

(GB)

Page 1 of 6  
 Safety data sheet according to Regulation (EC) No 1907/2006, Annex II  
 Revision date / version: 12.08.2024 / 0009  
 Replacing version dated / version: 01.11.2021 / 0008  
 Valid from: 12.08.2024  
 PDF print date: 14.08.2024  
 COSMO® EP-201.110

(COSMOFEN AL Komp. B-Binder)

## Safety data sheet according to Regulation (EC) No 1907/2006, Annex II

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

#### 1.1 Product identifier

**COSMO® EP-201.110**

**(COSMOFEN AL Komp. B-Binder)**

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

**Relevant identified uses of the substance or mixture:**

Adhesive

**Uses advised against:**

No information available at present.

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

Weiss Chemie + Technik GmbH & Co. KG  
 Hansastrasse 2  
 35708 Haiger  
 Tel: +49 (0) 2773 / 815-0  
 msds@weiss-chemie.de  
 www.weiss-chemie.de

Qualified person's e-mail address: info@chemical-check.de, k.schnurbusch@chemical-check.de Please DO NOT use for requesting Safety Data Sheets.

#### 1.4 Emergency telephone number

**Emergency information services / official advisory body:**

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**Telephone number of the company in case of emergencies:**

+49 (0) 700 / 24 112 112 (WIC)  
 +1 872 5888271 (WIC)

### SECTION 2: Hazards identification

#### 2.1 Classification of the substance or mixture

**Classification according to Regulation (EC) 1272/2008 (CLP)**

Hazard class	Hazard category	Hazard statement
Eye Irrit.	2	H319-Causes serious eye irritation.
Skin Irrit.	2	H315-Causes skin irritation.
Skin Sens.	1	H317-May cause an allergic skin reaction.
Aquatic Chronic	2	H411-Toxic to aquatic life with long lasting effects.

#### 2.2 Label elements

**Labeling according to Regulation (EC) 1272/2008 (CLP)**



Warning

H319-Causes serious eye irritation. H315-Causes skin irritation. H317-May cause an allergic skin reaction. H411-Toxic to aquatic life with long lasting effects.

P261-Avoid breathing vapours or spray. P273-Avoid release to the environment. P280-Wear protective gloves and eye protection / face protection.  
 P314-Get medical advice / attention if you feel unwell.

Bis-[4-(2,3-epoxypropoxy)phenyl]propane  
 Reaction mass of 2,2'-[methylenebis(2,1-phenyleneoxymethylene)]bis(oxirane) and 2,2'-[methylenebis(4,1-phenyleneoxymethylene)]bis(oxirane) and 2-((2-[4-(oxiran-2-ylmethoxy)benzyl]phenoxy)methyl)oxirane

#### 2.3 Other hazards

The mixture does not contain any vPvB substance (vPvB = very persistent, very bioaccumulative) or is not included under XIII of the regulation (EC) 1907/2006 (< 0,1 %).  
 The mixture does not contain any PBT substance (PBT = persistent, bioaccumulative, toxic) or is not included under XIII of the regulation (EC) 1907/2006 (< 0,1 %).  
 The mixture does not contain any substance with endocrine disrupting properties (< 0,1 %).

### SECTION 3: Composition/information on ingredients

#### 3.1 Substances

n.a.

#### 3.2 Mixtures

<b>Reaction mass of 2,2'-[methylenebis(2,1-phenyleneoxymethylene)]bis(oxirane) and 2,2'-[methylenebis(4,1-phenyleneoxymethylene)]bis(oxirane) and 2-((2-[4-(oxiran-2-ylmethoxy)benzyl]phenoxy)methyl)oxirane</b>	
<b>Registration number (REACH)</b>	01-2119454392-40-XXXX
<b>Index</b>	---
<b>EINECS, ELINCS, NLP, REACH-IT List-No.</b>	701-263-0
<b>CAS</b>	---
<b>content %</b>	30-50
<b>Classification according to Regulation (EC) 1272/2008 (CLP), M-factors</b>	Skin Irrit. 2, H315 Skin Sens. 1, H317 Aquatic Chronic 2, H411

<b>Bis-[4-(2,3-epoxypropoxy)phenyl]propane</b>	
<b>Registration number (REACH)</b>	01-2119456619-26-XXXX
<b>Index</b>	603-073-00-2
<b>EINECS, ELINCS, NLP, REACH-IT List-No.</b>	216-823-5
<b>CAS</b>	1675-54-3
<b>content %</b>	10-40
<b>Classification according to Regulation (EC) 1272/2008 (CLP), M-factors</b>	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317 Aquatic Chronic 2, H411
<b>Specific Concentration Limits and ATE</b>	Skin Irrit. 2, H315: >=5 % Eye Irrit. 2, H319: >=5 %

For the text of the H-phrases and classification codes (GHS/CLP), see Section 16.  
 The substances named in this section are given with their actual, appropriate classification!  
 For substances that are listed in appendix VI, table 3.1 of the regulation (EC) no. 1272/2008 (CLP regulation) this means that all notes that may be given here for the named classification have been taken into account.  
 The addition of the highest concentrations listed here can result in a classification. Only when this classification is listed in Section 2 does it apply. In all other cases the total concentration is below the classification.

### SECTION 4: First aid measures

#### 4.1 Description of first aid measures

First-aiders should ensure they are protected!  
 Never pour anything into the mouth of an unconscious person!

