


E-91
Solvent based Hardeners

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

- 1.1 Product identifier:** E-91
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.
Eye Irrit. 2: Eye irritation, Category 2, H319
Flam. Liq. 2: Flammable liquids, Category 2, H225
Repr. 2: Reproductive toxicity, Category 2, H361d
Skin Irrit. 2: Skin irritation, Category 2, H315
STOT RE 2: Specific target organ toxicity — Repeated exposure, Hazard Category 2, H373
STOT SE 3: Specific toxicity causing drowsiness and dizziness, single exposure, Category 3, H336
- 2.2 Label elements:**
CLP Regulation (EC) No 1272/2008:
Danger
- 
- Hazard statements:**
Eye Irrit. 2: H319 - Causes serious eye irritation.
Flam. Liq. 2: H225 - Highly flammable liquid and vapour.
Repr. 2: H361d - Suspected of damaging the unborn child.
Skin Irrit. 2: H315 - Causes skin irritation.
STOT RE 2: H373 - May cause damage to organs through prolonged or repeated exposure.
STOT SE 3: H336 - May cause drowsiness or dizziness.
- Precautionary statements:**
P210: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P280: Wear protective gloves/face protection/protective clothing/respiratory protection/protective footwear.
P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308+P313: IF exposed or concerned: Get medical advice/attention.
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**
Butanone; Toluene; 1-methoxy-2-propanol; butan-1-ol
- 2.3 Other hazards:**
Product fails to meet PBT/vPvB criteria
Endocrine-disrupting properties: The product fails to meet the criteria.

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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: 78-93-3 EC: 201-159-0 Index: 606-002-00-3 REACH: 01-2119457290-43-XXXX	Butanone ¹	ATP CLP00 Regulation 1272/2008 Eye Irrit. 2: H319; Flam. Liq. 2: H225; STOT SE 3: H336; EUH066 - Danger	 25 - <50 %
CAS: 108-88-3 EC: 203-625-9 Index: 601-021-00-3 REACH: 01-2119471310-51-XXXX	Toluene ¹	ATP CLP00 Regulation 1272/2008 Asp. Tox. 1: H304; Flam. Liq. 2: H225; Repr. 2: H361d; Skin Irrit. 2: H315; STOT RE 2: H373; STOT SE 3: H336 - Danger	 25 - <50 %
CAS: 107-98-2 EC: 203-539-1 Index: 603-064-00-3 REACH: 01-2119457435-35-XXXX	1-methoxy-2-propanol ²	ATP ATP01 Regulation 1272/2008 Flam. Liq. 3: H226; STOT SE 3: H336 - Warning	 10 - <25 %
CAS: 1330-20-7 EC: 215-535-7 Index: 601-022-00-9 REACH: 01-2119488216-32-XXXX	Xylene ¹	Self-classified 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	 2,5 - <5 %
CAS: 71-36-3 EC: 200-751-6 Index: 603-004-00-6 REACH: 01-2119484630-38-XXXX	butan-1-ol ¹	ATP CLP00 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	 1 - <2,5 %

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

² 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.

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 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:

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SECTION 4: FIRST AID MEASURES (continued)

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:

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:

This product is not classified as hazardous to the environment. Keep product away from drains, surface and underground water.

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

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SECTION 7: HANDLING AND STORAGE (continued)

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

PREGNANT WOMEN SHOULD NOT BE EXPOSED TO THIS PRODUCT. Transfer in designated areas that comply with the necessary safety conditions (emergency showers and eyewash stations in close proximity), using personal protection equipment, especially on the hands and face (See section 8). Limit manual transfers to small amounts only. Do not eat or drink during the process, washing hands afterwards with suitable cleaning products.

D.- Technical recommendations to prevent environmental risks

It is recommended to have absorbent material available at close proximity to the product (See subsection 6.3)

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		
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	
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	
Toluene CAS: 108-88-3 EC: 203-625-9	IOELV (8h)	50 ppm	192 mg/m ³	
	IOELV (STEL)	100 ppm	384 mg/m ³	
Butanone CAS: 78-93-3 EC: 201-159-0	IOELV (8h)	200 ppm	600 mg/m ³	
	IOELV (STEL)	300 ppm	900 mg/m ³	

DNEL (Workers):

Identification		Short exposure		Long exposure	
		Systemic	Local	Systemic	Local
Butanone CAS: 78-93-3 EC: 201-159-0	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Dermal	Non-applicable	Non-applicable	1161 mg/kg	Non-applicable
	Inhalation	Non-applicable	Non-applicable	600 mg/m ³	Non-applicable
Toluene CAS: 108-88-3 EC: 203-625-9	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Dermal	Non-applicable	Non-applicable	384 mg/kg	Non-applicable
	Inhalation	384 mg/m ³	384 mg/m ³	192 mg/m ³	192 mg/m ³
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

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SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION (continued)

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
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

