,2 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
 Compulsory use of face mask	Filter mask for particles	 CAT III	EN 149:2001+A1:2009	Replace when an increase in resistance to breathing is observed.

C.- Specific protection for the hands

Pictogram	PPE	Labelling	CEN Standard	Remarks
 Mandatory hand protection	NON-disposable chemical protective gloves (Material: HPPE, Breakthrough time: > 480 min, Thickness: 0.062 mm)	 CAT III	EN ISO 374-1:2016+A1:2018 EN 16523-1:2015+A1:2018 EN ISO 21420:2020	The Breakthrough Time indicated by the manufacturer must exceed the period during which the product is being used. Do not use protective creams after the product has come into contact with skin.



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





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SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION (continued)

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):	64 % weight
V.O.C. density at 20 °C:	582,4 kg/m ³ (582,4 g/L)
Average carbon number:	7,63
Average molecular weight:	103,88 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:	Viscous
Colour:	Yellowish
Odour:	Solvent
Odour threshold:	Non-applicable *

Volatility:

Boiling point at atmospheric pressure:	136 °C
Vapour pressure at 20 °C:	763 Pa
Vapour pressure at 50 °C:	4272,63 Pa (4,27 kPa)
Evaporation rate at 20 °C:	Non-applicable *

Product description:

*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)

Density at 20 °C:	900 - 920 kg/m ³
Relative density at 20 °C:	0,9 - 0,92
Dynamic viscosity at 20 °C:	92 - 74 cP
Kinematic viscosity at 20 °C:	91 mm ² /s
Kinematic viscosity at 40 °C:	>20,5 mm ² /s
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:	25 °C
Flammability (solid, gas):	Non-applicable *
Autoignition temperature:	238 °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 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

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SECTION 10: STABILITY AND REACTIVITY (continued)

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

Contains glycols. It is recommended not to breathe the vapours for prolonged periods of time due to the possibility of effects that are hazardous to the health.

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, however, it contains substances classified as dangerous 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 serious 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: Xylene (3); 2-butoxyethanol (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, as it does not contain substances classified as hazardous for this effect. 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.

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SECTION 11: TOXICOLOGICAL INFORMATION (continued)

Other information:

Non-applicable

Specific toxicology information on the substances:

Identification	Acute toxicity		Genus
butan-1-ol CAS: 71-36-3 EC: 200-751-6	LD50 oral	2292 mg/kg	
	LD50 dermal	3430 mg/kg	Rabbit
	LC50 inhalation	24,66 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 (ATEi)	Rat
	LC50 inhalation	11 mg/L (ATEi)	
Fatty acids, C18-unsatd., dimers, oligomeric reaction products with tall-oil fatty acids and triethylenetetramine CAS: 68082-29-1 EC: 500-191-5	LD50 oral	>2000 mg/kg	
	LD50 dermal	>2000 mg/kg	
	LC50 inhalation	>20 mg/L	
2,4,6-tris(dimethylaminomethyl)phenol CAS: 90-72-2 EC: 202-013-9	LD50 oral	1200 mg/kg (ATEi)	Rat
	LD50 dermal	>2000 mg/kg	
	LC50 inhalation	>20 mg/L	
2-butoxyethanol CAS: 111-76-2 EC: 203-905-0	LD50 oral	1200 mg/kg (ATEi)	Rat
	LD50 dermal	3000 mg/kg	Rabbit
	LC50 inhalation	3 mg/L (ATEi)	
1-methoxy-2-propanol CAS: 107-98-2 EC: 203-539-1	LD50 oral	>2000 mg/kg	
	LD50 dermal	>2000 mg/kg	
	LC50 inhalation	>20 mg/L	

Acute Toxicity Estimate (ATE mix):

	ATE mix	Ingredient(s) of unknown toxicity
Oral	60000 mg/kg (Calculation method)	0 %
Dermal	1913,04 mg/kg (Calculation method)	0 %
Inhalation	17,98 mg/L (4 h) (Calculation method)	0 %

11.2 Information on other hazards:

Endocrine disrupting properties

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

Other information

Non-applicable

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
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
Fatty acids, C18-unsatd., dimers, oligomeric reaction products with tall-oil fatty acids and triethylenetetramine CAS: 68082-29-1 EC: 500-191-5	LC50	7 mg/L (96 h)	Danio rerio Fish
	EC50	7 mg/L (48 h)	Daphnia magna Crustacean
	EC50	4 mg/L (72 h)	Pseudokirchneriella subcapitata Algae
butan-1-ol CAS: 71-36-3 EC: 200-751-6	LC50	1740 mg/L (96 h)	Pimephales promelas Fish
	EC50	1983 mg/L (48 h)	Daphnia magna Crustacean
	EC50	500 mg/L (96 h)	Scenedesmus subspicatus Algae

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SECTION 12: ECOLOGICAL INFORMATION (continued)

