

DRAP237 - EPOBETON C - COMP. A

Safety Data Sheet

According to Annex II to REACH - Regulation 2020/878

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

1.1. Product identifier

Code: DRAP237
Product name: EPOBETON C - COMP. A

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

Intended use: Two-component castable epoxy mortar

1.3. Details of the supplier of the safety data sheet

Name: DRACO ITALIANA S.p.A.
Full address: Via Monte Grappa, 11 D-E
District and Country: 20067 Tribiano (MI)
Italia
Tel.: +39 02.90632917
Fax: +39 02.90631976

e-mail address of the competent person responsible for the Safety Data Sheet

info@draco-edilizia.it

1.4. Emergency telephone number

For urgent inquiries refer to

Centro Antiveleni di Bergamo 800883300 (Azienda Ospedaliera Papa Giovanni XXII)
Centro Antiveleni di Firenze 0557947819 (Az. Osp. "Careggi" U.O. Tossicologia Medica)
Centro Antiveleni di Foggia 80018345 (Az. Osp. Univ. Foggia)
Centro Antiveleni di Milano 0266101029 (Osp. Niguarda Ca' Granda)
Centro Antiveleni di Napoli 0817472870 (Az. Osp. "A. Cardarelli")
Centro Antiveleni di Pavia 038224444 (CAV Centro Nazionale di Informazione Tossicologica)
Centro Antiveleni di Roma 063054343 (CAV Policlinico "A. Gemelli")
Centro Antiveleni di Roma 0649978000 (CAV Policlinico "Umberto I")
Centro Antiveleni di Roma 06 68593726 (CAV "Osp. Pediatrico Bambino Gesù" Dip. Emergenza e Accettazione DEA)

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 2015/830. 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:

Eye irritation, category 2	H319	Causes serious eye irritation.
Skin irritation, category 2	H315	Causes skin irritation.
Skin sensitization, category 1A	H317	May cause an allergic skin reaction.
Hazardous to the aquatic environment, chronic toxicity, category 2	H411	Toxic to aquatic life with long lasting effects.

2.2. Label elements

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

Hazard pictograms:



DRAP237 - EPOBETON C - COMP. A**SECTION 2. Hazards identification ... / >>**

Signal words: Warning

Hazard statements:

- 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.
EUH205 Contains epoxy constituents. May produce an allergic reaction.

Precautionary statements:

- P280** Wear protective gloves / eye protection / face protection.
P273 Avoid release to the environment.
P391 Collect spillage.
P261 Avoid breathing dust / fume / gas / mist / vapours / spray.
P333+P313 If skin irritation or rash occurs: Get medical advice / attention.
P337+P313 If eye irritation persists: Get medical advice / attention.

Contains:

1-chloro-2,3-epoxypropane
 C12-C14-alkyl glycidyl ethers (Oxirane, mono [(C12-14-alkyloxy) methyl] derivs)
 BisphenolF diglycidylether
 Polypropyleneglycol-epichlorohydrin copolymer
 Acidi-grassi,-C14-18-e-C16-18-insaturi,-2-fenossietil esteri, maleati
 Anidride maleica
 4-morfolincarbaldeide

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 1272/2008 (CLP)
1-chloro-2,3-epoxypropane		
CAS	25068-38-6	$30 \leq x < 50$ Eye Irrit. 2 H319, Skin Irrit. 2 H315, Skin Sens. 1 H317, Aquatic Chronic 2 H411
EC	500-033-5	Skin Irrit. 2 H315: $\geq 5\%$, Eye Irrit. 2 H319: $\geq 5\%$
INDEX		
REACH Reg. 01-2119456619-26		
C12-C14-alkyl glycidyl ethers (Oxirane, mono [(C12-14-alkyloxy) methyl] derivs)		
CAS	68609-97-2	$3 \leq x < 9$ Skin Irrit. 2 H315, Skin Sens. 1 H317
EC	271-846-8	
INDEX		
REACH Reg. Polymer (art. 2(9), art. 6(3))		
BisphenolF diglycidylether		
CAS	9003-36-5	$3 \leq x < 9$ Skin Irrit. 2 H315, Skin Sens. 1 H317, Aquatic Chronic 2 H411
EC	500-006-8	
INDEX		
REACH Reg. 01-2119454392-40		
Polypropyleneglycol-epichlorohydrin copolymer		
CAS	9072-62-2	$1 \leq x < 3$ Eye Irrit. 2 H319, STOT SE 3 H335, Skin Sens. 1 H317, Aquatic Chronic 3 H412
EC		
INDEX		
REACH Reg. Exempt Art. 2(9) REACH		

