E-35 CHP
Solvent based Hardeners

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

1.1 Product identifier: E-35 CHP
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 Dam. 1: Serious eye damage, Category 1, H318
Flam. Liq. 2: Flammable liquids, Category 2, H225
Org. Perox. D: Organic peroxides, Category D, H242
Skin Corr. 1B: Skin corrosion, Category 1B, H314
STOT SE 3: Respiratory tract toxicity, single exposure, Category 3, H335
STOT SE 3: Specific toxicity causing drowsiness and dizziness, single exposure, Category 3, H336

2.2 Label elements:

CLP Regulation (EC) No 1272/2008:

Danger

Hazard statements:

Flam. Liq. 2: H225 - Highly flammable liquid and vapour.
Org. Perox. D: H242 - Heating may cause a fire.
Skin Corr. 1B: H314 - Causes severe skin burns and eye damage.
STOT SE 3: H335 - May cause respiratory irritation.
STOT SE 3: H336 - May cause drowsiness or dizziness.

Precautionary statements:

P210: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P220: Keep away from clothing and other combustible materials.
P280: Wear protective gloves/face protection/protective clothing/respiratory protection/protective footwear.
P301+P330+P331: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303+P361+P353: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
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.
P501: Dispose of the contents/containers in accordance with the current legislation on waste treatment

Supplementary information:

EUH066: Repeated exposure may cause skin dryness or cracking.

Substances that contribute to the classification

4-hydroxy-4-methylpentan-2-one; 1,1´-dioxybiscyclohexan-1-ol; Ethyl acetate

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SECTION 2: HAZARDS IDENTIFICATION (continued)

2.3 Other hazards:

Product fails to meet PBT/vPvB criteria
Endocrine-disrupting properties: The product fails to 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: 141-78-6 EC: 205-500-4 Index: 607-022-00-5 REACH: 01-2119475103-46-XXXX	**Ethyl acetate** [1]	ATP CLP00	**50 - <100 %**
	Regulation 1272/2008	Eye Irrit. 2: H319; Flam. Liq. 2: H225; STOT SE 3: H336; EUH066 - Danger 	
CAS: 123-42-2 EC: 204-626-7 Index: 603-016-00-1 REACH: 01-2119473975-21-XXXX	**4-hydroxy-4-methylpentan-2-one** [1]	ATP CLP00	**10 - <25 %**
	Regulation 1272/2008	Eye Irrit. 2: H319 - Warning 	
CAS: 131-11-3 EC: 205-011-6 Index: Non-applicable REACH: 01-2119437229-36-XXXX	**Dimethyl Phthalate** [2]	Not classified	**10 - <25 %**
	Regulation 1272/2008		
CAS: 12262-58-7 EC: 235-527-7 Index: 617-010-00-1 REACH: 01-2120762253-58-XXXX	**1,1´-dioxybiscyclohexan-1-ol** [1]	ATP ATP01	**10 - <25 %**
	Regulation 1272/2008	Acute Tox. 4: H302; Org. Perox. A: H240; Skin Corr. 1B: H314 - Danger 	

[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.

Other information:

Identification	Specific concentration limit
4-hydroxy-4-methylpentan-2-one CAS: 123-42-2 EC: 204-626-7	% (w/w) >=10: Eye Irrit. 2 - H319
1,1´-dioxybiscyclohexan-1-ol CAS: 12262-58-7 EC: 235-527-7	% (w/w) >=72: Org. Perox. C - H242 32<= % (w/w) <72: Org. Perox. D - H242 % (w/w) >=5: STOT SE 3 - H335

SECTION 4: FIRST AID MEASURES

4.1 Description of first aid measures:

Request medical assistance immediately, 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:

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SECTION 4: FIRST AID MEASURES (continued)

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:

Request immediate medical assistance, showing the SDS of this product. Do not induce vomiting, because its expulsion from the stomach can be hazardous to the mucus of the main digestive tract, and also risk damage to the respiratory system through inhalation. Rinse out the mouth and throat, as they may have been affected during ingestion. In the case of loss of consciousness do not administer anything orally unless supervised by a doctor. Keep the person affected at rest.

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).

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:

HEATING MAY CAUSE A FIRE. 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. Destroy 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:

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SECTION 6: ACCIDENTAL RELEASE MEASURES (continued)

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

AVOID ANY KIND OF HEATING. Devices and systems must comply with the essential safety and health requirements and, with the minimum requirements for improving the health and safety protection of workers. Consult section 10 for conditions and materials that should be avoided. KEEP ONLY IN ORIGINAL CONTAINER.