DNEL (General population):

Identification		Short exposure		Long exposure	
		Systemic	Local	Systemic	Local
Butanone CAS: 78-93-3 EC: 201-159-0	Oral	Non-applicable	Non-applicable	31 mg/kg	Non-applicable
	Dermal	Non-applicable	Non-applicable	412 mg/kg	Non-applicable
	Inhalation	Non-applicable	Non-applicable	106 mg/m ³	Non-applicable
Toluene CAS: 108-88-3 EC: 203-625-9	Oral	Non-applicable	Non-applicable	8,13 mg/kg	Non-applicable
	Dermal	Non-applicable	Non-applicable	226 mg/kg	Non-applicable
	Inhalation	226 mg/m ³	226 mg/m ³	56,5 mg/m ³	56,5 mg/m ³
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
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
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

PNEC:

Identification				
Butanone CAS: 78-93-3 EC: 201-159-0	STP	709 mg/L	Fresh water	55,8 mg/L
	Soil	22,5 mg/kg	Marine water	55,8 mg/L
	Intermittent	55,8 mg/L	Sediment (Fresh water)	284,74 mg/kg
	Oral	1 g/kg	Sediment (Marine water)	284,7 mg/kg
Toluene CAS: 108-88-3 EC: 203-625-9	STP	13,61 mg/L	Fresh water	0,68 mg/L
	Soil	2,89 mg/kg	Marine water	0,68 mg/L
	Intermittent	0,68 mg/L	Sediment (Fresh water)	16,39 mg/kg
	Oral	Non-applicable	Sediment (Marine water)	16,39 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
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
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

8.2 Exposure controls:

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

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SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION (continued)

In accordance with the order of importance to control professional exposure (Directive 98/24/EC) it is recommended to use localized extraction in the work area as a collective protection measure to avoid exceeding the occupational exposure limits. In case of using personal protective equipment it should have CE marking in accordance with Directive 2016/425/EC. For more information on Personal Protective Equipment (storage, use, cleaning, maintenance, class of protection,...) consult the information leaflet provided by the manufacturer. For additional 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	Face shield		EN 166:2002 EN 167:2002 EN 168:2002 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	Disposable clothing for protection against chemical risks, with antistatic and fireproof properties		EN 1149-1,2,3 EN 13034:2005+A1:2009 EN ISO 13982-1:2004/A1:2010 EN ISO 6529:2013 EN ISO 6530:2005 EN ISO 13688:2013 EN 464:1994	For professional use only. Clean periodically according to the manufacturer's instructions.
 Mandatory foot protection	Safety footwear for protection against chemical risk, with antistatic and heat resistant properties		EN ISO 13287:2020 EN ISO 20345:2011 EN 13832-1:2019	Replace boots at any sign of deterioration.

F.- Additional emergency measures

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

Environmental exposure controls:

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): 89 % weight

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SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION (continued)

V.O.C. density at 20 °C:	792,1 kg/m ³ (792,1 g/L)
Average carbon number:	5,19
Average molecular weight:	84,24 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:	Yellowish
Odour:	Solvent
Odour threshold:	Non-applicable *

Volatility:

Boiling point at atmospheric pressure:	99 °C
Vapour pressure at 20 °C:	5511 Pa
Vapour pressure at 50 °C:	21118,46 Pa (21,12 kPa)
Evaporation rate at 20 °C:	Non-applicable *

Product description:

Density at 20 °C:	880 - 900 kg/m ³
Relative density at 20 °C:	0,88 - 0,9
Dynamic viscosity at 20 °C:	35 - 17 cP
Kinematic viscosity at 20 °C:	29 mm ² /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:	6 °C
Flammability (solid, gas):	Non-applicable *
Autoignition temperature:	270 °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 *

*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)

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

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.

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SECTION 11: TOXICOLOGICAL INFORMATION (continued)

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); Toluene (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: Suspected of damaging the unborn child.

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: 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.

F- Specific target organ toxicity (STOT) - single 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.

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
1-methoxy-2-propanol	LD50 oral	>2000 mg/kg	
CAS: 107-98-2	LD50 dermal	>2000 mg/kg	
EC: 203-539-1	LC50 inhalation	>20 mg/L	
butan-1-ol	LD50 oral	2292 mg/kg	
CAS: 71-36-3	LD50 dermal	3430 mg/kg	Rabbit
EC: 200-751-6	LC50 inhalation	24,66 mg/L (4 h)	Rat
Xylene	LD50 oral	2100 mg/kg	Rat
CAS: 1330-20-7	LD50 dermal	1100 mg/kg	Rat
EC: 215-535-7	LC50 inhalation	11 mg/L (ATEI)	
Toluene	LD50 oral	5580 mg/kg	Rat
CAS: 108-88-3	LD50 dermal	12124 mg/kg	Rat
EC: 203-625-9	LC50 inhalation	28,1 mg/L (4 h)	Rat
Butanone	LD50 oral	4000 mg/kg	Rat
CAS: 78-93-3	LD50 dermal	6400 mg/kg	Rabbit
EC: 201-159-0	LC50 inhalation	23,5 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	27500 mg/kg (Calculation method)	0 %
Inhalation	275 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

