

# Safety Data Sheet

According to Annex II to REACH - Regulation (EU) 2020/878 and to Annex II to UK REACH

## SECTION 1. Identification of the substance/mixture and of the company/undertaking

### 1.1. Product identifier

Product name **Fusion Fix EP Epoxy Super Clear**

UFI : **66TM-1Q4R-510E-KYF7**

### 1.2. Relevant identified uses of the substance or mixture and uses advised against

Intended use **Epoxy spray adhesive for composite materials**

Identified Uses	Industrial	Professional	Consumer
Use of spray adhesives for bonding composite materials	✓	✓	-
<b>Uses Advised Against</b>			
<b>Do not use for uses other than those indicated</b>			

### 1.3. Details of the supplier of the safety data sheet

Name **Easy Composites Ltd**  
 Full address **Unit 39, Park Hall Business Village**  
 District and Country **Stoke-on-Trent ST3 5XA**  
**United Kingdom**  
 Tel. **+44 (0)1782 454499 (Office Hours)**  
 e-mail address of the competent person responsible for the Safety Data Sheet **sales@easycomposites.com**

### 1.4. Emergency telephone number

For urgent inquiries refer to **+44 (0)1782 454499 (Office Hours)**  
**NHS111 in England: 111**  
**NHS24 in Scotland: 111**  
**NHS Direct in Wales: 111 or 0845 4647**  
**In an emergency, if the patient has collapsed or is not breathing properly, call 999**

## SECTION 2. Hazards identification

### 2.1. Classification of the substance or mixture

The product is classified as hazardous pursuant to the provisions set forth in (EC) Regulation 1272/2008 (CLP) (and subsequent amendments and supplements). The product thus requires a safety datasheet that complies with the provisions of (EU) Regulation 2020/878.

Any additional information concerning the risks for health and/or the environment are given in sections 11 and 12 of this sheet.

Hazard classification and indication:

Aerosol, category 1	H222	Extremely flammable aerosol.
	H229	Pressurised container: may burst if heated.
Eye irritation, category 2	H319	Causes serious eye irritation.
Skin irritation, category 2	H315	Causes skin irritation.
Skin sensitization, category 1	H317	May cause an allergic skin reaction.
Specific target organ toxicity - single exposure, category 3	H336	May cause drowsiness or dizziness.
Hazardous to the aquatic environment, chronic toxicity, category 3	H412	Harmful to aquatic life with long lasting effects.

## SECTION 2. Hazards identification ... / >>

### 2.2. Label elements

Hazard labelling pursuant to EC Regulation 1272/2008 (CLP) and subsequent amendments and supplements.

Hazard pictograms:



Signal words: Danger

Hazard statements:

<b>H222</b>	Extremely flammable aerosol.
<b>H229</b>	Pressurised container: may burst if heated.
<b>H319</b>	Causes serious eye irritation.
<b>H315</b>	Causes skin irritation.
<b>H317</b>	May cause an allergic skin reaction.
<b>H336</b>	May cause drowsiness or dizziness.
<b>H412</b>	Harmful to aquatic life with long lasting effects.
<b>EUH205</b>	Contains epoxy constituents. May produce an allergic reaction.

Precautionary statements:

<b>P210</b>	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
<b>P211</b>	Do not spray on an open flame or other ignition source.
<b>P251</b>	Do not pierce or burn, even after use.
<b>P261</b>	Avoid breathing gases / mist / vapors / aerosols.
<b>P273</b>	Avoid release to the environment.
<b>P410+P412</b>	Protect from sunlight. Do not expose to temperatures exceeding 50°C / 122°F.

**Contains:** bis-[4-(2,3-epoxipropoxy)phenyl]propane  
Acetone  
Dimethyl ether  
Butanone

### 2.3. Other hazards

On the basis of available data, the product does not contain any PBT or vPvB in percentage  $\geq$  than 0,1%.

The product does not contain substances with endocrine disrupting properties in concentration  $\geq$  0.1%.

## SECTION 3. Composition/information on ingredients

### 3.2. Mixtures

Contains:

Identification	x = Conc. %	Classification (EC) 1272/2008 (CLP)
<b>Dimethyl ether</b>		
INDEX 603-019-00-8	50 ≤ x < 80	<b>Flam. Gas 1A H220, Press. Gas (Liq.) H280, STOT SE 3 H336, Classification note according to Annex VI to the CLP Regulation: U</b>
EC 204-065-8		
CAS 115-10-6		
REACH Reg. 01-2119472128-37-XXXX		
<b>Acetone</b>		
INDEX 606-001-00-8	10 ≤ x < 20	<b>Flam. Liq. 2 H225, Eye Irrit. 2 H319, STOT SE 3 H336, EUH066</b>
EC 200-662-2		
CAS 67-64-1		
REACH Reg. 01-2119471330-49		

### SECTION 3. Composition/information on ingredients ... / >>

#### bis-[4-(2,3-epoxipropoxy)phenyl]propane

INDEX 603-073-00-2  $2,5 \leq x < 7$

Eye Irrit. 2 H319, Skin Irrit. 2 H315, Skin Sens. 1 H317, Aquatic Chronic 2 H411

EC 216-823-5

CAS 1675-54-3

REACH Reg. 01-2119456619-26

#### Butanone

INDEX 606-002-00-3  $1 \leq x < 5$

Flam. Liq. 2 H225, Eye Irrit. 2 H319, STOT SE 3 H336, EUH066

EC

201-159-0 CAS

78-93-3

REACH Reg. 01-2119457290-43

The full wording of hazard (H) phrases is given in section 16 of the sheet.