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

Propylene carbonate

CAS 108-32-7 1 ≤ x < 3 Eye Irrit. 2 H319

EC 203-572-1

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REACH Reg. exempt for tonnes < 1

Acidi-grassi,-C14-18-e-C16-18-insaturi,-2-fenossietil esteri, maleati

CAS 0,1 ≤ x < 0,5 Eye Irrit. 2 H319, Skin Sens. 1A H317

EC 292-835-4

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REACH Reg. 01-2120057275-56-0000

4-morfolincarbaleide

CAS 4394-85-8 0 ≤ x < 0,5 Skin Sens. 1B H317

EC 224-518-3

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REACH Reg. 01-2119987993-12-xxxx

Anidride maleica

CAS 108-31-6 0,001 ≤ x < 0,5 Acute Tox. 4 H302, STOT RE 1 H372, Skin Corr. 1B H314, Eye Dam. 1 H318,

Resp. Sens. 1 H334, Skin Sens. 1A H317

EC 203-571-6 Skin Sens. 1A H317: ≥ 0,001%

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REACH Reg. 01-2119472428-31-XXXX

LD50 Oral: 1090 mg/kg

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

SECTION 4. First aid measures

4.1. Description of first aid measures

EYES: Remove contact lenses, if present. Wash immediately with plenty of water for at least 30-60 minutes, opening the eyelids fully. Get medical advice/attention.

SKIN: Remove contaminated clothing. Rinse skin with a shower immediately. Get medical advice/attention.

INGESTION: Have the subject drink as much water as possible. Get medical advice/attention. Do not induce vomiting unless explicitly authorised by a doctor.

INHALATION: Get medical advice/attention immediately. Remove victim to fresh air, away from the accident scene. If the subject stops breathing, administer artificial respiration. Take suitable precautions for rescue workers.

Polypropyleneglycol-epichlorohydrin copolymer

General information: First aid personnel must wear the appropriate personal protective equipment during rescue operations. Wear protective clothing as described in Section 8 of this safety data sheet. Do not take any action that involves personal risks or if you do not have adequate training.

Inhalation: Take the affected person to fresh air and keep him warm and at rest in a position that promotes breathing. Rinse nose and mouth with water. Consult a doctor if the discomfort continues.

Ingestion: Wash out mouth thoroughly with water. Do not induce vomiting in the absence of instructions to that effect from medical personnel.

Consult a doctor.

Skin contact: Immediately take off all contaminated clothing and wash the skin with soap and water. Get medical attention immediately if symptoms occur after washing.

Eye contact: Rinse immediately with plenty of water. Remove any contact lenses and keep the eyelids well separated. Continue to rinse for 30 minutes. Get immediate medical attention. Continue to rinse.

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

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

Polypropyleneglycol-epichlorohydrin copolymer

Inhalation: May irritate the respiratory tract.

Skin contact: May cause an allergic skin reaction. Prolonged or repeated contact with the skin can cause irritation, redness and dermatitis.

Prolonged contact causes severe tissue damage.

Eye contact: Causes serious eye irritation.

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

Information not available

DRAP237 - EPOBETON C - COMP. A**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

None in particular.

Polypropyleneglycol-epichlorohydrin copolymer

Suitable extinguishing media Extinguish with alcohol-resistant foam, carbon dioxide, dry powder or water spray.

Unsuitable extinguishing media Do not use water jet as an extinguishing agent as it causes fire to spread.

5.2. Special hazards arising from the substance or mixture**HAZARDS CAUSED BY EXPOSURE IN THE EVENT OF FIRE**

Do not breathe combustion products.

Polypropyleneglycol-epichlorohydrin copolymer**Specific hazards:**

Harmful to aquatic life with long lasting effects. Receptacles can burst violently or explode if heated due to excessive pressure build-up.

Thermal degradation or combustion can release carbon oxides and other gases

toxic vapors.

Hazardous combustion products:

Thermal decomposition or combustion products can include the following substances: Phenolic. Fire smoke or acre smoke. Carbon dioxide (CO₂). Carbon monoxide (CO). Toxic gases or vapors. Irritating gases or vapors. Acids. Alkali. Amines.

5.3. Advice for firefighters**GENERAL INFORMATION**

Use jets of water to cool the containers to prevent product decomposition and the development of substances potentially hazardous for health. Always wear full fire prevention gear. Collect extinguishing water to prevent it from draining into the sewer system. Dispose of contaminated water used for extinction and the remains of the fire according to applicable regulations.