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

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 ºC

Maximum Temp.: 30 ºC

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		
Ethyl acetate	IOELV (8h)	200 ppm	734 mg/m³
CAS: 141-78-6 EC: 205-500-4	IOELV (STEL)	400 ppm	1468 mg/m³

DNEL (Workers):

Identification		Short exposure		Long exposure	
		Systemic	Local	Systemic	Local
Ethyl acetate	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
CAS: 141-78-6	Dermal	Non-applicable	Non-applicable	63 mg/kg	Non-applicable
EC: 205-500-4	Inhalation	1468 mg/m³	1468 mg/m³	734 mg/m³	734 mg/m³
4-hydroxy-4-methylpentan-2-one	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
CAS: 123-42-2	Dermal	Non-applicable	Non-applicable	467 mg/kg	Non-applicable
EC: 204-626-7	Inhalation	Non-applicable	240 mg/m³	32,6 mg/m³	Non-applicable
Dimethyl Phthalate	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
CAS: 131-11-3	Dermal	Non-applicable	Non-applicable	135 mg/kg	Non-applicable
EC: 205-011-6	Inhalation	Non-applicable	Non-applicable	66,1 mg/m³	Non-applicable

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SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION (continued)

Identification		Short exposure		Long exposure	
		Systemic	Local	Systemic	Local
1,1´-dioxybiscyclohexan-1-ol	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
CAS: 12262-58-7	Dermal	Non-applicable	Non-applicable	1 mg/kg	Non-applicable
EC: 235-527-7	Inhalation	Non-applicable	Non-applicable	3,53 mg/m³	Non-applicable

DNEL (General population):

Identification		Short exposure		Long exposure	
		Systemic	Local	Systemic	Local
Ethyl acetate	Oral	Non-applicable	Non-applicable	4,5 mg/kg	Non-applicable
CAS: 141-78-6	Dermal	Non-applicable	Non-applicable	37 mg/kg	Non-applicable
EC: 205-500-4	Inhalation	734 mg/m³	734 mg/m³	367 mg/m³	367 mg/m³
4-hydroxy-4-methylpentan-2-one	Oral	Non-applicable	Non-applicable	1,67 mg/kg	Non-applicable
CAS: 123-42-2	Dermal	Non-applicable	Non-applicable	33 mg/kg	Non-applicable
EC: 204-626-7	Inhalation	Non-applicable	Non-applicable	5,8 mg/m³	Non-applicable
Dimethyl Phthalate	Oral	Non-applicable	Non-applicable	9,4 mg/kg	Non-applicable
CAS: 131-11-3	Dermal	Non-applicable	Non-applicable	67,5 mg/kg	Non-applicable
EC: 205-011-6	Inhalation	Non-applicable	Non-applicable	16,3 mg/m³	Non-applicable
1,1´-dioxybiscyclohexan-1-ol	Oral	Non-applicable	Non-applicable	0,5 mg/kg	Non-applicable
CAS: 12262-58-7	Dermal	Non-applicable	Non-applicable	0,5 mg/kg	Non-applicable
EC: 235-527-7	Inhalation	Non-applicable	Non-applicable	0,87 mg/m³	Non-applicable

PNEC:

Identification				
Ethyl acetate	STP	650 mg/L	Fresh water	0,24 mg/L
CAS: 141-78-6	Soil	0,148 mg/kg	Marine water	0,024 mg/L
EC: 205-500-4	Intermittent	1,65 mg/L	Sediment (Fresh water)	1,15 mg/kg
	Oral	0,2 g/kg	Sediment (Marine water)	0,115 mg/kg
4-hydroxy-4-methylpentan-2-one	STP	100 mg/L	Fresh water	2 mg/L
CAS: 123-42-2	Soil	0,3 mg/kg	Marine water	0,2 mg/L
EC: 204-626-7	Intermittent	1 mg/L	Sediment (Fresh water)	7,4 mg/kg
	Oral	Non-applicable	Sediment (Marine water)	0,74 mg/kg
Dimethyl Phthalate	STP	4 mg/L	Fresh water	0,192 mg/L
CAS: 131-11-3	Soil	3,16 mg/kg	Marine water	0,019 mg/L
EC: 205-011-6	Intermittent	0,39 mg/L	Sediment (Fresh water)	1,3 mg/kg
	Oral	Non-applicable	Sediment (Marine water)	0,13 mg/kg
1,1´-dioxybiscyclohexan-1-ol	STP	0,05 mg/L	Fresh water	0,011 mg/L
CAS: 12262-58-7	Soil	0,011 mg/kg	Marine water	0,00106 mg/L
EC: 235-527-7	Intermittent	0,017 mg/L	Sediment (Fresh water)	0,085 mg/kg
	Oral	Non-applicable	Sediment (Marine water)	0,009 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	CE CAT III	EN 149:2001+A1:2009 EN 405:2002+A1:2010 EN ISO 136:1998	Replace when an increase in resistence to breathing is observed and/or a smell or taste of the contaminant is detected.