##### Inhalation

Remove person from danger area.  
 Supply person with fresh air and consult doctor according to symptoms.

##### Skin contact

Remove polluted, soaked clothing immediately, wash thoroughly with plenty of water and soap, in case of irritation of the skin (flare), consult a doctor.

##### Eye contact

Remove contact lenses.  
 Wash thoroughly for several minutes using copious water. Seek medical help if necessary.

##### Ingestion

Rinse the mouth thoroughly with water.  
 Do not induce vomiting - give copious water to drink. Consult doctor immediately.

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

If applicable delayed symptoms and effects can be found in section 11 and the absorption route in section 4.1. In certain cases, the symptoms of poisoning may only appear after an extended period / after several hours.

The following may occur:

Allergic reaction possible.

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

Symptomatic treatment.

### SECTION 5: Firefighting measures

#### 5.1 Extinguishing media

**Suitable extinguishing media**

Water jet spray/foam/CO2/dry extinguisher

**Unsuitable extinguishing media**

High volume water jet

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

In case of fire the following can develop:

Oxides of carbon

Hydrogen chloride

Toxic gases

#### 5.3 Advice for firefighters

For personal protective equipment see Section 8.  
 In case of fire and/or explosion do not breathe fumes.

Protective respirator with independent air supply.

According to size of fire

Full protection, if necessary.

Dispose of contaminated extinction water according to official regulations.

### SECTION 6: Accidental release measures

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

##### 6.1.1 For non-emergency personnel

In case of spillage or accidental release, wear personal protective equipment as specified in section 8 to prevent contamination.

Ensure sufficient ventilation, remove sources of ignition.

Avoid dust formation with solid or powder products.

Leave the danger zone if possible, use existing emergency plans if necessary.

Ensure sufficient supply of air.

Avoid contact with eyes or skin.

If applicable, caution - risk of slipping.

##### 6.1.2 For emergency responders

See section 8 for suitable protective equipment and material specifications.

#### 6.2 Environmental precautions

If leakage occurs, dam up.

Resolve leaks if this possible without risk.

Prevent from entering drainage system.

Prevent surface and ground-water infiltration, as well as ground penetration.

If accidental entry into drainage system occurs, inform responsible authorities.

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

Soak up with absorbent material (e.g. universal binding agent, sand, diatomaceous earth, sawdust) and dispose of according to Section 13.

#### 6.4 Reference to other sections

For personal protective equipment see Section 8 and for disposal instructions see Section 13.

### SECTION 7: Handling and storage

In addition to information given in this section, relevant information can also be found in section 8 and 6.1.



Safety data sheet according to Regulation (EC) No 1907/2006, Annex II
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7.1 Precautions for safe handling

7.1.1 General recommendations

Ensure good ventilation.
Keep away from sources of ignition - Do not smoke.
Avoid contact with eyes or skin.
Eating, drinking, smoking, as well as food-storage, is prohibited in work-room.
Observe directions on label and instructions for use.
Use working methods according to operating instructions.

7.1.2 Notes on general hygiene measures at the workplace

General hygiene measures for the handling of chemicals are applicable.
Wash hands before breaks and at end of work.
Keep away from food, drink and animal feedingstuffs.
Remove contaminated clothing and protective equipment before entering areas in which food is consumed.

7.2 Conditions for safe storage, including any incompatibilities

Keep out of access to unauthorised individuals.
Not to be stored in gangways or stair wells.
Store product closed and only in original packing.
Do not store with oxidizing agents.
Under all circumstances prevent penetration into the soil.
Store cool.
Store in a dry place.

7.3 Specific end use(s)

Adhesive
Observe the instructions for good working practice and the recommendations for risk assessment.
Consult hazardous substance information systems, e.g. from the professional associations, the chemical industry or different industries, depending on the application (building materials, wood, chemistry, laboratory, leather, metal).

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Table with 2 columns: Chemical Name (Calcium carbonate) and WEL-STEL: ---

Table with 7 columns: Area of application, Exposure route / Environmental compartment, Effect on health, Descriptor, Value, Unit, Note. Contains data for various environmental and human exposure scenarios.

Table with 7 columns: Area of application, Exposure route / Environmental compartment, Effect on health, Descriptor, Value, Unit, Note. Contains data for Bis-[4-(2,3-epoxypropoxy)phenyl]propane.

Table with 6 columns: Consumer, Human - inhalation, Long term, systemic effects, DNEL, 0,75, mg/m3. Contains data for various exposure routes.

Table with 7 columns: Area of application, Exposure route / Environmental compartment, Effect on health, Descriptor, Value, Unit, Note. Contains data for Calcium carbonate.