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).

Polypropyleneglycol-epichlorohydrin copolymer

Evacuate the area. Do not take any action that involves personal risks or if you do not have adequate training. Cool the containers exposed to heat by spraying water and remove them from the fire area if this can be done without risk. Do not use water jet as an extinguishing agent as it causes the spread of the fire. Check the runoff water by containing it and preventing it from reaching sewers and waterways. Contain and collect the extinction water.

SECTION 6. Accidental release measures**6.1. Personal precautions, protective equipment and emergency procedures**

Block the leakage if there is no hazard.

Wear suitable protective equipment (including personal protective equipment referred to under Section 8 of the safety data sheet) to prevent any contamination of skin, eyes and personal clothing. These indications apply for both processing staff and those involved in emergency procedures.

Polypropyleneglycol-epichlorohydrin copolymer

Evacuate the area. Do not take any action that involves personal risks or if you do not have adequate training. Follow the precautions for safe handling described in this safety data sheet. Keep unnecessary and unprotected personnel away from spills. Provide adequate ventilation. Avoid inhalation of vapors and contact with skin and eyes. Do not touch the spilled material or walk on it. Eliminate all sources of ignition.

6.2. Environmental precautions

The product must not penetrate into the sewer system or come into contact with surface water or ground water.

Polypropyleneglycol-epichlorohydrin copolymer

Evacuate the area. Do not take any action that involves personal risks or if you do not have adequate training. Follow the precautions for safe handling described in this safety data sheet. Keep unnecessary and unprotected personnel away from spills. Provide adequate ventilation. Avoid inhalation of vapors and contact with skin and eyes. Do not touch the spilled material or walk on it. Eliminate all sources of ignition.

DRAP237 - EPOBETON C - COMP. A**SECTION 6. Accidental release measures ... / >>****6.3. Methods and material for containment and cleaning up**

Collect the leaked product into a suitable container. Evaluate the compatibility of the container to be used, by checking section 10. Absorb the remainder with inert absorbent material.

Make sure the leakage site is well aired. Contaminated material should be disposed of in compliance with the provisions set forth in point 13.

Polypropyleneglycol-epichlorohydrin copolymer

Evacuate the area. Do not take any action that involves personal risks or if you do not have adequate training. Follow the precautions for safe handling described in this safety data sheet. Keep unnecessary and unprotected personnel away from spills. Provide adequate ventilation.

Avoid inhalation of vapors and contact with skin and eyes. Do not touch the spilled material or walk on it. Eliminate all sources of ignition.

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

Polypropyleneglycol-epichlorohydrin copolymer

Evacuate the area. Do not take any action that involves personal risks or if you do not have adequate training. Follow the precautions for safe handling described in this safety data sheet. Keep unnecessary and unprotected personnel away from spills. Provide adequate ventilation.

Avoid inhalation of vapors and contact with skin and eyes. Do not touch the spilled material or walk on it. Eliminate all sources of ignition.

7.1. Precautions for safe handling

Before handling the product, consult all the other sections of this material safety data sheet. Avoid leakage of the product into the environment. Do not eat, drink or smoke during use. Remove any contaminated clothes and personal protective equipment before entering places in which people eat.

7.2. Conditions for safe storage, including any incompatibilities

Store only in the original container. Store the containers sealed, in a well ventilated place, away from direct sunlight. Keep containers away from any incompatible materials, see section 10 for details.

7.3. Specific end use(s)

Information not available

SECTION 8. Exposure controls/personal protection**8.1. Control parameters**

Regulatory References:

FRA	France	Valeurs limites d'exposition professionnelle aux agents chimiques en France. ED 984 - INRS
GBR	United Kingdom	EH40/2005 Workplace exposure limits (Fourth Edition 2020)
	TLV-ACGIH	ACGIH 2020

C12-C14-alkyl glycidyl ethers (Oxirane, mono [(C12-14-alkyloxy) methyl] derivs)**Predicted no-effect concentration - PNEC**

Normal value in fresh water	0,0072	mg/l
Normal value in marine water	0,00072	mg/l
Normal value for fresh water sediment	66,77	mg/kg
Normal value for marine water sediment	6,677	mg/kg
Normal value for water, intermittent release	0,072	mg/l
Normal value of STP microorganisms	10	mg/l
Normal value for the terrestrial compartment	80,12	mg/kg