The product is an aerosol containing propellants. For the purposes of calculation of the health hazards, propellants are not considered (unless they have health hazards). The percentages indicated are inclusive of the propellants.

### SECTION 4. First aid measures

#### 4.1. Description of first aid measures

In case of doubt or in the presence of symptoms contact a doctor and show him this document.

In case of more severe symptoms, ask for immediate medical aid.

EYES: Remove, if present, contact lenses if the situation allows you to do so easily. Wash immediately with plenty of water for at least 15 minutes, opening the eyelids fully. Get medical advice/attention.

SKIN: Take off immediately all contaminated clothing. Wash immediately and thoroughly with running water (and soap if possible). Get medical advice/attention. Avoid further contact with contaminated clothing.

INGESTION: Do not induce vomiting unless explicitly authorised by a doctor. Do not give anything by mouth to an unconscious person. Get medical advice/attention.

INHALATION: Remove victim to fresh air, away from the accident scene. In the event of respiratory symptoms (coughing, wheezing, breathing difficulty, asthma) keep the victim in a comfortable position for breathing. If necessary administer oxygen. If the subject stops breathing, administer artificial respiration. Get medical advice/attention.

#### Rescuer protection

It is good practice for rescuers lending support to a person who has been exposed to a chemical substance or to a mixture to wear personal protective equipment. The nature of such protection depends on the hazard level of the substance or mixture, on the type of exposure and on the extent of the contamination. In the absence of other more specific indications, use of disposable gloves in the event of possible contact with body fluids is recommended. For the type of PPE suitable for the characteristics of the substance or mixture, see section 8.

#### 4.2. Most important symptoms and effects, both acute and delayed

Specific information on symptoms and effects caused by the product are unknown.

DELAYED EFFECTS: Based on the information currently available, there are no known cases of delayed effects following exposure to this product.

#### 4.3. Indication of any immediate medical attention and special treatment needed

If symptoms occur, whether acute or delayed, consult a doctor.

#### Means to have available in the workplace for specific and immediate treatment

Running water for skin and eye wash.

### SECTION 5. Firefighting measures

#### 5.1. Extinguishing media

##### SUITABLE EXTINGUISHING EQUIPMENT

The extinguishing equipment should be of the conventional kind: carbon dioxide, foam, powder and water spray.

##### UNSUITABLE EXTINGUISHING EQUIPMENT

Direct jets of water. Water is not effective for putting out fires but can be used to cool containers exposed to flames to prevent explosions.

#### 5.2. Special hazards arising from the substance or mixture

HAZARDS CAUSED BY EXPOSURE IN THE EVENT OF FIRE

## SECTION 5. Firefighting measures ... / >>

If overheated, aerosol cans can deform, explode and be propelled considerable distances. Put a protective helmet on before approaching the fire. Do not breathe combustion products.

### 5.3. Advice for firefighters

#### GENERAL INFORMATION

In the case of fire, use jets of water to cool the containers to prevent the risk of explosions (product decomposition and excess pressure) and the development of substances potentially hazardous for health. Always wear full fire prevention gear. Remove all containers containing the product from the fire, if it is safe to do so.

#### SPECIAL PROTECTIVE EQUIPMENT FOR FIRE-FIGHTERS

Normal fire fighting clothing i.e. fire kit (BS EN 469), gloves (BS EN 659) and boots (HO specification A29 and A30) in combination with self-contained open circuit positive pressure compressed air breathing apparatus (BS EN 137).

## SECTION 6. Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

Eliminate all sources of ignition (cigarettes, flames, sparks, etc.) from the leakage site. Send away individuals who are not suitably equipped. Wear protective gloves / protective clothing / eye protection / face protection.

### 6.2. Environmental precautions

Do not disperse in the environment.

### 6.3. Methods and material for containment and cleaning up

Use inert absorbent material to soak up leaked product. Make sure the leakage site is well aired. Contaminated material should be disposed of in compliance with the provisions set forth in point 13.

### 6.4. Reference to other sections

Any information on personal protection and disposal is given in sections 8 and 13.

## SECTION 7. Handling and storage

### 7.1. Precautions for safe handling

Avoid bunching of electrostatic charges. Do not spray on flames or incandescent bodies. Vapours may catch fire and an explosion may occur; vapour accumulation is therefore to be avoided by leaving windows and doors open and ensuring good cross ventilation. Do not eat, drink or smoke during use. Do not breathe spray.

### 7.2. Conditions for safe storage, including any incompatibilities

Store in a place where adequate ventilation is ensured, away from direct sunlight at a temperature below 50°C / 122°F, away from any combustion sources.

Storage class TRGS 510 (Germany): 2B

### 7.3. Specific end use(s)

Refer to the product data sheet. Also refer to the information on safe use when attached to this safety data sheet.