United Kingdom | WEL-TWA = Workplace Exposure Limit - Long-term exposure limit - 8-hour TWA (= time weighted average) reference period (EH40/2005 Workplace exposure limits (Fourth Edition 2020)).
(EU) = Directive 91/322/EEC, 98/24/EC, 2000/39/EC, 2004/37/EC, 2006/15/EC, 2009/161/EU, 2017/164/EU or 2019/1831/EU:
(8) = Inhalable fraction (2004/37/EC, 2017/164/EU). (9) = Respirable fraction (2004/37/EC, 2017/164/EU).
(11) = Inhalable fraction (2004/37/EC). (12) = Inhalable fraction. Respirable fraction in those Member States that implement, on the date of the entry into force of this Directive, a biomonitoring system with a biological limit value not exceeding 0,002 mg Cd/g creatinine in urine (2004/37/EC).
| WEL-STEL = Workplace Exposure Limit - Short-term exposure limit - 15-minute reference period (EH40/2005 Workplace exposure limits (Fourth Edition 2020)).
(EU) = Directive 91/322/EEC, 98/24/EC, 2000/39/EC, 2004/37/EC, 2006/15/EC, 2009/161/EU, 2017/164/EU or 2019/1831/EU:
(8) = Inhalable fraction (2004/37/EC, 2017/164/EU). (9) = Respirable fraction (2004/37/EC, 2017/164/EU).
(10) = Short-term exposure limit value in relation to a reference period of 1 minute (2017/164/EU).
| BMGV = Biological monitoring guidance value (EH40/2005 Workplace exposure limits (Fourth Edition 2020)).
(EU) = Directive 98/24/EC or 2004/37/EC or SCOEL (Biological Limit Value - BLV, Recommendation from the Scientific Committee on Occupational Exposure Limits (SCOEL)) |
| Other information (EH40/2005 Workplace exposure limits (Fourth Edition 2020)): Sen = Capable of causing occupational asthma. Sk = Can be absorbed through skin. Carc = Capable of causing cancer and/or heritable genetic damage.
(EU) = Directive 91/322/EEC, 98/24/EC, 2000/39/EC, 2004/37/EC, 2006/15/EC, 2009/161/EU, 2017/164/EU or 2019/1831/EU:
(13) = The substance can cause sensitisation of the skin and of the respiratory tract (2004/37/EC), (14) = The substance can cause sensitisation of the skin (2004/37/EC). |

8.2 Exposure controls

8.2.1 Appropriate engineering controls

Ensure good ventilation. This can be achieved by local suction or general air extraction.
If this is insufficient to maintain the concentration under the WEL or AGW values, suitable breathing protection should be worn.
Applies only if maximum permissible exposure values are listed here.
Suitable assessment methods for reviewing the effectiveness of protection measures adopted include metrological and non-metrological investigative techniques.
These are specified by e.g. EN 14042.
EN 14042 'Workplace atmospheres. Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents'.

8.2.2 Individual protection measures, such as personal protective equipment

General hygiene measures for the handling of chemicals are applicable.
Wash hands before breaks and at end of work.
Keep away from food, drink and animal feedingstuffs.
Remove contaminated clothing and protective equipment before entering areas in which food is consumed.

Eye/face protection:
Tight fitting protective goggles with side protection (EN 166).

Skin protection - Hand protection:
Chemical resistant protective gloves (EN ISO 374).
Recommended
Protective gloves made of fluorocarbon rubber (EN ISO 374).
Protective nitrile gloves (EN ISO 374).
Minimum layer thickness in mm:
>= 0,5

Permeation time (penetration time) in minutes:
>= 240
The breakthrough times determined in accordance with EN 16523-1 were not obtained under practical conditions.
The recommended maximum wearing time is 50% of breakthrough time.
Protective hand cream recommended.

Skin protection - Other:
Protective working garments (e.g. safety shoes EN ISO 20345, long-sleeved protective working garments).

Respiratory protection:
Normally not necessary.
If air supply is not sufficient, wear protective breathing apparatus.
Filter A P2 (EN 14387), code colour brown, white
Observe wearing time limitations for respiratory protection equipment.

Thermal hazards:
Not applicable

Additional information on hand protection - No tests have been performed.
In the case of mixtures, the selection has been made according to the knowledge available and the information about the contents.
Selection of materials derived from glove manufacturer's indications.
Final selection of glove material must be made taking the breakthrough times, permeation rates and degradation into account.
Selection of a suitable glove depends not only on the material but also on other quality characteristics and varies from manufacturer to manufacturer.
In the case of mixtures, the resistance of glove materials cannot be predicted and must therefore be tested before use.

(GB)

Page 3 of 6  
 Safety data sheet according to Regulation (EC) No 1907/2006, Annex II  
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The exact breakthrough time of the glove material can be requested from the protective glove manufacturer and must be observed.

**8.2.3 Environmental exposure controls**

No information available at present.

**SECTION 9: Physical and chemical properties**

**9.1 Information on basic physical and chemical properties**

Physical state:	Paste, liquid.
Colour:	White
Odour:	Characteristic
Melting point/freezing point:	There is no information available on this parameter.
Boiling point or initial boiling point and boiling range:	There is no information available on this parameter.
Flammability:	Combustible.
Lower explosion limit:	There is no information available on this parameter.
Upper explosion limit:	There is no information available on this parameter.
Flash point:	There is no information available on this parameter.
Auto-ignition temperature:	There is no information available on this parameter.
Decomposition temperature:	There is no information available on this parameter.
pH:	Mixture is non-soluble (in water).
Kinematic viscosity:	There is no information available on this parameter.
Solubility:	Not miscible
Partition coefficient n-octanol/water (log value):	Does not apply to mixtures.
Vapour pressure:	There is no information available on this parameter.
Density and/or relative density:	-1,47 g/cm3 (20°C)
Relative vapour density:	There is no information available on this parameter.
Particle characteristics:	Does not apply to liquids.