Health - Derived no-effect level - DNEL / DMEL

Route of exposure	Effects on consumers				Effects on workers			
	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Oral		40 mg/kg/d	1 mg/kg/d		68 mg/kg/d	1,7 mg/kg/d		
Inhalation	2,9 mg/m3	7,6 mg/m3	1,46 mg/m3	4,1 mg/m3	9,8 mg/m3	29 mg/m3	0,98 mg/m3	13,8 mg/m3
Skin		10 mg/kg/d		2,35 mg/kg/d		17 mg/kg/d		3,9 mg/kg/d

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

Acidi-grassi,-C14-18-e-C16-18-insaturi,-2-fenossietil esteri, maleati

Predicted no-effect concentration - PNEC

Normal value for the food chain (secondary poisoning) 20 mg/kg

Health - Derived no-effect level - DNEL / DMEL

Route of exposure	Effects on consumers				Effects on workers			
	Acute	Acute	Chronic	Chronic	Acute	Acute	Chronic	Chronic
	local	systemic	local	systemic	local	systemic	local	systemic
Oral				0,5 mg/kg				
Skin				1 mg/kg				

4-morfolincarbaleide

Predicted no-effect concentration - PNEC

Normal value in fresh water	0,5	mg/l
Normal value in marine water	0,05	mg/l
Normal value for fresh water sediment	1,85	mg/kg
Normal value for marine water sediment	0,0764	mg/kg
Normal value for water, intermittent release	5	mg/l
Normal value of STP microorganisms	2000	mg/l

Health - Derived no-effect level - DNEL / DMEL

Route of exposure	Effects on consumers				Effects on workers			
	Acute	Acute	Chronic	Chronic	Acute	Acute	Chronic	Chronic
	local	systemic	local	systemic	local	systemic	local	systemic
Oral				8 mg/kg				
Inhalation				29 mg/m3				98 mg/m3
Skin				8 mg/kg			0,293 mg/cm2	

Anidride maleica

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		Remarks / Observations
		mg/m3	ppm	mg/m3	ppm	
VLEP	FRA			1		
WEL	GBR	1		3		
TLV-ACGIH		0,0025	0,01			Skin, resp sensitizer

Predicted no-effect concentration - PNEC

Normal value in fresh water	0,04281	mg/l
Normal value in marine water	0,00428	mg/l
	1	
Normal value for fresh water sediment	0,334	mg/kg
Normal value for marine water sediment	0,0334	mg/kg
Normal value for water, intermittent release	0,4281	mg/l
Normal value of STP microorganisms	44,6	mg/l
Normal value for the terrestrial compartment	0,0415	mg/l

Health - Derived no-effect level - DNEL / DMEL

Route of exposure	Effects on consumers				Effects on workers			
	Acute	Acute	Chronic	Chronic	Acute	Acute	Chronic	Chronic
	local	systemic	local	systemic	local	systemic	local	systemic
Inhalation					0,8 mg/m3		0,4 mg/m3	
Skin					0,04 mg/kg			

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.

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.

DRAP237 - EPOBETON C - COMP. A**SECTION 8. Exposure controls/personal protection ... / >>**

Provide an emergency shower with face and eye wash station.

HAND PROTECTION

Protect hands with category III work gloves (see standard EN 374).

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 II professional long-sleeved overalls and safety footwear (see Regulation 2016/425 and standard EN ISO 20344). Wash body with soap and water after removing protective clothing.

EYE PROTECTION

Wear airtight protective goggles (see standard EN 166).

RESPIRATORY PROTECTION

If the threshold value (e.g. TLV-TWA) is exceeded for the substance or one of the substances present in the product, use a mask with a type A filter whose class (1, 2 or 3) must be chosen according to the limit of use concentration. (see standard EN 14387). In the presence of gases or vapours of various kinds and/or gases or vapours containing particulate (aerosol sprays, fumes, mists, etc.) combined filters are required. 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. The protection provided by masks is in any case limited.

If the substance considered is odourless or its olfactory threshold is higher than the corresponding TLV-TWA and in the case of an emergency, wear open-circuit compressed air breathing apparatus (in compliance with standard EN 137) or external air-intake breathing apparatus (in compliance with standard EN 138). For a correct choice of respiratory protection device, see standard EN 529.

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.

Polypropyleneglycol-epichlorohydrin copolymer

Hand protection

Wear impervious, chemical resistant gloves that conform to an approved standard if a risk assessment indicates the possibility of skin contact. To protect hands from chemicals, gloves must comply with the European standard EN374. The cracking time of the chosen gloves must be at least 8 hours.