## SECTION 8. Exposure controls/personal protection

### 8.1. Control parameters

Regulatory references:

BGR	Bългария	НАРЕДБА № 13 ОТ 30 ДЕКЕМВРИ 2003 Г. ЗА ЗАЩИТА НА РАБОТЕЩИТЕ ОТ РИСКОВЕ, СВЪРЗАНИ С ЕКСПОЗИЦИЯ НА ХИМИЧНИ АГЕНТИ ПРИ РАБОТА (изм. ДВ. бр.5 от 17 Януари 2020г.)
CZE	Česká Republika	NAŘÍZENÍ VLÁDY ze dne 10. května 2021, kterým se mění nařízení vlády č. 361/2007 Sb., kterým se stanoví podmínky ochrany zdraví při práci
DEU	Deutschland	Forschungsgemeinschaft MAK- und BAT-Werte-Liste 2022 Ständige Senatskommission zur Prüfung gesundheitsschädlicher Arbeitsstoffe Mitteilung 58
ESP	España	Límites de exposición profesional para agentes químicos en España 2023

**SECTION 8. Exposure controls/personal protection ... / >>**

EST	Eesti	Ohtlike kemikaalide ja neid sisaldavate materjalide kasutamise töötervishoiu ja tööohutuse nõuded ning töökeskkonna keemiliste ohutegurite piirnormid [RT I, 21.12.2022, 14]
FRA	France	Valeurs limites d'exposition professionnelle aux agents chimiques en France Décret n° 2021-1849 du 28 décembre 2021
FIN	Suomi	HTP-VÄRDEN 2020. Koncentrationer som befunnits skadliga. SOCIAL - OCH HÄLSOVÄRDSMINISTERIETS PUBLIKATIONER 2020:25
HUN	Magyarország	Az innovációért és technológiáért felelős miniszter 5/2020. (II. 6.) ITM rendelete a kémiai kóroki tényezők hatásának kitett munkavállalók egészségének és biztonságának védelméről
HRV	Hrvatska	Pravilnik o izmjenama i dopunama Pravilnika o zaštiti radnika od izloženosti opasnim kemikalijama na radu, graničnim vrijednostima izloženosti i biološkim graničnim vrijednostima (NN 1/2021)
ITA	Italia	Decreto Legislativo 9 Aprile 2008, n.81
LTU	Lietuva	Jsakymas dėl lietuvos higienos normos hn 23:2011 „cheminių medžiagų profesinio poveikio ribiniai dydžiai. Matavimo ir poveikio vertinimo bendrieji reikalavimai“ patvirtinimo
LVA	Latvija	Grozījumi Ministru kabineta 2007. gada 15. maija noteikumos Nr. 325 "Darba aizsardzības prasības saskarē ar ķīmiskajām vielām darba vietās" (prot. Nr. 32 18. §; prot. Nr. 1 22. §)
NLD	Nederland	Arbeidsomstandighedenregeling. Lijst van wettelijke grenswaarden op grond van de artikelen 4.3, eerste lid, en 4.16, eerste lid, van het Arbeidsomstandighedenbesluit
PRT	Portugal	Decreto-Lei n.º 1/2021 de 6 de janeiro, valores-limite de exposição profissional indicativos para os agentes químicos. Decreto-Lei n.º 35/2020 de 13 de julho, proteção dos trabalhadores contra os riscos ligados à exposição durante o trabalho a agentes cancerígenos ou mutagénicos
POL	Polska	Rozporządzenie ministra rozwoju, pracy i technologii z dnia 18 lutego 2021 r. Zmieniające rozporządzenie w sprawie najwyższych dopuszczalnych stężeń i natężeń czynników szkodliwych dla zdrowia w środowisku pracy
ROU	România	Hotărârea nr. 53/2021 pentru modificarea hotărârii guvernului nr. 1.218/2006, precum și pentru modificarea și completarea hotărârii guvernului nr. 1.093/2006
SWE	Sverige	Hygieniska gränsvärden, Arbetsmiljöverkets föreskrifter och allmänna råd om hygieniska gränsvärden (AFS 2018:1)
SVN	Slovenija	Pravilnik o varovanju delavcev pred tveganji zaradi izpostavljenosti kemičnim snovem pri delu (Uradni list RS, št. 100/01, 39/05, 53/07, 102/10, 43/11 – ZVZD-1, 38/15, 78/18 in 78/19)
TUR	Türkiye	Kimyasal Maddelerle Çalışmalarda Sağlık ve Güvenlik Önlemleri Hakkında Yönetmelik 12.08.2013 / 28733; 20.10.2023 / 32345.
GBR	United Kingdom	EH40/2005 Workplace exposure limits (Fourth Edition 2020)
EU	OEL EU	Directive (EU) 2022/431; Directive (EU) 2019/1831; Directive (EU) 2019/130; Directive (EU) 2019/983; Directive (EU) 2017/2398; Directive (EU) 2017/164; Directive 2009/161/EU; Directive 2006/15/EC; Directive 2004/37/EC; Directive 2000/39/EC; Directive 98/24/EC; Directive 91/322/EEC.
	TLV-ACGIH	ACGIH 2023