**9.2 Other information**

Explosives:	Product is not explosive.
Oxidising liquids:	No
Evaporation rate:	n.a.
Bulk density:	n.a.

**SECTION 10: Stability and reactivity**

**10.1 Reactivity**

The product has not been tested.

**10.2 Chemical stability**

Stable with proper storage and handling.

**10.3 Possibility of hazardous reactions**

No dangerous reactions are known.

**10.4 Conditions to avoid**

See also section 7.

Strong heat

**10.5 Incompatible materials**

See also section 7.

Avoid contact with strong oxidizing agents.

Avoid contact with strong alkalis.

Avoid contact with strong acids.

**10.6 Hazardous decomposition products**

See also section 5.2.

No decomposition when used as directed.

**SECTION 11: Toxicological information**

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

Possibly more information on health effects, see Section 2.1 (classification).

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(COSMOFEN AL Komp. B-Binder)

Toxicity / effect	Endpo int	Value	Unit	Organis m	Test method	Notes
Acute toxicity, by oral route:						n.d.a.
Acute toxicity, by dermal route:						n.d.a.
Acute toxicity, by inhalation:						n.d.a.
Skin corrosion/irritation:						n.d.a.
Serious eye damage/irritation:						n.d.a.
Respiratory or skin sensitisation:						n.d.a.
Germ cell mutagenicity:						n.d.a.
Carcinogenicity:						n.d.a.
Reproductive toxicity:						n.d.a.
Specific target organ toxicity - single exposure (STOT-SE):						n.d.a.
Specific target organ toxicity - repeated exposure (STOT-RE):						n.d.a.
Aspiration hazard:						n.d.a.
Symptoms:						n.d.a.

Reaction mass of 2,2'-[methylenebis(2,1-phenyleneoxymethylene)]bis(oxirane) and 2,2'-[methylenebis(4,1-phenyleneoxymethylene)]bis(oxirane) and 2-[(2-[4-(oxiran-2-ylmethoxy)benzyl]phenoxy)methyl]oxirane

Toxicity / effect	Endpo int	Value	Unit	Organis m	Test method	Notes
Acute toxicity, by oral route:	LD50	>2000	mg/k g	Rat	OECD 401 (Acute Oral Toxicity)	
Acute toxicity, by dermal route:	LD50	>2000	mg/k g	Rat	OECD 402 (Acute Dermal Toxicity)	

Skin corrosion/irritation:				Rabbit	OECD 404 (Acute Dermal Irritation/Corrosion)	Skin Irrit. 2
Serious eye damage/irritation:				Rabbit	OECD 405 (Acute Eye Irritation/Corrosion)	Not irritant
Respiratory or skin sensitisation:				Mouse	OECD 429 (Skin Sensitisation - Local Lymph Node Assay)	Yes (skin contact)
Respiratory or skin sensitisation:				Guinea pig	OECD 406 (Skin Sensitisation)	Yes (skin contact)
Germ cell mutagenicity:				Mouse	OECD 474 (Mammalian Erythrocyte Micronucleus Test)	Negative
Germ cell mutagenicity:				Rat	OECD 486 (Unscheduled DNA Synthesis (UDS) Test with Mammalian Liver Cells In Vivo)	Negative
Carcinogenicity:	NOAE L	~800	mg/k g/d	Mouse		Negative 2 d/w, 24 months
Reproductive toxicity:	NOAE L	750	mg/k g bw/d	Rat	OECD 416 (Two-generation Reproduction Toxicity Study)	
Specific target organ toxicity - repeated exposure (STOT-RE), oral:	NOAE L	~250	mg/k g bw/d	Rat	OECD 408 (Repeated Dose 90-Day Oral Toxicity Study in Rodents)	

Bis-[4-(2,3-epoxypropoxy)phenyl]propane						
Toxicity / effect	Endpo int	Value	Unit	Organis m	Test method	Notes
Acute toxicity, by oral route:	LD50	>2000	mg/k g	Rat	OECD 420 (Acute Oral toxicity - Fixed Dose Procedure)	
Acute toxicity, by dermal route:	LD50	>2000	mg/k g	Rat	OECD 402 (Acute Dermal Toxicity)	
Skin corrosion/irritation:				Rabbit	OECD 404 (Acute Dermal Irritation/Corrosion)	Skin Irrit. 2
Serious eye damage/irritation:				Rabbit	OECD 405 (Acute Eye Irritation/Corrosion)	Eye Irrit. 2
Respiratory or skin sensitisation:				Mouse	OECD 429 (Skin Sensitisation - Local Lymph Node Assay)	Yes (skin contact)
Germ cell mutagenicity:					OECD 471 (Bacterial Reverse Mutation Test)	Positive
Germ cell mutagenicity:					OECD 476 (In Vitro Mammalian Cell Gene Mutation Test)	Positive
Germ cell mutagenicity:					OECD 478 (Genetic Toxicology - Rodent dominant Lethal Test)	Negative
Germ cell mutagenicity:				Salmonella typhimurium	OECD 472 (Genetic Toxicology - Escherichia coli, Reverse Assay)	Negative
Carcinogenicity:				Rat	OECD 453 (Combined Chronic Toxicity/Carcinogenicity Studies)	Negative
Reproductive toxicity (Developmental toxicity):				Rat	OECD 414 (Prenatal Developmental Toxicity Study)	Negative
Reproductive toxicity (Developmental toxicity):				Rabbit	OECD 414 (Prenatal Developmental Toxicity Study)	Negative
Reproductive toxicity (Effects on fertility):	NOAE L	540	mg/k g bw/d	Rat	OECD 416 (Two-generation Reproduction Toxicity Study)	
Specific target organ toxicity - repeated exposure (STOT-RE), oral:	NOAE L	50	mg/k g	Rat	OECD 408 (Repeated Dose 90-Day Oral Toxicity Study in Rodents)	
Specific target organ toxicity - repeated exposure (STOT-RE), dermal:	NOAE L	10	mg/k g	Rat		
Specific target organ toxicity - repeated exposure (STOT-RE), dermal:	NOAE L	100	mg/k g	Mouse		
Symptoms:						breathing difficulties, coughing, gastrointestinal disturbances