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SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION (continued)

C.- Specific protection for the hands

Pictogram	PPE	Labelling	CEN Standard	Remarks
 Mandatory hand protection	NON-disposable chemical protective gloves	CE 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

Pictogram	PPE	Labelling	CEN Standard	Remarks
 Mandatory face protection	Face shield	CE CAT II	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	CE CAT III	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	CE CAT III	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):	72,5 % weight
V.O.C. density at 20 ºC:	725 kg/m³ (725 g/L)
Average carbon number:	4,55
Average molecular weight:	95,85 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 ºC: Liquid

*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)

Appearance:	Fluid
Colour:	Colourless
Odour:	Solvent
Odour threshold:	Non-applicable *
Volatility:	
Boiling point at atmospheric pressure:	Non-applicable *
Vapour pressure at 20 ºC:	Non-applicable *
Vapour pressure at 50 ºC:	27010,56 Pa (27,01 kPa)
Evaporation rate at 20 ºC:	Non-applicable *
Product description:	
Density at 20 ºC:	995 - 1005 kg/m³
Relative density at 20 ºC:	0,995 - 1,005
Dynamic viscosity at 20 ºC:	Non-applicable *
Kinematic viscosity at 20 ºC:	Non-applicable *
Kinematic viscosity at 40 ºC:	Non-applicable *
Concentration:	Non-applicable *
pH:	Non-applicable *
Vapour density at 20 ºC:	Non-applicable *
Partition coefficient n-octanol/water 20 ºC:	Non-applicable *
Solubility in water at 20 ºC:	Non-applicable *
Solubility properties:	Partially miscible
Decomposition temperature:	Non-applicable *
Melting point/freezing point:	Non-applicable *
Flammability:	
Flash Point:	-4 ºC
Flammability (solid, gas):	Non-applicable *
Autoignition temperature:	Non-applicable *
Lower flammability limit:	1,4 % Volume
Upper flammability limit:	11,5 % Volume
Particle characteristics:	
Median equivalent diameter:	Non-applicable

9.2 Other information:

Information with regard to physical hazard classes:

Explosive properties:	Non-applicable *
Oxidising properties:	H242 Heating may cause a fire.
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 ºC:	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

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SECTION 10: STABILITY AND REACTIVITY (continued)

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	Heating may cause a fire or explosion	Avoid direct impact	Not applicable

10.5 Incompatible materials:

Acids	Water	Oxidising materials	Combustible materials	Others
Avoid strong acids	Not applicable	Avoid direct impact	Avoid direct impact	Avoid alkalines, heavy metals, reducing agents, peroxide accelerating agents

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), carbon monoxide and other organic compounds

SECTION 11: TOXICOLOGICAL INFORMATION

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

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

Dangerous health implications:

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

A- Ingestion (acute effect):

- Acute toxicity : Based on available data, the classification criteria are not met, however, it contains substances classified as dangerous for consumption. For more information see section 3.
- Corrosivity/Irritability: Corrosive product, if it is swallowed causes burns destroying the tissues. For more information about secondary effects from skin contact see section 2.

B- Inhalation (acute effect):

- Acute toxicity : Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for inhalation. For more information see section 3.
- Corrosivity/Irritability: Prolonged inhalation of the product is corrosive to mucous membranes and the upper respiratory tract

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

- Contact with the skin: Above all, skin contact may occur as fabrics of all thicknesses can be destroyed, resulting in burns. For more information on the secondary effects see section 2.
- 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: Non-applicable
- 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:

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SECTION 11: TOXICOLOGICAL INFORMATION (continued)

- 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:

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

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

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

H- Aspiration hazard:

Based on available data, the classification criteria are not met, as it does not 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
4-hydroxy-4-methylpentan-2-one	LD50 oral	4000 mg/kg	Rat
CAS: 123-42-2	LD50 dermal	13630 mg/kg	Rabbit
EC: 204-626-7	LC50 inhalation	>20 mg/L	
Dimethyl Phthalate	LD50 oral	>2000 mg/kg	
CAS: 131-11-3	LD50 dermal	>2000 mg/kg	
EC: 205-011-6	LC50 inhalation	>20 mg/L	
1,1´-dioxybiscyclohexan-1-ol	LD50 oral	1155 mg/kg	Rat
CAS: 12262-58-7	LD50 dermal	>2000 mg/kg	
EC: 235-527-7	LC50 inhalation	>5 mg/L	
Ethyl acetate	LD50 oral	4100 mg/kg	Rat
CAS: 141-78-6	LD50 dermal	20000 mg/kg	Rabbit
EC: 205-500-4	LC50 inhalation	>20 mg/L	

Acute Toxicity Estimate (ATE mix):

	ATE mix	Ingredient(s) of unknown toxicity
Oral	9240 mg/kg (Calculation method)	0 %
Dermal	>2000 mg/kg (Calculation method)	Non-applicable
Inhalation	>20 mg/L (4 h) (Calculation method)	Non-applicable

11.2 Information on other hazards:

Endocrine disrupting properties

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

Other information

Non-applicable

SECTION 12: ECOLOGICAL INFORMATION

12.1 Toxicity:

Product-specific aquatic toxicity:

	Acute toxicity	Species	Genus
LC50	108,59 mg/L (96 h)	Non-applicable	Fish

Substance-specific aquatic toxicity:

Acute toxicity:

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SECTION 12: ECOLOGICAL INFORMATION (continued)

Identification		Concentration	Species	Genus
Ethyl acetate	LC50	230 mg/L (96 h)	Pimephales promelas	Fish
CAS: 141-78-6	EC50	717 mg/L (48 h)	Daphnia magna	Crustacean
EC: 205-500-4	EC50	3300 mg/L (48 h)	Scenedesmus subspicatus	Algae
4-hydroxy-4-methylpentan-2-one	LC50	420 mg/L (96 h)	Lepomis macrochirus	Fish
CAS: 123-42-2	EC50	9016 mg/L (24 h)	Daphnia magna	Crustacean
EC: 204-626-7	EC50	530 mg/L (192 h)	Microcystis aeruginosa	Algae
Dimethyl Phthalate	LC50	39 mg/L (96 h)	Pimephales promelas	Fish
CAS: 131-11-3	EC50	150 mg/L (24 h)	Daphnia magna	Crustacean
EC: 205-011-6	EC50	204 mg/L (72 h)	Scenedesmus subspicatus	Algae
1,1´-dioxybiscyclohexan-1-ol	LC50	48 mg/L (96 h)	Poecilia reticulata	Fish
CAS: 12262-58-7	EC50	Non-applicable		
EC: 235-527-7	EC50	Non-applicable		

Chronic toxicity:

Identification		Concentration	Species	Genus
Ethyl acetate	NOEC	9,65 mg/L	Pimephales promelas	Fish
CAS: 141-78-6 EC: 205-500-4	NOEC	2,4 mg/L	Daphnia magna	Crustacean
4-hydroxy-4-methylpentan-2-one	NOEC	Non-applicable		
CAS: 123-42-2 EC: 204-626-7	NOEC	100 mg/L	Daphnia magna	Crustacean
Dimethyl Phthalate	NOEC	11 mg/L	Oncorhynchus mykiss	Fish
CAS: 131-11-3 EC: 205-011-6	NOEC	9,6 mg/L	Daphnia magna	Crustacean
1,1´-dioxybiscyclohexan-1-ol	NOEC	Non-applicable		
CAS: 12262-58-7 EC: 235-527-7	NOEC	1,5 mg/L	Daphnia magna	Crustacean

12.2 Persistence and degradability:

Substance-specific information:

Identification	Degradability		Biodegradability	
Ethyl acetate	BOD5	1,36 g O2/g	Concentration	100 mg/L
CAS: 141-78-6	COD	1,69 g O2/g	Period	14 days
EC: 205-500-4	BOD5/COD	0,8	% Biodegradable	83 %
4-hydroxy-4-methylpentan-2-one	BOD5	Non-applicable	Concentration	100 mg/L
CAS: 123-42-2	COD	Non-applicable	Period	14 days
EC: 204-626-7	BOD5/COD	Non-applicable	% Biodegradable	90 %
Dimethyl Phthalate	BOD5	1,12 g O2/g	Concentration	100 mg/L
CAS: 131-11-3	COD	0,74 g O2/g	Period	28 days
EC: 205-011-6	BOD5/COD	1,51	% Biodegradable	93 %