Identification		Concentration	Species	Genus
2,4,6-tris(dimethylaminomethyl)phenol CAS: 90-72-2 EC: 202-013-9	LC50	345 mg/L (96 h)	QSAR	Fish
	EC50	Non-applicable		
	EC50	Non-applicable		
2-butoxyethanol CAS: 111-76-2 EC: 203-905-0	LC50	1490 mg/L (96 h)	Lepomis macrochirus	Fish
	EC50	1815 mg/L (48 h)	Daphnia magna	Crustacean
	EC50	911 mg/L (72 h)	Pseudokirchneriella subcapitata	Algae
1-methoxy-2-propanol CAS: 107-98-2 EC: 203-539-1	LC50	20800 mg/L (96 h)	Pimephales promelas	Fish
	EC50	23300 mg/L (48 h)	Daphnia magna	Crustacean
	EC50	1000 mg/L (168 h)	Selenastrum capricornutum	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
butan-1-ol CAS: 71-36-3 EC: 200-751-6	NOEC	Non-applicable		
	NOEC	4,1 mg/L	Daphnia magna	Crustacean
2-butoxyethanol CAS: 111-76-2 EC: 203-905-0	NOEC	100 mg/L	Danio rerio	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 %	
butan-1-ol CAS: 71-36-3 EC: 200-751-6	BOD5	1,71 g O2/g	Concentration	Non-applicable	
	COD	2,46 g O2/g	Period	19 days	
	BOD5/COD	0,7	% Biodegradable	98 %	
2-butoxyethanol CAS: 111-76-2 EC: 203-905-0	BOD5	0,71 g O2/g	Concentration	100 mg/L	
	COD	2,2 g O2/g	Period	14 days	
	BOD5/COD	0,32	% Biodegradable	96 %	
1-methoxy-2-propanol CAS: 107-98-2 EC: 203-539-1	BOD5	Non-applicable	Concentration	100 mg/L	
	COD	Non-applicable	Period	28 days	
	BOD5/COD	Non-applicable	% Biodegradable	90 %	

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	
Fatty acids, C18-unsatd., dimers, oligomeric reaction products with tall-oil fatty acids and triethylenetetramine CAS: 68082-29-1 EC: 500-191-5	BCF	77	
	Pow Log		
	Potential	Moderate	
butan-1-ol CAS: 71-36-3 EC: 200-751-6	BCF	1	
	Pow Log	0.88	
	Potential	Low	
2,4,6-tris(dimethylaminomethyl)phenol CAS: 90-72-2 EC: 202-013-9	BCF	3	
	Pow Log	0.77	
	Potential	Low	
2-butoxyethanol CAS: 111-76-2 EC: 203-905-0	BCF	3	
	Pow Log	0.83	
	Potential	Low	

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SECTION 12: ECOLOGICAL INFORMATION (continued)

Identification	Bioaccumulation potential	
1-methoxy-2-propanol CAS: 107-98-2 EC: 203-539-1	BCF Pow Log Potential	3 -0.44 Low

12.4 Mobility in soil:

Identification	Absorption/desorption			Volatility
Xylene CAS: 1330-20-7 EC: 215-535-7	Koc Conclusion Surface tension	202 Moderate Non-applicable	Henry Dry soil Moist soil	524,86 Pa·m ³ /mol Yes Yes
butan-1-ol CAS: 71-36-3 EC: 200-751-6	Koc Conclusion Surface tension	2.44 Very High 2,567E-2 N/m (25 °C)	Henry Dry soil Moist soil	5,39E-2 Pa·m ³ /mol Yes Yes
2,4,6-tris(dimethylaminomethyl)phenol CAS: 90-72-2 EC: 202-013-9	Koc Conclusion Surface tension	15130 Immobile Non-applicable	Henry Dry soil Moist soil	9,312E-12 Pa·m ³ /mol No No
2-butoxyethanol CAS: 111-76-2 EC: 203-905-0	Koc Conclusion Surface tension	8 Very High 2,729E-2 N/m (25 °C)	Henry Dry soil Moist soil	1,621E-1 Pa·m ³ /mol No 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, 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-hazardous 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 2023 and RID 2023:

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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: Yes
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: Yes
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: Yes
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
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.

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.:

Non-applicable

Texts of the legislative phrases mentioned in section 2:

- H315: Causes skin irritation.
- H318: Causes serious eye damage.
- H335: May cause respiratory irritation.
- H411: Toxic to aquatic life with long lasting effects.
- H373: May cause damage to organs through prolonged or repeated exposure (Oral).
- H317: May cause an allergic skin reaction.
- H312+H332: Harmful in contact with skin or if inhaled.
- 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: H302 - Harmful if swallowed.
- Acute Tox. 4: H312+H332 - Harmful in contact with skin or 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 Dam. 1: H318 - Causes serious eye damage.
- 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. 1A: 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:

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SECTION 16: OTHER INFORMATION (continued)

Skin Irrit. 2: Calculation method
Eye Dam. 1: Calculation method
STOT SE 3: Calculation method
Aquatic Chronic 2: Calculation method
STOT RE 2: Calculation method
Skin Sens. 1A: Calculation method
Acute Tox. 4: 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.

- END OF SAFETY DATA SHEET -