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
Butanone CAS: 78-93-3 EC: 201-159-0	LC50	3220 mg/L (96 h)	Pimephales promelas	Fish
	EC50	5091 mg/L (48 h)	Daphnia magna	Crustacean
	EC50	4300 mg/L (168 h)	Scenedesmus quadricauda	Algae
Toluene CAS: 108-88-3 EC: 203-625-9	LC50	5,5 mg/L (96 h)	Oncorhynchus kisutch	Fish
	EC50	3,78 mg/L (48 h)	Ceriodaphnia dubia	Crustacean
	EC50	Non-applicable		
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
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
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

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

12.2 Persistence and degradability:

Substance-specific information:

Identification		Degradability		Biodegradability
Butanone CAS: 78-93-3 EC: 201-159-0	BOD5	2,03 g O2/g	Concentration	Non-applicable
	COD	2,31 g O2/g	Period	20 days
	BOD5/COD	0,88	% Biodegradable	89 %
Toluene CAS: 108-88-3 EC: 203-625-9	BOD5	2,5 g O2/g	Concentration	100 mg/L
	COD	Non-applicable	Period	14 days
	BOD5/COD	Non-applicable	% Biodegradable	100 %
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 %
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 %

12.3 Bioaccumulative potential:

Substance-specific information:

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SECTION 12: ECOLOGICAL INFORMATION (continued)

Identification	Bioaccumulation potential	
Butanone CAS: 78-93-3 EC: 201-159-0	BCF Pow Log Potential	3 0.29 Low
Toluene CAS: 108-88-3 EC: 203-625-9	BCF Pow Log Potential	90 2.73 Moderate
1-methoxy-2-propanol CAS: 107-98-2 EC: 203-539-1	BCF Pow Log Potential	3 -0.44 Low
Xylene CAS: 1330-20-7 EC: 215-535-7	BCF Pow Log Potential	9 2.77 Low
butan-1-ol CAS: 71-36-3 EC: 200-751-6	BCF Pow Log Potential	1 0.88 Low

12.4 Mobility in soil:

Identification	Absorption/desorption		Volatility	
Butanone CAS: 78-93-3 EC: 201-159-0	Koc Conclusion Surface tension	30 Very High 2,396E-2 N/m (25 °C)	Henry Dry soil Moist soil	5,77 Pa·m ³ /mol Yes Yes
Toluene CAS: 108-88-3 EC: 203-625-9	Koc Conclusion Surface tension	178 Moderate 2,793E-2 N/m (25 °C)	Henry Dry soil Moist soil	672,8 Pa·m ³ /mol Yes Yes
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

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

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):

HP3 Flammable, HP5 Specific Target Organ Toxicity (STOT)/Aspiration Toxicity, HP10 Toxic for reproduction, 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:

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SECTION 13: DISPOSAL CONSIDERATIONS (continued)

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:** II
- 14.5 Environmental hazards:** No
- 14.6 Special precautions for user**
Special regulations: 163, 367, 640D, 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:** II
- 14.5 Marine pollutant:** No
- 14.6 Special precautions for user**
Special regulations: 163, 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:** II
- 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

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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: 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 ...):

Contains more than 0.1 % of Toluene by weight. Shall not be placed on the market, or used, as a substance or in mixtures in a concentration equal to or greater than 0,1 % by weight where the substance or mixture is used in adhesives or spray paints intended for supply to the general public.

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

Texts of the legislative phrases mentioned in section 2:

- H336: May cause drowsiness or dizziness.
- H315: Causes skin irritation.
- H373: May cause damage to organs through prolonged or repeated exposure.
- H361d: Suspected of damaging the unborn child.
- H225: Highly 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: H302 - Harmful if swallowed.
Acute Tox. 4: H312+H332 - Harmful in contact with skin or if inhaled.
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. 2: H225 - Highly flammable liquid and vapour.
Flam. Liq. 3: H226 - Flammable liquid and vapour.
Repr. 2: H361d - Suspected of damaging the unborn child.
Skin Irrit. 2: H315 - Causes skin irritation.
STOT RE 2: H373 - May cause damage to organs through prolonged or repeated exposure (Oral).
STOT RE 2: H373 - May cause damage to organs through prolonged or repeated exposure.
STOT SE 3: H335 - May cause respiratory irritation.
STOT SE 3: H336 - May cause drowsiness or dizziness.

Classification procedure:

STOT SE 3: Calculation method
Skin Irrit. 2: Calculation method
STOT RE 2: Calculation method
Repr. 2: Calculation method
Flam. Liq. 2: 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 -