**SECTION 8. Exposure controls/personal protection ... / >>**

		Acetone								
Threshold Limit Value										
Type	Country	TWA/8h		STEL/15min		Remarks / Observations				
		mg/m3	ppm	mg/m3	ppm					
TLV	BGR	600		1400						
TLV	CZE	800	331,2	1500	621					
AGW	DEU	1200	500	2400 (C)	1000 (C)					
MAK	DEU	1200	500	2400	1000					
VLA	ESP	1210	500							
TLV	EST	1210	500							
VLEP	FRA	1210	500	2420	1000					
HTP	FIN	1200	500	1500	630					
AK	HUN	1210								
GVI/KGVI	HRV	1210	500							
VLEP	ITA	1210	500							
RD	LTU	1210	500	2420	1000					
RV	LVA	1210	500			SKIN				
TGG	NLD	1210	500	2420	1000					
VLE	PRT	1210	500							
NDS/NDSch	POL	600		1800						
TLV	ROU	1210	500							
NGV/KGV	SWE	600	250	1200 (C)	500 (C)					
MV	SVN	1210	500	2420	1000					
ESD	TUR	1210	500							
WEL	GBR	1210	500	3620	1500					
OEL	EU	1210	500							
TLV-ACGIH			250		500					
Predicted no-effect concentration - PNEC										
Normal value in fresh water				10,6	mg/l					
Normal value in marine water				1,06	mg/l					
Normal value for fresh water sediment				30,4	mg/kg					
Normal value for marine water sediment				3,04	mg/kg					
Normal value for water, intermittent release				21	mg/l					
Normal value of STP microorganisms				100	mg/l					
Normal value for the terrestrial compartment				29,5	mg/kg					
Oral		LOW		62	mg/kg					
Inhalation	LOW	LOW	LOW	200	mg/m3	2420	mg/m3	LOW	LOW	1210
Skin	LOW	LOW	LOW	62	mg/kg	LOW	LOW	LOW	LOW	186
										mg/kg

**SECTION 8. Exposure controls/personal protection ... / >>**

**Dimethyl ether**

**Threshold Limit Value**

Type	Country	TWA/8h		STEL/15min		Remarks / Observations
		mg/m <sup>3</sup>	ppm	mg/m <sup>3</sup>	ppm	
AGW	DEU	1900	1000	15200	8000	
MAK	DEU	1900	1000	15200	8000	
VLA	ESP	1920	1000			
VLEP	FRA	1920	1000			
HTP	FIN	2000	1000			
AK	HUN	1920				
VLEP	ITA	1920	1000			
RV	LVA	1920	1000			
TGG	NLD	950		1500		
NDS/NDSCh	POL	1000				
TLV	ROU	1920	1000			
NGV/KGV	SWE	950	500	1500	800	
ESD	TUR	1920	1000			
WEL	GBR	766	400	958	500	
OEL	EU	1920	1000			

**Predicted no-effect concentration - PNEC**

Normal value in fresh water	0,155	mg/l
Normal value in marine water	0,016	mg/l
Normal value for fresh water sediment	0,681	mg/kg
Normal value for marine water sediment	0,069	mg/kg
Normal value for water, intermittent release	1,549	mg/l
Normal value of STP microorganisms	160	mg/l
Normal value for the terrestrial compartment	0,045	mg/kg

Oral		NPI		NPI				
Inhalation	NPI	LOW	NPI	471 mg/m <sup>3</sup>	NPI	LOW	NPI	1894 mg/m <sup>3</sup>
Skin	NPI	NPI	NPI	NPI	NPI	NPI	NPI	NPI

**SECTION 8. Exposure controls/personal protection ... / >>**

Threshold Limit Value		Butanone				Remarks / Observations
Type	Country	TWA/8h		STEL/15min		
		mg/m <sup>3</sup>	ppm	mg/m <sup>3</sup>	ppm	
TLV	BGR	590		885		
TLV	CZE	600	200,4	900	300,6	
AGW	DEU	600	200	600	200	SKIN
MAK	DEU	600	200	600	200	SKIN
VLA	ESP	600	200	900	300	
TLV	EST	600	200	900	300	
VLEP	FRA	600	200	900	300	SKIN
HTP	FIN	60	20	300	100	
AK	HUN	600		900		SKIN
GVII/KGVI	HRV	600	200	900	300	
VLEP	ITA	600	200	900	300	
RD	LTU	600	200	900	300	
RV	LVA	200	67	900	300	
TGG	NLD	590	197	900	300	SKIN
VLE	PRT	600	200	900	300	
NDS/NDSch	POL	450		900		SKIN
TLV	ROU	600	200	900	300	
NGV/KGV	SWE	150	50	900	300	
MV	SVN	600	200	900	300	SKIN
ESD	TUR	600	200	900	300	
WEL	GBR	600	200	900	300	SKIN
OEL	EU	600	200	900	300	
TLV-ACGIH		590	200	885	300	

**Predicted no-effect concentration - PNEC**

Normal value in fresh water	55,8	mg/l
Normal value in marine water	55,8	mg/l
Normal value for fresh water sediment	284,74	mg/kg
Normal value for marine water sediment	284,7	mg/kg
Normal value of STP microorganisms	709	mg/l
Normal value for the food chain (secondary poisoning)	1000	mg/kg
Normal value for the terrestrial compartment	22,5	mg/kg

Oral		NPI		31				
				mg/kg bw/d				
Inhalation	NPI	405	NPI	106	NPI	900	NPI	600
		mg/m <sup>3</sup>		mg/m <sup>3</sup>		mg/m <sup>3</sup>		mg/m <sup>3</sup>
Skin	NPI	NPI	NPI	412	NPI	NPI	NPI	1161
				mg/kg bw/d				mg/kg bw/d



## SECTION 8. Exposure controls/personal protection ... / >>

### bis-[4-(2,3-epoxipropoxy)phenyl]propane

#### Predicted no-effect concentration - PNEC

Normal value in fresh water	0,006	mg/l
Normal value in marine water	0,001	mg/l
Normal value for fresh water sediment	0,341	mg/kg dw
Normal value for marine water sediment	0,034	mg/kg dw
Normal value for marine water, intermittent release	0,018	mg/l
Normal value for fresh water, intermittent release	0,0018	mg/l
Normal value of STP microorganisms	10	mg/l
Normal value for the food chain (secondary poisoning)	11	mg/kg food
Normal value for the terrestrial compartment	0,0647	mg/kg
Normal value for the atmosphere	NPI	