Choose the most suitable gloves by contacting the supplier / manufacturer of the gloves, who can provide information on the cracking time of the material with which the gloves are made. Wear protective gloves made of the following material: Butyl rubber. Polyethylene / Ethylene Vinyl Alcohol (PE / EVAL). Nitrile rubber. Neoprene. Polyvinyl chloride (PVC).

Respiratory protection

Respiratory equipment complying with an approved standard must be used if a risk assessment indicates the possibility of inhalation of contaminants. Make sure that all respiratory protective devices are suitable for the intended use and are CE marked. If ventilation is insufficient, suitable respiratory equipment must be used. Wear a respirator equipped with the following cartridge: Gas filter, type A2.

SECTION 9. Physical and chemical properties**9.1. Information on basic physical and chemical properties**

Properties	Value	Information
Appearance	pasty liquid	
Colour	light grey	
Odour	characteristic	
Odour threshold	Not available	
Melting point / freezing point	Not available	
Initial boiling point	Not available	
Flammability	Not available	
Lower explosive limit	Not available	
Upper explosive limit	Not available	
Flash point	> 60 °C	
Auto-ignition temperature	Not available	
Decomposition temperature	Not available	
pH	7,5	
Kinematic viscosity	Not available	
Solubility	partially soluble in water	
Partition coefficient: n-octanol/water	Not determined	
Vapour pressure	Not available	
Density and/or relative density	1,5 g/cm ³	
Relative vapour density	Not available	

9.2. Other information

DRAP237 - EPOBETON C - COMP. A**SECTION 9. Physical and chemical properties ... / >>**

9.2.1. Information with regard to physical hazard classes

Information not available

9.2.2. Other safety characteristics

VOC (Directive 2010/75/EC) 2,89 % - 43,32 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.

10.2. Chemical stability

The product is 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.

Polypropyleneglycol-epichlorohydrin copolymer

Under normal conditions of storage and use, hazardous reactions will not occur.

Reactions with the following materials can generate heat: Amines. It can cure.

10.4. Conditions to avoid

None in particular. However the usual precautions used for chemical products should be respected.

Polypropyleneglycol-epichlorohydrin copolymer

Avoid heat, flames and other sources of ignition. Avoid excessive heat for prolonged periods. Store at temperatures not exceeding 300 °

C. It decomposes at temperatures above 350 ° C. Receptacles can burst violently or explode if heated due to excessive pressure build-up.

10.5. Incompatible materials

Polypropyleneglycol-epichlorohydrin copolymer

Avoid contact with the following materials: Acids. Alkali. Amines. Oxidizing materials.

10.6. Hazardous decomposition products

Polypropyleneglycol-epichlorohydrin copolymer

Thermal decomposition or combustion products can include the following substances: Phenolic. Carbon monoxide (CO). Carbon dioxide (CO₂). Fire smoke or acre smoke. Toxic gases or vapors. Irritating gases or vapors. Acids. Alkali. Amines.**SECTION 11. Toxicological information****11.1. Information on toxicological effects**

Polypropyleneglycol-epichlorohydrin copolymer

Inhalation: May irritate the respiratory tract.

Ingestion: This product has low toxicity. No harmful effects associated with quantities that can be accidentally ingested are expected.

Post-overexposure symptoms may include the following: Gastrointestinal symptoms, including stomach pain.

Skin contact: May cause an allergic skin reaction. Prolonged or repeated contact with the skin can cause irritation, redness and dermatitis. Prolonged contact causes severe tissue damage.

Eye contact: Causes serious eye irritation.

Acidi-grassi,-C14-18-e-C16-18-insaturi,-2-fenossietil esteri, maleati

Species: Rat, male and female

NOAEL: 300 mg / kg

Method of application: Oral

Method: OECD Test Guideline 422

BPL: yes

Target organs: Blood

Metabolism, toxicokinetics, mechanism of action and other information

Information not available

DRAP237 - EPOBETON C - COMP. A**SECTION 11. Toxicological information ... / >>**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)

1-chloro-2,3-epoxypropane

LD50 (Oral):	> 15000 mg/kg Ratto
LD50 (Dermal):	23000 mg/kg Coniglio

C12-C14-alkyl glycidyl ethers (Oxirane, mono [(C12-14-alkyloxy) methyl] derivs)

LD50 (Oral):	26800 mg/kg Ratto
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BisphenolF diglycidylether

LD50 (Oral):	> 2000 mg/kg Ratto
LD50 (Dermal):	> 2000 mg/kg Coniglio

Polypropyleneglycol-epichlorohydrin copolymer

LD50 (Oral):	> 2000 mg/kg Rat
LD50 (Dermal):	> 2000 mg/kg Rabbit

Propylene carbonate

LD50 (Oral):	> 5000 mg/kg Ratto
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Acidi-grassi,-C14-18-e-C16-18-insaturi,-2-fenossietil esteri, maleati