GB

Page 4 of 6  
 Safety data sheet according to Regulation (EC) No 1907/2006, Annex II  
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 COSMO® EP-201.110

(COSMOFEN AL Komp. B-Binder)

Calcium carbonate						
Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:	LD50	>2000	mg/kg	Rat	OECD 420 (Acute Oral toxicity - Fixed Dose Procedure)	
Acute toxicity, by dermal route:	LD50	>2000	mg/kg	Rat	OECD 402 (Acute Dermal Toxicity)	
Acute toxicity, by inhalation:	LC50	>3	mg/l/4h	Rat	OECD 403 (Acute Inhalation Toxicity)	
Skin corrosion/irritation:				Rabbit	OECD 404 (Acute Dermal Irritation/Corrosion)	Not irritant
Serious eye damage/irritation:				Rabbit	OECD 405 (Acute Eye Irritation/Corrosion)	Not irritant
Respiratory or skin sensitisation:				Mouse	OECD 429 (Skin Sensitisation - Local Lymph Node Assay)	No (skin contact)
Germ cell mutagenicity:					OECD 471 (Bacterial Reverse Mutation Test)	Negative
Germ cell mutagenicity:					OECD 473 (In Vitro Mammalian Chromosome Aberration Test)	Negative
Germ cell mutagenicity:					OECD 476 (In Vitro Mammalian Cell Gene Mutation Test)	Negative
Carcinogenicity:						No indications of such an effect.
Reproductive toxicity:	NOEL	1000	mg/kg bw/d	Rat	OECD 422 (Combined Repeated Dose Tox. Study with the Reproduction/Development, Tox. Screening Test)	
Specific target organ toxicity - single exposure (STOT-SE):						No indications of such an effect.
Specific target organ toxicity - repeated exposure (STOT-RE):						No indications of such an effect.
Specific target organ toxicity - repeated exposure (STOT-RE), oral:	NOEL	1000	mg/kg bw/d	Rat	OECD 422 (Combined Repeated Dose Tox. Study with the Reproduction/Development, Tox. Screening Test)	
Specific target organ toxicity - repeated exposure (STOT-RE), inhalat.:	NOEL	0,212	mg/l	Rat	OECD 413 (Subchronic Inhalation Toxicity - 90-Day Study)	
Aspiration hazard:						No

11.2. Information on other hazards

COSMO® EP-201.110

(COSMOFEN AL Komp. B-Binder)

Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Endocrine disrupting properties:						Does not apply to mixtures.
Other information:						No other relevant information available on adverse effects on health.

SECTION 12: Ecological information

Possibly more information on environmental effects, see Section 2.1 (classification).

COSMO® EP-201.110

(COSMOFEN AL Komp. B-Binder)

Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
12.1. Toxicity to fish:							n.d.a.
12.1. Toxicity to daphnia:							n.d.a.
12.1. Toxicity to algae:							n.d.a.

12.2. Persistence and degradability:							n.d.a.
12.3. Bioaccumulative potential:							n.d.a.
12.4. Mobility in soil:							n.d.a.
12.5. Results of PBT and vPvB assessment:							n.d.a.
12.6. Endocrine disrupting properties:							Does not apply to mixtures.
12.7. Other adverse effects:							No information available on other adverse effects on the environment.

Reaction mass of 2,2'-(methylenbis(2,1-phenyleneoxymethylene))bis(oxirane) and 2,2'-(methylenbis(4,1-phenyleneoxymethylene))bis(oxirane) and 2-(2-[4-(oxiran-2-ylmethoxy)benzyl]phenoxy)methyl)oxirane

Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
12.1. Toxicity to fish:	EC50	96h	2,54	mg/l	Leuciscus idus		
12.1. Toxicity to daphnia:	LC50	48h	2,55	mg/l	Daphnia magna		
12.1. Toxicity to algae:	EC50	72h	>1,8	mg/l	Pseudokirchneriella subcapitata	OECD 201 (Alga, Growth Inhibition Test)	
12.2. Persistence and degradability:		28d	0	%	activated sludge	Regulation (EC) 440/2008 C.4-E (DETERMINATION OF 'READY' BIODEGRADABILITY - CLOSED BOTTLE TEST)	Not biodegradable
12.2. Persistence and degradability:		28d	1	%	activated sludge	OECD 301 B (Ready Biodegradability - Co2 Evolution Test)	Not biodegradable
12.2. Persistence and degradability:		28d	16	%	activated sludge	OECD 301 B (Ready Biodegradability - Co2 Evolution Test)	
12.3. Bioaccumulative potential:	Log Pow		3,3			OECD 117 (Partition Coefficient (n-octanol/water) - HPLC method)	Low
12.3. Bioaccumulative potential:	BCF		150				Low QSAR