Oral		0,75 mg/kg bw/d		0,75 mg/kg bw/d				
Inhalation	MED	0,75 mg/m3	MED	0,75 mg/m3	MED	12,3 mg/m3	MED	12,3 mg/m3
Skin	MED	3,6 mg/kg bw/d	MED	3,6 µg/kg bw/day	MED	8,3 mg/kg bw/d	MED	8,3 µg/kg bw/day

#### Legend:

(C) = CEILING ; INHAL = Inhalable Fraction ; RESP = Respirable Fraction ; THORA = Thoracic Fraction.

VND = hazard identified but no DNEL/PNEC available ; NEA = no exposure expected ; NPI = no hazard identified ; LOW = low hazard

; MED = medium hazard ; HIGH = high hazard.

### 8.2. Exposure controls

As the use of adequate technical equipment must always take priority over personal protective equipment, make sure that the workplace is well aired through effective local aspiration.

When choosing personal protective equipment, ask your chemical substance supplier for advice.

Personal protective equipment must be CE marked, showing that it complies with applicable standards.

Provide an emergency shower with face and eye wash station.

#### HAND PROTECTION

Protect hands with category III work gloves (see standard EN 374) if risk assessment requires it.

The following should be considered when choosing work glove material: compatibility, degradation, failure time and permeability.

The work gloves' resistance to chemical agents should be checked before use, as it can be unpredictable. The gloves' wear time depends on the duration and type of use.

#### SKIN PROTECTION

Wear category III professional long-sleeved overalls and safety footwear (see Regulation 2016/425 and standard EN ISO 20344) if risk assessment requires it. Wash body with soap and water after removing protective clothing.

#### EYE PROTECTION.

Wear airtight protective goggles (ref. EN 166) if the risk assessment requires it.

#### RESPIRATORY PROTECTION

Respiratory protection devices must be used if the technical measures adopted are not suitable for restricting the worker's exposure to the threshold values considered. Use a mask with a type AX filter combined with a type P filter should be worn (see standard EN 14387).

#### ENVIRONMENTAL EXPOSURE CONTROLS

The emissions generated by manufacturing processes, including those generated by ventilation equipment, should be checked to ensure compliance with environmental standards.

Product residues must not be indiscriminately disposed of with waste water or by dumping in waterways.

## SECTION 9. Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Properties	Value	Information
Appearance	aerosol	
Colour	transparent	
Odour	characteristic of solvent	
Melting point / freezing point	not applicable	Reason for missing data: not applicable
Initial boiling point	56,05 °C	Remark: ECHA website Substance: Acetone
Flammability	flammable aerosol	
Lower explosive limit	1,5 % (v/v)	Remark: GESTIS website

## SECTION 9. Physical and chemical properties ... / >>

Upper explosive limit	24,4 % (v/v)	Substance:Butanone Remark:GESTIS website
Flash point	not applicable	Substance:Dimethyl ether Reason for missing data:not applicable
Auto-ignition temperature	226 °C	Remark:ECHA website Substance:Dimethyl ether Reason for missing data:not applicable
Decomposition temperature	not applicable	Reason for missing data:substance/mixture is non-polar/aprotic (eg: an organic solvent mixture)
pH	not applicable	Reason for missing data:not applicable
Kinematic viscosity	not applicable	Reason for missing data:not applicable
Solubility	soluble in organic solvents	
Partition coefficient: n-octanol/water	not applicable	Reason for missing data:not applicable
Vapour pressure	760 kPa	Temperature: 50 °C
Density and/or relative density	0,8 g/cm <sup>3</sup>	
Relative vapour density	1,63	Remark:GESTIS website Substance:Dimethyl ether
Particle characteristics	not applicable	

### 9.2. Other information

#### 9.2.1. Information with regard to physical hazard classes

Information not available

#### 9.2.2. Other safety characteristics

VOC (Directive 2010/75/EU)	80,00 % - 640,00	g/litre
VOC (volatile carbon)	43,79 % - 350,35	g/litre

## SECTION 10. Stability and reactivity

### 10.1. Reactivity

There are no particular risks of reaction with other substances in normal conditions of use.

#### Acetone

Reacts with: bases.

#### Butanone

Reacts with: light metals, strong oxidants. Attacks various types of plastic materials. Decomposes under the effect of heat.

### 10.2. Chemical stability

The product is stable in normal conditions of use and storage.

#### Acetone

Stable in normal conditions of use and storage.

#### Dimethyl ether

Stable in normal conditions of use and storage.

### 10.3. Possibility of hazardous reactions

No hazardous reactions are foreseeable in normal conditions of use and storage.

#### Acetone

Risk of explosion on contact with: bromine trifluoride, fluorine dioxide, hydrogen peroxide, nitrosyl chloride, 2-methyl-1,3 butadiene, nitromethane, nitrosyl perchlorate.

May react dangerously with: potassium tert-butoxide, bromine, bromoform, isoprene, sodium, sulphur, sulphur dioxide, chromium trioxide, chromyl chloride, nitric acid, chloroform, peroxymonosulphuric acid, phosphoryl oxychloride, chromosulphuric acid, fluorine, strong oxidising agents, strong reducing agents.