LD50 (Oral):	8295 mg/kg Rat, OECD 401
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4-morfolincarbaldeide

LD50 (Oral):	> 7360 mg/kg Rat
LD50 (Dermal):	> 18400 mg/kg Rabbit OECD 402

Anidride maleica

LD50 (Oral):	1090 mg/kg Rat, OECD 401
LD50 (Dermal):	2620 mg/kg OECD 401

SKIN CORROSION / IRRITATION

Causes skin irritation

Acidi-grassi,-C14-18-e-C16-18-insaturi,-2-fenossietil esteri, maleati

Species: Rabbit
Method: OECD Test Guideline 404
Result: No skin irritation
BPL: yes

Anidride maleica

Species: Rabbit
Method: No information available.
Result: Corrosive to the skin
BPL: no

SERIOUS EYE DAMAGE / IRRITATION

Causes serious eye irritation

DRAP237 - EPOBETON C - COMP. A**SECTION 11. Toxicological information ... / >>**

Acidi-grassi,-C14-18-e-C16-18-insaturi,-2-fenossietil esteri, maleati

Species: Rabbit

Assessment: Irritating to eyes.

Result: Irritating to eyes

BPL: yes

Anidride maleica

Species: Rabbit

Result: Corrosive to the eyes

BPL: yes

RESPIRATORY OR SKIN SENSITISATION

Sensitising for the skin

Polypropyleneglycol-epichlorohydrin copolymer

Guinea pig maximization test (GPMT) - Guinea pig: Sensitizing.

Acidi-grassi,-C14-18-e-C16-18-insaturi,-2-fenossietil esteri, maleati

Test type: Mouse Local Lymph Node assay (LLNA)

Species: Mouse

Assessment: The product is a skin sensitizer, sub-category 1A.

Method: OECD Test Guideline 429

Result: The product is a skin sensitizer, sub-category 1A

Anidride maleica

Test type: Buehler Test

Route of exposure: Skin contact

Species: Guinea pig

Method: OECD Test Guideline 406

Result: Causes sensitization.

BPL: yes

GERM CELL MUTAGENICITY

Does not meet the classification criteria for this hazard class

Acidi-grassi,-C14-18-e-C16-18-insaturi,-2-fenossietil esteri, maleati

Genotossicità in vitro

Tipo di test: Test di ames

Attivazione metabolica: con o senza attivazione metabolica

Metodo: Linee Guida 471 per il Test dell'OECD

Risultato: negativo

BPL: si

Tipo di test: Aberrazione cromosomica in vitro

Attivazione metabolica: con o senza attivazione metabolica

Metodo: Linee Guida 473 per il Test dell'OECD

Risultato: negativo

BPL: si

Tipo di test: In vitro mammalian cell gene mutation test
(mouse lymphoma)

Attivazione metabolica: con o senza attivazione metabolica

Metodo: Linee Guida 476 per il Test dell'OECD

Risultato: negativo

BPL: si

CARCINOGENICITY

Does not meet the classification criteria for this hazard class

Anidride maleica

ACGIH classifica la sostanza cancerogena A4, ovvero non classificabile come cancerogeno per l'uomo.

REPRODUCTIVE TOXICITY

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Does not meet the classification criteria for this hazard class

STOT - SINGLE EXPOSURE

Does not meet the classification criteria for this hazard class

Polypropyleneglycol-epichlorohydrin copolymer
It can irritate the respiratory tract.

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 is toxic for aquatic organisms. In the long term, it have negative effects on aquatic environment.

12.1. Toxicity

Polypropyleneglycol-epichlorohydrin copolymer
Harmful to aquatic life with long lasting effects.