Bis-[4-(2,3-epoxypropoxy)phenyl]propane

Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
12.1. Toxicity to fish:	LC50	96h	1,5-2	mg/l	Oncorhynchus mykiss	OECD 203 (Fish, Acute Toxicity Test)	
12.1. Toxicity to daphnia:	NOEC/NOEL	21d	0,3	mg/l	Daphnia magna	OECD 211 (Daphnia magna Reproduction Test)	
12.1. Toxicity to daphnia:	EC50	48h	1,8-2,7	mg/l	Daphnia magna	OECD 202 (Daphnia sp. Acute Immobilisation Test)	
12.1. Toxicity to algae:	NOEC/NOEL	72h	4,2	mg/l	Scenedesmus subspicatus		
12.1. Toxicity to algae:	LC50	72h	9,4	mg/l	Selenastrum capricornutum	U.S. EPA ECOTOX Database	
12.2. Persistence and degradability:		28d	6-12	%	activated sludge	OECD 301 B (Ready Biodegradability - Co2 Evolution Test)	Not readily biodegradable
12.2. Persistence and degradability:		28d	5	%	activated sludge	OECD 301 F (Ready Biodegradability - Manometric Respirometry Test)	Not readily biodegradable
12.3. Bioaccumulative potential:	BCF		3-31				Low

(GB)

Page 5 of 6  
 Safety data sheet according to Regulation (EC) No 1907/2006, Annex II  
 Revision date / version: 12.08.2024 / 0009  
 Replacing version dated / version: 01.11.2021 / 0008  
 Valid from: 12.08.2024  
 PDF print date: 14.08.2024  
 COSMO® EP-201.110

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12.3. Bioaccumulative potential:	Log Pow		2,64 -3,7 8			OECD 117 (Partition Coefficient (n-octanol/water) - HPLC method)	Low
12.4. Mobility in soil:	Koc		445				
12.5. Results of PBT and vPvB assessment							No PBT substance, No vPvB substance
Toxicity to bacteria:	IC50	3h	>10 0	mg/l	activated sludge		

Calcium carbonate							
Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
12.1. Toxicity to fish:	LC50	96h			Oncorhynchus mykiss	OECD 203 (Fish, Acute Toxicity Test)	No observation with saturated solution of test material.
12.1. Toxicity to daphnia:	EC50	48h			Daphnia magna	OECD 202 (Daphnia sp. Acute Immobilisation Test)	No observation with saturated solution of test material.
12.1. Toxicity to algae:	EC50	72h	>14	mg/l	Desmodesmus subspicatus	OECD 201 (Alga, Growth Inhibition Test)	
12.1. Toxicity to algae:	NOEC/N OEL	72h	14	mg/l	Desmodesmus subspicatus	OECD 201 (Alga, Growth Inhibition Test)	
12.2. Persistence and degradability:							Not relevant for inorganic substances.
12.3. Bioaccumulative potential:							Not to be expected
12.4. Mobility in soil:							n.a.
12.5. Results of PBT and vPvB assessment							No PBT substance, No vPvB substance
Toxicity to bacteria:	EC50	3h	>10 00	mg/l	activated sludge	OECD 209 (Activated Sludge, Respiration Inhibition Test (Carbon and Ammonium Oxidation))	
Toxicity to bacteria:	NOEC/N OEL	3h	100 0	mg/l	activated sludge	OECD 209 (Activated Sludge, Respiration Inhibition Test (Carbon and Ammonium Oxidation))	
Other organisms:	EC50	21d	>10 00	mg/kg g dw		OECD 208 (Terrestrial Plants, Growth Test)	Glycine max
Other organisms:	EC50	21d	>10 00	mg/kg g dw		OECD 208 (Terrestrial Plants, Growth Test)	Lycopersicon esculentum
Other organisms:	EC50	21d	>10 00	mg/kg g dw		OECD 208 (Terrestrial Plants, Growth Test)	Avena sativa
Other organisms:	NOEC/N OEL	21d	100 0	mg/kg g dw		OECD 208 (Terrestrial Plants, Growth Test)	Glycine max
Other organisms:	NOEC/N OEL	21d	100 0	mg/kg g dw		OECD 208 (Terrestrial Plants, Growth Test)	Lycopersicon esculentum
Other organisms:	NOEC/N OEL	21d	100 0	mg/kg g dw		OECD 208 (Terrestrial Plants, Growth Test)	Avena sativa

Other organisms:	EC50	14d	>10 00	mg/kg g dw	Eisenia foetida	OECD 207 (Earthworm, Acute Toxicity Tests)	
Other organisms:	NOEC/N OEL	14d	100 0	mg/kg g dw	Eisenia foetida	OECD 207 (Earthworm, Acute Toxicity Tests)	
Other organisms:	EC50	28d	>10 00	mg/kg g dw		OECD 216 (Soil Microorganisms - Nitrogen Transformation Test)	
Other organisms:	NOEC/N OEL	28d	100 0	mg/kg g dw		OECD 216 (Soil Microorganisms - Nitrogen Transformation Test)	
Water solubility:			0,01 66	g/l		OECD 105 (Water Solubility)	20°C