Develops flammable gas on contact with: nitrosyl perchlorate.

#### Dimethyl ether

May form explosive mixtures with: air, strong oxidants, nitrates, fluorine, liquid oxygen.

May react dangerously with: acids, strong alkalis.

#### Butanone

May form peroxides with: air, light, strong oxidising agents. Risk of explosion on contact with: hydrogen peroxide, nitric acid, sulphuric acid. May react dangerously with: oxidising agents, trichloromethane, alkalis. Forms explosive mixtures with: air.

## SECTION 10. Stability and reactivity ... / >>

### 10.4. Conditions to avoid

Avoid overheating.

Acetone

Avoid exposure to: sources of heat,naked flames.

Dimethyl ether

Avoid exposure to: heat,naked flames,ignition sources,electrostatic discharges.

Keep away from: strong acids,strong alkalis,strong oxidising agents.

Butanone

Avoid exposure to: sources of heat.

bis-[4-(2,3-epoxipropoxi)phenyl]propane

Avoid exposure to: heat,light.

### 10.5. Incompatible materials

Strong reducing or oxidising agents, strong acids or alkalis, hot material.

Acetone

Incompatible with: acids,oxidising substances.

Incompatible with: alkalis.

Incompatible with: amines.

Dimethyl ether

Avoid contact with: hydrofluoric acid,strong oxidising agents,oxygen,strong acids,alkalis.

Butanone

Incompatible with: strong oxidants,inorganic acids,ammonia,copper,chloroform.

bis-[4-(2,3-epoxipropoxi)phenyl]propane

Avoid contact with: strong oxidising agents,strong reducing agents,strong acids,strong bases,amines,phenoles.

### 10.6. Hazardous decomposition products

Acetone

May develop: irritant substances.

## SECTION 11. Toxicological information

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

#### Metabolism, toxicokinetics, mechanism of action and other information

Information not available

#### Information on likely routes of exposure

Information not available

#### Delayed and immediate effects as well as chronic effects from short and long-term exposure

Information not available

#### Interactive effects

Information not available

#### ACUTE TOXICITY

ATE (Inhalation) of the mixture:

Not classified (no significant component)

ATE (Oral) of the mixture:

Not classified (no significant component)

ATE (Dermal) of the mixture:

Not classified (no significant component)

Acetone

LD50 (Dermal):

> 7426 mg/kg Rabbit

LD50 (Oral):

5800 mg/kg Rat

LC50 (Inhalation mists/powders):

76 mg/l/4h Female Rat

Dimethyl ether

LC50 (Inhalation vapours):

309018 mg/m3 Rat

Butanone

LD50 (Dermal):

> 5000 mg/kg Rabbit

LD50 (Oral):

2193 mg/kg Rat

0 mg/l/4h NESSUN DATO DISPONIBILE. Tox acuta: minimamente tossico.

## SECTION 11. Toxicological information ... / >>

LC50 (Inhalation vapours): Irritazione: pericolo trascurabile.

bis-[4-(2,3-epoxipropoxy)phenyl]propane  
LD50 (Dermal): 2000 mg/kg Rat  
LD50 (Oral): 11400 mg/kg Rat

### SKIN CORROSION / IRRITATION

Causes skin irritation

### SERIOUS EYE DAMAGE / IRRITATION

Causes serious eye irritation

### RESPIRATORY OR SKIN SENSITISATION

Sensitising for the skin

### GERM CELL MUTAGENICITY

Does not meet the classification criteria for this hazard class

### CARCINOGENICITY

Does not meet the classification criteria for this hazard class

### REPRODUCTIVE TOXICITY

Does not meet the classification criteria for this hazard class

### STOT - SINGLE EXPOSURE

May cause drowsiness or dizziness

### STOT - REPEATED EXPOSURE

Does not meet the classification criteria for this hazard class

### ASPIRATION HAZARD

Does not meet the classification criteria for this hazard class

### 11.2. Information on other hazards

Based on the available data, the product does not contain substances listed in the main European lists of potential or suspected endocrine disruptors with human health effects under evaluation.

## SECTION 12. Ecological information

This product is dangerous for the environment and the aquatic organisms. In the long term, it has negative effects on the aquatic environment.

### 12.1. Toxicity

Acetone  
LC50 - for Fish 8120 mg/l/96h Pimephales promelas  
EC50 - for Crustacea 8800 mg/l/48h Daphnia  
EC50 - for Algae / Aquatic Plants 7200 mg/l/72h (GESTIS website)  
Chronic NOEC for Algae / Aquatic Plants 530 mg/l 8 d

Dimethyl ether  
LC50 - for Fish > 4,1 g/l/96h Poecilia reticulata (Guppy)  
EC50 - for Crustacea > 4,4 g/l/48h Daphnia magna (Pulce d'acqua grande)  
EC50 - for Algae / Aquatic Plants 154,9 mg/l/96h algae

Butanone  
LC50 - for Fish 2993 mg/l/96h Pimephales promelas  
EC50 - for Crustacea 308 mg/l/48h Daphnia magna  
EC50 - for Algae / Aquatic Plants 1220 mg/l/72h (ECHA website)

## SECTION 12. Ecological information ... / >>

bis-[4-(2,3-epoxipropoxy)phenyl]propane	
LC50 - for Fish	1,3 mg/l/96h
EC50 - for Crustacea	2,1 mg/l/48h Daphnia
EC50 - for Algae / Aquatic Plants	> 11 mg/l/72h