Propylene carbonate
Endpoints: EC50 - Species: Daphnia> 1000 mg / l - Duration h: 24

Acidi-grassi,-C14-18-e-C16-18-insaturi,-2-fenossietil esteri, maleati
LL50 (Oncorhynchus mykiss (rainbow trout))> 100 mg / l
Exposure time: 96 h
Test type: Semi-static test
Method: OECD Test Guideline 203
BPL: yes

EL50 (Daphnia magna (Water flea))> 100 mg / l
Exposure time: 48 h
Test type: Static test
Method: OECD Test Guideline 202
BPL: yes

ErL50 (Pseudokirchneriella subcapitata)> 100 mg / l
Exposure time: 72 h
Test type: Static test
Method: OECD Test Guidelines 201
BPL: yes

EC50 (activated sludge)> 1,000 mg / l
Exposure time: 3 h
Test type: Breathing inhibitor
Method: OECD Test Guideline 209
BPL: yes

Anidride maleica
CL50 (Oncorhynchus mykiss (Trota iridea)): 75 mg/l
Tempo di esposizione: 96 h
Tipo di test: Prova statica
BPL: no

CE50 (Daphnia magna (Pulce d'acqua grande)): 42,81 mg/l
Tempo di esposizione: 48 h
Metodo: Linee Guida 202 per il Test dell'OECD

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SECTION 12. Ecological information ... / >>

BPL: si

CE50r (Pseudokirchneriella subcapitata): 74,35 mg/l

Tempo di esposizione: 72 h

Metodo: Linee Guida 201 per il Test dell'OECD

BPL: si

NOEC: 10 mg/l

Tempo di esposizione: 21 d

Specie: Daphnia magna (Pulce d'acqua grande)

BPL: no

1-chloro-2,3-epoxypropane

LC50 - for Fish 2 mg/l/96h

EC50 - for Crustacea 1,8 mg/l/48h

EC50 - for Algae / Aquatic Plants 11 mg/l/72h

Propylene carbonate

EC50 - for Algae / Aquatic Plants > 900 mg/l/72h

C12-C14-alkyl glycidyl ethers (Oxirane, mono [(C12-14-alkyloxy) methyl] derivs)

LC50 - for Fish 1800 mg/l/96h

EC50 - for Crustacea 6,07 mg/l/48h Daphnie

Chronic NOEC for Algae / Aquatic Plants 5 mg/l 72 h

BisphenolF diglycidylether

LC50 - for Fish 2,54 mg/l/96h

EC50 - for Crustacea 2,55 mg/l/48h Daphnie

EC50 - for Algae / Aquatic Plants > 1 mg/l/72h

Polypropyleneglycol-epichlorohydrin copolymer

LC50 - for Fish > 67 mg/l/96h Leuciscus idus

EC50 - for Crustacea > 90 mg/l/48h Daphnia magna, OECD 202

4-morfolincarbaldeide

LC50 - for Fish > 500 mg/l/96h Leuciscus idus DIN 38412

EC50 - for Crustacea > 500 mg/l/48h Daphnia magna

EC50 - for Algae / Aquatic Plants 23880 mg/l/72h Scenedesmus subspicatus

EC10 for Algae / Aquatic Plants 17040 mg/l/72h Scenedesmus subspicatus

12.2. Persistence and degradability

C12-C14-alkyl glycidyl ethers (Oxirane, mono [(C12-14-alkyloxy) methyl] derivs)

Biodegradability: Rapidly degradable - Test: Oxygen consumption - Duration: 28d -%: 87 - Notes: OECD Guideline 301 F (Manometric Respirometry Test)

Polypropyleneglycol-epichlorohydrin copolymer

Degradation 8 - 27%: 28 day OCED 301B

Degradation 7%: 28 day OECD 302B

Acidi-grassi,-C14-18-e-C16-18-insaturi,-2-fenossietil esteri, maleati

Result: Not readily biodegradable.

Method: OECD Test Guideline 301F

BPL: yes

Anidride maleica

Result: Readily biodegradable.

Method: OECD Test Guideline 301 B

BPL: yes

C12-C14-alkyl glycidyl ethers (Oxirane, mono [(C12-14-alkyloxy) methyl] derivs)

Rapidly degradable

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Polypropyleneglycol-epichlorohydrin copolymer
NOT rapidly degradable

12.3. Bioaccumulative potential

C12-C14-alkyl glycidyl ethers (Oxirane, mono [(C12-14-alkyloxy) methyl] derivs)

Partition coefficient: n-octanol/water 3,77 Kow
BCF 160

BisphenolF diglycidylether

Partition coefficient: n-octanol/water 3 Kow
BCF 150

Anidride maleica

Partition coefficient: n-octanol/water -2,61 Log Kow 19,8°C pH:4-9

4-morfolincarbaldeide

BCF < 1,9 OECD 305 C

12.4. Mobility in soil

C12-C14-alkyl glycidyl ethers (Oxirane, mono [(C12-14-alkyloxy) methyl] derivs)

Non-mobile - Test: Koc - Partition coefficient 426850

Anidride maleica

Koc: 42, log Koc: 1.63

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. Other adverse effects

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**

ADR / RID, IMDG, IATA: 3082

ADR / RID: In accordance with Special Provision 375, this product, when is packed in receptacles of a capacity \leq 5Kg or 5L, is not submitted to ADR provisions.