### SECTION 13: Disposal considerations

#### 13.1 Waste treatment methods

##### For the substance / mixture / residual amounts

EC disposal code no.:  
 The waste codes are recommendations based on the scheduled use of this product. Owing to the user's specific conditions for use and disposal, other waste codes may be allocated under certain circumstances. (2014/955/EU)  
 08 04 09 waste adhesives and sealants containing organic solvents or other hazardous substances  
 20 01 27 paint, inks, adhesives and resins containing hazardous substances  
 Recommendation:  
 Sewage disposal shall be discouraged.  
 Pay attention to local and national official regulations.  
 E.g. dispose at suitable refuse site.  
 E.g. suitable incineration plant.  
**For contaminated packing material**  
 Pay attention to local and national official regulations.  
 Empty container completely.  
 Untreated packaging can be recycled.  
 Dispose of packaging that cannot be cleaned in the same manner as the substance.

### SECTION 14: Transport information

#### General statements

##### Transport by road/by rail (ADR/RID)

14.1. UN number or ID number: 3082  
 14.2. UN proper shipping name: UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (EPOXY RESIN)  
 14.3. Transport hazard class(es): 9  
 14.4. Packing group: III  
 14.5. Environmental hazards: environmentally hazardous  
 Tunnel restriction code: -  
 Classification code: M6  
 LQ: 5 L  
 Transport category: 3

##### Transport by sea (IMDG-code)

14.1. UN number or ID number: 3082  
 14.2. UN proper shipping name: UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (EPOXY RESIN)  
 14.3. Transport hazard class(es): 9  
 14.4. Packing group: III  
 14.5. Environmental hazards: environmentally hazardous  
 Marine Pollutant: Yes  
 EmS: F-A, S-F

##### Transport by air (IATA)

14.1. UN number or ID number: 3082  
 14.2. UN proper shipping name: UN 3082 Environmentally hazardous substance, liquid, n.o.s. (EPOXY RESIN)  
 14.3. Transport hazard class(es): 9  
 14.4. Packing group: III  
 14.5. Environmental hazards: environmentally hazardous

##### 14.6. Special precautions for user

Persons employed in transporting dangerous goods must be trained.  
 All persons involved in transporting must observe safety regulations.  
 Precautions must be taken to prevent damage.

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

Freighted as packaged goods rather than in bulk, therefore not applicable.  
 Minimum amount regulations have not been taken into account.  
 Danger code and packing code on request.  
 Comply with special provisions.

### SECTION 15: Regulatory information

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

Observe restrictions:  
 Comply with national regulations/laws governing the protection of young people at work (national implementation of the Directive 94/33/EC)!  
 Comply with trade association/occupational health regulations.

Directive 2012/18/EU ("Seveso III"), Annex I, Part 1 - The following categories apply to this product (others may also need to be considered according to storage, handling etc.):

Hazard categories	Notes to Annex I	Qualifying quantity (tonnes) of dangerous substances as referred to in Article 3(10) for the application of - Lower-tier requirements	Qualifying quantity (tonnes) of dangerous substances as referred to in Article 3(10) for the application of - Upper-tier requirements
E2		200	500

The Notes to Annex 1 of Directive 2012/18/EU, in particular those named in the tables here and notes 1-6, must be taken into account when assigning categories and qualifying quantities.

(GB)

Page 6 of 6

Safety data sheet according to Regulation (EC) No 1907/2006, Annex II

Revision date / version: 12.08.2024 / 0009

Replacing version dated / version: 01.11.2021 / 0008

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COSMO® EP-201.110

(COSMOFEN AL Komp. B-Binder)

Directive 2010/75/EU (VOC): 0 %

National requirements/regulations on safety and health protection must be applied when using work equipment.

**15.2 Chemical safety assessment**

A chemical safety assessment is not provided for mixtures.

**SECTION 16: Other information**

Revised sections: 2, 3, 8, 11, 12, 15

Employee training in handling dangerous goods is required.

These details refer to the product as it is delivered.

Employee instruction/training in handling hazardous materials is required.

**Classification and processes used to derive the classification of the mixture in accordance with the ordinance (EG) 1272/2008 (CLP):**

Classification in accordance with regulation (EC) No. 1272/2008 (CLP)	Evaluation method used
Eye Irrit. 2, H319	Classification according to calculation procedure.
Skin Irrit. 2, H315	Classification according to calculation procedure.
Skin Sens. 1, H317	Classification according to calculation procedure.
Aquatic Chronic 2, H411	Classification according to calculation procedure.

The following phrases represent the posted Hazard Class and Risk Category Code (GHS/CLP) of the product and the constituents.

H315 Causes skin irritation.

H317 May cause an allergic skin reaction.

H319 Causes serious eye irritation.

H411 Toxic to aquatic life with long lasting effects.

Eye Irrit. — Eye irritation

Skin Irrit. — Skin irritation

Skin Sens. — Skin sensitization

Aquatic Chronic — Hazardous to the aquatic environment - chronic

**Key literature references and sources****for data:**

Regulation (EC) No 1907/2006 (REACH) and Regulation (EC) No 1272/2008 (CLP) as amended.

Guidelines for the preparation of safety data sheets as amended (ECHA).

Guidelines on labelling and packaging according to the Regulation (EG) Nr. 1272/2008 (CLP) as amended (ECHA).

Safety data sheets for the constituent substances.