### 12.2. Persistence and degradability

Acetone  
Rapidly degradable

Dimethyl ether  
Solubility in water 45600 mg/l a 25°C/77°F (ECHA website)  
NOT rapidly degradable

Butanone  
Solubility in water 22000 mg/l  
Rapidly degradable

bis-[4-(2,3-epoxipropoxy)phenyl]propane  
Solubility in water 6,9 mg/l/20°C (ECHA website)  
NOT rapidly degradable

### 12.3. Bioaccumulative potential

Acetone  
Partition coefficient: n-octanol/water -0,24 (ECHA website)

Butanone  
Partition coefficient: n-octanol/water 0,3

bis-[4-(2,3-epoxipropoxy)phenyl]propane  
Partition coefficient: n-octanol/water 3,78 Log Pow  
BCF 31 l/kg

### 12.4. Mobility in soil

Information not available

### 12.5. Results of PBT and vPvB assessment

On the basis of available data, the product does not contain any PBT or vPvB in percentage  $\geq$  than 0,1%.

### 12.6. Endocrine disrupting properties

Based on the available data, the product does not contain substances listed in the main European lists of potential or suspected endocrine disruptors with environmental effects under evaluation.

### 12.7. Other adverse effects

Information not available

## SECTION 13. Disposal considerations

### 13.1. Waste treatment methods

Reuse, when possible. Product residues should be considered special hazardous waste. The hazard level of waste containing this product should be evaluated according to applicable regulations.

Disposal must be performed through an authorised waste management firm, in compliance with national and local regulations.

Waste transportation may be subject to ADR restrictions.

CONTAMINATED PACKAGING

Contaminated packaging must be recovered or disposed of in compliance with national waste management regulations.

## SECTION 14. Transport information

### 14.1. UN number or ID number

ADR / RID, IMDG, IATA: UN 1950

### 14.2. UN proper shipping name

ADR / RID: AEROSOLS, FLAMMABLE  
IMDG: AEROSOLS  
IATA: AEROSOLS, FLAMMABLE

### 14.3. Transport hazard class(es)

ADR / RID: Class: 2 Label: 2.1



IMDG: Class: 2 Label: 2.1



IATA: Class: 2 Label: 2.1



### 14.4. Packing group

ADR / RID, IMDG, IATA: -

### 14.5. Environmental hazards

ADR / RID: NO  
IMDG: not marine pollutant  
IATA: NO

### 14.6. Special precautions for user

ADR / RID:	HIN - Kemler: --	Limited Quantities: 1 lt	Tunnel restriction code: (D)
	Special provision: 190, 327, 344, 625		
IMDG:	EMS: F-D, S-U	Limited Quantities: 1 lt	
IATA:	Cargo:	Maximum quantity: 150 kg	Packaging instructions: 203
	Passengers:	Maximum quantity: 75 kg	Packaging instructions: 203
	Special provision:	A145, A167, A802	

### 14.7. Maritime transport in bulk according to IMO instruments

Information not relevant

## SECTION 15. Regulatory information

### 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

Seveso Category - Directive 2012/18/EU: P3a

Restrictions relating to the product or contained substances pursuant to Annex XVII to EC Regulation 1907/2006

Product

Point 40

Contained substance

Point 75

Regulation (EU) 2019/1148 - on the marketing and use of explosives precursors

Regulated explosives precursor

The acquisition, introduction, possession or use of that regulated explosives precursor by members of the general public is subject to reporting obligations as set out in Article 9.

All suspicious transactions and significant disappearances and thefts must be reported to the relevant national contact point.

## SECTION 15. Regulatory information ... / >>

### Substances in Candidate List (Art. 59 REACH)

On the basis of available data, the product does not contain any SVHC in percentage  $\geq$  than 0,1%.

### Substances subject to authorisation (Annex XIV REACH)

None

### Substances subject to exportation reporting pursuant to Regulation (EU) 649/2012:

None

### Substances subject to the Rotterdam Convention:

None

### Substances subject to the Stockholm Convention:

None

### Healthcare controls

Workers exposed to this chemical agent must not undergo health checks, provided that available risk-assessment data prove that the risks related to the workers' health and safety are modest and that the 98/24/EC directive is respected.

### German regulation on the classification of substances hazardous to water (AwSV, vom 18. April 2017)

WGK 1: Low hazard to waters

## 15.2. Chemical safety assessment

A chemical safety assessment has not been performed for the preparation/for the substances indicated in section 3.

## SECTION 16. Other information

Text of hazard (H) indications mentioned in section 2-3 of the sheet:

<b>Flam. Gas 1A</b>	Flammable gas, category 1A
<b>Aerosol 1</b>	Aerosol, category 1
<b>Aerosol 3</b>	Aerosol, category 3
<b>Flam. Liq. 2</b>	Flammable liquid, category 2
<b>Press. Gas (Liq.)</b>	Liquefied gas
<b>Eye Irrit. 2</b>	Eye irritation, category 2
<b>Skin Irrit. 2</b>	Skin irritation, category 2
<b>Skin Sens. 1</b>	Skin sensitization, category 1
<b>STOT SE 3</b>	Specific target organ toxicity - single exposure, category 3
<b>Aquatic Chronic 2</b>	Hazardous to the aquatic environment, chronic toxicity, category 2
<b>Aquatic Chronic 3</b>	Hazardous to the aquatic environment, chronic toxicity, category 3
<b>H220</b>	Extremely flammable gas.
<b>H222</b>	Extremely flammable aerosol.
<b>H229</b>	Pressurised container: may burst if heated.
<b>H225</b>	Highly flammable liquid and vapour.
<b>H280</b>	Contains gas under pressure; may explode if heated.
<b>H319</b>	Causes serious eye irritation.
<b>H315</b>	Causes skin irritation.
<b>H317</b>	May cause an allergic skin reaction.
<b>H336</b>	May cause drowsiness or dizziness.
<b>H411</b>	Toxic to aquatic life with long lasting effects.
<b>H412</b>	Harmful to aquatic life with long lasting effects.
<b>EUH066</b>	Repeated exposure may cause skin dryness or cracking.
<b>EUH205</b>	Contains epoxy constituents. May produce an allergic reaction.