12.3 Bioaccumulative potential:

Substance-specific information:

Identification	Bioaccumulation potential	
Ethyl acetate	BCF	30
CAS: 141-78-6	Pow Log	0.73
EC: 205-500-4	Potential	Moderate
4-hydroxy-4-methylpentan-2-one	BCF	0.5
CAS: 123-42-2	Pow Log	-0.34
EC: 204-626-7	Potential	Low
Dimethyl Phthalate	BCF	57
CAS: 131-11-3	Pow Log	1.6
EC: 205-011-6	Potential	Moderate

12.4 Mobility in soil:

Identification	Absorption/desorption		Volatility	
Ethyl acetate	Koc	59	Henry	13,58 Pa·m³/mol
CAS: 141-78-6	Conclusion	Very High	Dry soil	Yes
EC: 205-500-4	Surface tension	2,324E-2 N/m (25 ºC)	Moist soil	Yes

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SECTION 12: ECOLOGICAL INFORMATION (continued)

Identification	Absorption/desorption		Volatility	
4-hydroxy-4-methylpentan-2-one	Koc	Non-applicable	Henry	Non-applicable
CAS: 123-42-2	Conclusion	Non-applicable	Dry soil	Non-applicable
EC: 204-626-7	Surface tension	2,963E-2 N/m (25 ºC)	Moist soil	Non-applicable
Dimethyl Phthalate	Koc	Non-applicable	Henry	Non-applicable
CAS: 131-11-3	Conclusion	Non-applicable	Dry soil	Non-applicable
EC: 205-011-6	Surface tension	4,044E-2 N/m (25 ºC)	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

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, HP8 Corrosive

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: UN3105

14.2 UN proper shipping name: ORGANIC PEROXIDE TYPE D, LIQUID (1,1´-dioxybiscyclohexan-1-ol)

14.3 Transport hazard class(es): 5.2

Labels: 5.2, 8

14.4 Packing group: N/A

14.5 Environmental hazards: No

14.6 Special precautions for user

Special regulations: 122, 274

Tunnel restriction code: D

Physico-Chemical properties: see section 9

Limited quantities: 125 mL

14.7 Maritime transport in bulk according to IMO instruments: Non-applicable

Transport of dangerous goods by sea:

With regard to IMDG 40-20:

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SECTION 14: TRANSPORT INFORMATION (continued)

14.1 UN number or ID number: UN3105
14.2 UN proper shipping name: ORGANIC PEROXIDE TYPE D, LIQUID (1,1´-dioxybiscyclohexan-1-ol)
14.3 Transport hazard class(es): 5.2
Labels: 5.2, 8
14.4 Packing group: N/A
14.5 Marine pollutant: No
14.6 Special precautions for user
Special regulations: 122, 274
EmS Codes:
Physico-Chemical properties: see section 9
Limited quantities: 125 mL
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: UN3105
14.2 UN proper shipping name: ORGANIC PEROXIDE TYPE D, LIQUID (1,1´-dioxybiscyclohexan-1-ol)
14.3 Transport hazard class(es): 5.2
Labels: 5.2, 8
14.4 Packing group: N/A
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: Non-applicable

Seveso III:

Section	Description	Lower-tier requirements	Upper-tier requirements
P5c	FLAMMABLE LIQUIDS	5000	50000
P6b	SELF-REACTIVE SUBSTANCES AND MIXTURES and ORGANIC PEROXIDES	50	200

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.

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SECTION 15: REGULATORY INFORMATION (continued)

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:

H225: Highly flammable liquid and vapour.
H314: Causes severe skin burns and eye damage.
H318: Causes serious eye damage.
H335: May cause respiratory irritation.
H336: May cause drowsiness or dizziness.
H242: Heating may cause a fire.

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: H302 - Harmful if swallowed.
Eye Irrit. 2: H319 - Causes serious eye irritation.
Flam. Liq. 2: H225 - Highly flammable liquid and vapour.
Org. Perox. A: H240 - Heating may cause an explosion.
Skin Corr. 1B: H314 - Causes severe skin burns and eye damage.
STOT SE 3: H336 - May cause drowsiness or dizziness.

Classification procedure:

Flam. Liq. 2: Calculation method (2.6.4.3)
Skin Corr. 1B: Calculation method
Eye Dam. 1: Calculation method
STOT SE 3: Calculation method
STOT SE 3: 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

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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 -