ECHA Homepage - Information about chemicals.

GESTIS Substance Database (Germany).

German Environment Agency "Rigoletto" information site on substances that are hazardous to water (Germany).

EU Occupation Exposure Limits Directives 91/322/EEC, 2000/39/EC, 2006/15/EC, 2009/161/EU, (EU)

2017/164, (EU) 2019/1831, each as amended.

National Lists of Occupational Exposure Limits for each country as amended.

Regulations on the transport of hazardous goods by road, rail, sea and air (ADR, RID, IMDG, IATA) as amended.

**Any abbreviations and acronyms used in this document:**

acc., acc. to according, according to  
 ADR Accord européen relatif au transport international des marchandises Dangereuses par Route (= European Agreement concerning the International Carriage of Dangerous Goods by Road)  
 AOX Adsorbable organic halogen compounds  
 approx. approximately  
 Art., Art. no. Article number  
 ASTM ASTM International (American Society for Testing and Materials)  
 ATE Acute Toxicity Estimate  
 BAM Bundesanstalt für Materialforschung und -prüfung (= Federal Institute for Materials Research and Testing, Germany)  
 BAuA Bundesanstalt für Arbeitsschutz und Arbeitsmedizin (= Federal Institute for Occupational Health and Safety, Germany)  
 BCF Bioconcentration factor  
 BSEF The International Bromine Council  
 CAS Chemical Abstracts Service  
 CLP Classification, Labelling and Packaging (REGULATION (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures)  
 CMR carcinogenic, mutagenic, reproductive toxic  
 DMEL Derived Minimum Effect Level  
 DNEL Derived No Effect Level  
 DOC Dissolved organic carbon  
 e.g. for example (abbreviation of Latin 'exempli gratia'), for instance  
 EbCx, EyCx, Eblx (x = 10, 50) Effect Concentration/Level of x % on reduction of the biomass (algae, plants)  
 EC European Community  
 ECHA European Chemicals Agency  
 ECx, ELx (x = 0, 3, 5, 10, 20, 50, 80, 100) Effect Concentration/Level for x % effect  
 EEC European Economic Community  
 EINECS European Inventory of Existing Commercial Chemical Substances  
 ELINCS European List of Notified Chemical Substances  
 EN European Norms  
 EPA United States Environmental Protection Agency (United States of America)  
 ErCx, Epcx, Erlx (x = 10, 50) Effect Concentration/Level of x % on inhibition of the growth rate (algae, plants)  
 etc. et cetera  
 EU European Union  
 EVAL Ethylene-vinyl alcohol copolymer  
 Fax. Fax number  
 gen. general  
 GHS Globally Harmonized System of Classification and Labelling of Chemicals  
 GWP Global warming potential

Koc Adsorption coefficient of organic carbon in the soil  
 Kow octanol-water partition coefficient  
 IARC International Agency for Research on Cancer  
 IATA International Air Transport Association  
 IBC (Code) International Bulk Chemical (Code)  
 IMDG-code International Maritime Code for Dangerous Goods including, inclusive  
 IUCLID International Uniform Chemical Information Database  
 IUPAC International Union for Pure Applied Chemistry  
 LC50 Lethal Concentration to 50 % of a test population  
 LD50 Lethal Dose to 50% of a test population (Median Lethal Dose)  
 Log Koc Logarithm of adsorption coefficient of organic carbon in the soil  
 Log Kow, Log Pow Logarithm of octanol-water partition coefficient  
 LQ Limited Quantities  
 MARPOL International Convention for the Prevention of Marine Pollution from Ships  
 mg/kg bw mg/kg body weight  
 mg/kg bw/d, mg/kg bw/day mg/kg body weight/day  
 mg/kg dw mg/kg dry weight  
 mg/kg wwt mg/kg wet weight  
 n.a. not applicable  
 n.av. not available  
 n.c. not checked  
 n.d.a. no data available  
 NIOSH National Institute for Occupational Safety and Health (USA)  
 NLP No-longer-Polymer  
 NOEC, NOEL No Observed Effect Concentration/Level  
 OECD Organisation for Economic Co-operation and Development  
 org. organic  
 OSHA Occupational Safety and Health Administration (USA)  
 PBT persistent, bioaccumulative and toxic  
 PE Polyethylene  
 PNEC Predicted No Effect Concentration  
 ppm parts per million  
 PVC Polyvinylchloride  
 REACH Registration, Evaluation, Authorisation and Restriction of Chemicals (REGULATION (EC) No 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals)  
 REACH-IT List-No. 6/7/8/9xx-xxx-x No. is automatically assigned, e.g. to pre-registrations without a CAS No. or other numerical identifier. List Numbers do not have any legal significance, rather they are purely technical identifiers for processing a submission via REACH-IT.  
 RID Règlement concernant le transport International ferroviaire de marchandises Dangereuses (= Regulation concerning the International Carriage of Dangerous Goods by Rail)  
 SVHC Substances of Very High Concern  
 Tel. Telephone  
 TOC Total organic carbon  
 UN RTDG United Nations Recommendations on the Transport of Dangerous Goods  
 VOC Volatile organic compounds  
 vPvB very persistent and very bioaccumulative

The statements made here should describe the product with regard to the necessary safety precautions - they are

not meant to guarantee definite characteristics - but they are based on our present up-to-date knowledge.

No responsibility.

These statements were made by:

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