### LEGEND:

- ADR: European Agreement concerning the carriage of Dangerous goods by Road
- ATE: Acute Toxicity Estimate
- CAS: Chemical Abstract Service Number
- CE50: Effective concentration (required to induce a 50% effect)
- CE: Identifier in ESIS (European archive of existing substances)
- CLP: Regulation (EC) 1272/2008
- DNEL: Derived No Effect Level
- EmS: Emergency Schedule
- GHS: Globally Harmonized System of classification and labeling of chemicals
- IATA DGR: International Air Transport Association Dangerous Goods Regulation

## SECTION 16. Other information ... / >>

- IC50: Immobilization Concentration 50%
- IMDG: International Maritime Code for dangerous goods
- IMO: International Maritime Organization
- INDEX: Identifier in Annex VI of CLP
- LC50: Lethal Concentration 50%
- LD50: Lethal dose 50%
- OEL: Occupational Exposure Level
- PBT: Persistent, bioaccumulative and toxic
- PEC: Predicted environmental Concentration
- PEL: Predicted exposure level
- PMT: Persistent, mobile and toxic
- PNEC: Predicted no effect concentration
- REACH: Regulation (EC) 1907/2006
- RID: Regulation concerning the international transport of dangerous goods by train
- TLV: Threshold Limit Value
- TLV CEILING: Concentration that should not be exceeded during any time of occupational exposure.
- TWA: Time-weighted average exposure limit
- TWA STEL: Short-term exposure limit
- VOC: Volatile organic Compounds
- vPvB: Very persistent and very bioaccumulative
- vPvM: Very persistent and very mobile
- WGK: Water hazard classes (German).

### GENERAL BIBLIOGRAPHY

1. Regulation (EC) 1907/2006 (REACH) of the European Parliament
  2. Regulation (EC) 1272/2008 (CLP) of the European Parliament
  3. Regulation (EU) 2020/878 (II Annex of REACH Regulation)
  4. Regulation (EC) 790/2009 (I Atp. CLP) of the European Parliament
  5. Regulation (EU) 286/2011 (II Atp. CLP) of the European Parliament
  6. Regulation (EU) 618/2012 (III Atp. CLP) of the European Parliament
  7. Regulation (EU) 487/2013 (IV Atp. CLP) of the European Parliament
  8. Regulation (EU) 944/2013 (V Atp. CLP) of the European Parliament
  9. Regulation (EU) 605/2014 (VI Atp. CLP) of the European Parliament
  10. Regulation (EU) 2015/1221 (VII Atp. CLP) of the European Parliament
  11. Regulation (EU) 2016/918 (VIII Atp. CLP) of the European Parliament
  12. Regulation (EU) 2016/1179 (IX Atp. CLP)
  13. Regulation (EU) 2017/776 (X Atp. CLP)
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  16. Delegated Regulation (UE) 2018/1480 (XIII Atp. CLP)
  17. Regulation (EU) 2019/1148
  18. Delegated Regulation (UE) 2020/217 (XIV Atp. CLP)
  19. Delegated Regulation (UE) 2020/1182 (XV Atp. CLP)
  20. Delegated Regulation (UE) 2021/643 (XVI Atp. CLP)
  21. Delegated Regulation (UE) 2021/849 (XVII Atp. CLP)
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- The Merck Index. - 10th Edition
  - Handling Chemical Safety
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  - Patty - Industrial Hygiene and Toxicology
  - N.I. Sax - Dangerous properties of Industrial Materials-7, 1989 Edition
  - IFA GESTIS website
  - ECHA website
  - Database of SDS models for chemicals - Ministry of Health and ISS (Istituto Superiore di Sanità) - Italy

### Note for users:

The information contained in the present sheet are based on our own knowledge on the date of the last version. Users must verify the suitability and thoroughness of provided information according to each specific use of the product.

This document must not be regarded as a guarantee on any specific product property.

The use of this product is not subject to our direct control; therefore, users must, under their own responsibility, comply with the current health and safety laws and regulations. The producer is relieved from any liability arising from improper uses.

Provide appointed staff with adequate training on how to use chemical products.

### CALCULATION METHODS FOR CLASSIFICATION



## SECTION 16. Other information ... / >>

Chemical and physical hazards: Product classification derives from criteria established by the CLP Regulation, Annex I, Part 2. The data for evaluation of chemical-physical properties are reported in section 9.

Health hazards: Product classification is based on calculation methods as per Annex I of CLP, Part 3, unless determined otherwise in Section 11.

Environmental hazards: Product classification is based on calculation methods as per Annex I of CLP, Part 4, unless determined otherwise in Section 12.

Changes to previous review:

The following sections were modified:

08.