IMDG: In accordance with Section 2.10.2.7 of IMDG Code, this product, when is packed in receptacles of a capacity \leq 5Kg or 5L, is not submitted to IMDG Code provisions.

IATA: In accordance with SP A197, this product, when is packed in receptacles of a capacity \leq 5Kg or 5L, is not submitted to IATA dangerous goods regulations.

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SECTION 14. Transport information ... / >>

14.2. UN proper shipping name

ADR / RID: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (1-chloro-2,3-epoxypropane; BisphenolF diglycidylether)
 IMDG: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (1-chloro-2,3-epoxypropane; BisphenolF diglycidylether)
 IATA: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (1-chloro-2,3-epoxypropane; BisphenolF diglycidylether)

14.3. Transport hazard class(es)

ADR / RID: Class: 9 Label: 9



IMDG: Class: 9 Label: 9



IATA: Class: 9 Label: 9



14.4. Packing group

ADR / RID, IMDG, IATA: III

14.5. Environmental hazards

ADR / RID: Environmentally Hazardous



IMDG: Marine Pollutant



IATA: Environmentally Hazardous



14.6. Special precautions for user

ADR / RID:	HIN - Kemler: 90	Limited Quantities: 5 L	Tunnel restriction code: (-)
	Special provision: -		
IMDG:	EMS: F-A, S-F	Limited Quantities: 5 L	
IATA:	Cargo:	Maximum quantity: 450 L	Packaging instructions: 964
	Pass.:	Maximum quantity: 450 L	Packaging instructions: 964
	Special provision:	A97, A158, A197, A215	

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

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/EC: E2

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

<u>Product</u>	
Point	3 - 40
<u>Contained substance</u>	
Point	75

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Regulation (EC) No. 2019/1148 - on the marketing and use of explosives precursors

Not applicable

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 (EC) Reg. 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.

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:

Acute Tox. 4	Acute toxicity, category 4
STOT RE 1	Specific target organ toxicity - repeated exposure, category 1
Skin Corr. 1B	Skin corrosion, category 1B
Eye Irrit. 2	Eye irritation, category 2
Skin Irrit. 2	Skin irritation, category 2
STOT SE 3	Specific target organ toxicity - single exposure, category 3
Resp. Sens. 1	Respiratory sensitization, category 1
Skin Sens. 1	Skin sensitization, category 1
Skin Sens. 1A	Skin sensitization, category 1A
Skin Sens. 1B	Skin sensitization, category 1B
Aquatic Chronic 2	Hazardous to the aquatic environment, chronic toxicity, category 2
Aquatic Chronic 3	Hazardous to the aquatic environment, chronic toxicity, category 3
H302	Harmful if swallowed.
H372	Causes damage to organs through prolonged or repeated exposure.
H314	Causes severe skin burns and eye damage.
H319	Causes serious eye irritation.
H315	Causes skin irritation.
H335	May cause respiratory irritation.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H317	May cause an allergic skin reaction.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.
EUH205	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 NUMBER: Chemical Abstract Service Number
- CE50: Effective concentration (required to induce a 50% effect)
- CE NUMBER: Identifier in ESIS (European archive of existing substances)
- CLP: EC Regulation 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
- IC50: Immobilization Concentration 50%
- IMDG: International Maritime Code for dangerous goods

DRAP237 - EPOBETON C - COMP. A**SECTION 16. Other information ... / >>**

- IMO: International Maritime Organization
- INDEX NUMBER: Identifier in Annex VI of CLP
- LC50: Lethal Concentration 50%
- LD50: Lethal dose 50%
- OEL: Occupational Exposure Level
- PBT: Persistent bioaccumulative and toxic as REACH Regulation
- PEC: Predicted environmental Concentration
- PEL: Predicted exposure level
- PNEC: Predicted no effect concentration
- REACH: EC Regulation 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 as for REACH Regulation
- 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 (EU) 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)
14. Regulation (EU) 2018/669 (XI Atp. CLP)
15. Regulation (EU) 2019/521 (XII Atp. CLP)
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)

- The Merck Index. - 10th Edition
- Handling Chemical Safety
- INRS - Fiche Toxicologique (toxicological sheet)
- 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

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.

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SECTION 16. Other information ... / >>

Changes to previous review:
The following sections were modified:
02 / 03 / 08 / 09 / 11 / 12 / 15 / 16.