

Safety data sheet

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

1.1. Product identifier

Code: M5104
Product name: EPOKITT - MASTICE EPOSSIDICO

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

Intended use: Mastic for marble, Professional use only.

Uses advised against: no one in particular

1.3. Details of the supplier of the safety data sheet

Name: ILPA ADESIVI SRL
Full address: Via Ferorelli, 4
District and Country: 70132 BARI (BARI)
ITALIA
Tel. + 39 0805383837
Fax + 39 0805377807

e-mail address of the competent person responsible for the Safety Data Sheet: aborricelli@ilpa.it

1.4. Emergency telephone number

For urgent inquiries refer to: + 39 3355405598 (Technical support - 8,00 - 17,00 - LUN-VEN; MON-FRI)(Italian time zone)
Safety Executive (HSE) Chemicals Regulation Directorate 5S.1 Redgrave Court, Merton Road, Bootle, Merseyside. L20 7HS.
Phone: +44 151 9513317

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 EC Regulation 1907/2006 and subsequent amendments. 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 1	H317	May cause an allergic skin reaction.
Hazardous to the aquatic environment, chronic toxicity, category 3	H412	Harmful 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:



Signal words: Warning

Hazard statements:

H319 Causes serious eye irritation.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H412 Harmful to aquatic life with long lasting effects.
EUH205 Contains epoxy constituents. May produce an allergic reaction.

Precautionary statements:

P201 Obtain special instructions before use.
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P260 Do not breathe dust / fume / gas / mist / vapours / spray.
P280 Wear protective gloves / eye protection / face protection.
P308+P313 IF exposed or concerned: Get medical advice / attention.
P370+P378 In case of fire: use carbon dioxide, foam, powder and water spray to extinguish.

Contains: TRIMETHYLOLPROPANE TRIGLYCIDYL ETHER
 1,4-bis(2,3-Epoxypropoxy)-butane
 REACTION PRODUCT: BISPHENOL A-(EPICHLORHYDRIN)
 REACTION PRODUCT: BISPHENOL F-(EPICHLORHYDRIN)
 1,6 Hexanediol Diglycidyl Ether

2.3. Other hazards.

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

SECTION 3. Composition/information on ingredients.

3.1. Substances.

Information not relevant.

3.2. Mixtures.

Contains:

Identification.	Conc. %.	Classification 1272/2008 (CLP).
REACTION PRODUCT: BISPHENOL A-(EPICHLORHYDRIN) CAS. 25068-38-6	13,5 - 15	Eye Irrit. 2 H319, Skin Irrit. 2 H315, Skin Sens. 1 H317,

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Aquatic Chronic 2 H411

EC. 500-033-5

INDEX. 603-074-00-8

Reg. no. 01-2119456619-26

1,4-bis(2,3-Epoxypropoxy)-butane

CAS. 2425-79-8

4,5 - 5

Acute Tox. 4 H302, Acute
Tox. 4 H312, Acute Tox. 4
H332, Eye Irrit. 2 H319, Skin
Irrit. 2 H315, Skin Sens. 1
H317, Aquatic Chronic 3
H412

EC. 219-371-7

INDEX. 603-072-00-7

Reg. no. 01-2119494060-45

**REACTION PRODUCT: BISPHENOL F-
(EPICHLORHYDRIN)**

CAS. 28064-14-4

4 - 4,5

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

EC. 500-006-8

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Reg. no. 01-2119454392-40

TRIMETHYLOLPROPANE TRIGLYCIDYL ETHER

CAS. 30499-70-8

3 - 3,5

Eye Irrit. 2 H319, Skin Irrit. 2
H315, Skin Sens. 1 H317,
Aquatic Chronic 3 H412

EC. 608-489-8

INDEX. -

1,6 Hexanediol Diglycidyl Ether

CAS. 16096-31-4

2 - 2,5

Eye Irrit. 2 H319, Skin Irrit. 2
H315, Skin Sens. 1 H317,
Aquatic Chronic 3 H412

EC. 240-260-4

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Reg. no. 01-2119463471-41

Note: Upper limit is not included into the range.

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 15 minutes, opening the eyelids fully. If problem persists, seek medical advice.

SKIN: Remove contaminated clothing. Wash immediately with plenty of water. If irritation persists, get medical advice/attention. Wash contaminated clothing before using it again.

INHALATION: Remove to open air. In the event of breathing difficulties, get medical advice/attention immediately.

INGESTION: Get medical advice/attention. Induce vomiting only if indicated by the doctor. Never give anything by mouth to an unconscious person, unless authorised by a doctor.

PROTECTIVE MEASURES FOR THE FIRST RESCUE WORKERS: for PPE (personal protection equipment) required for first aid refer to section 8.2 of this safety data sheet.

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

For symptoms and effects caused by the contained substances, see chap. 11.

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

Information not available.

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.

5.2. Special hazards arising from the substance or mixture.

HAZARDS CAUSED BY EXPOSURE IN THE EVENT OF FIRE

Do not breathe combustion products.

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).

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.

6.2. Environmental precautions.

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

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. Check incompatibility for container material in section 7. 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.

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).

No use other than specified in Section 1.2 of this safety data sheet.

SECTION 8. Exposure controls/personal protection.

8.1. Control parameters.

REACTION PRODUCT: BISPHENOL A-(EPICHLORHYDRIN)

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	0,996	mg/kg/d
Normal value for marine water sediment	1	mg/kg/d
Normal value for water, intermittent release	0,018	mg/l
Normal value of STP microorganisms	10	mg/l
Normal value for the terrestrial compartment	0,196	mg/kg/d

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.	VND	0,75 mg/kg bw/d	VND	0,75 mg/kg bw/d				
Inhalation.	NPI	VND	NPI	VND	NPI	12,25 mg/m3	NPI	12,25 mg/m3
Skin.	VND	3,571 mg/kg bw/d	NPI	3,571 mg/kg bw/d	VND	8,33 mg/kg bw/d	NPI	8,33 mg/kg bw/d

1,4-bis(2,3-Epoxypropoxy)-butane

Predicted no-effect concentration - PNEC.

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Normal value in fresh water	0,024	mg/l
Normal value in marine water	0,002	mg/l
Normal value for fresh water sediment	0,084	mg/kg/d
Normal value for marine water sediment	0,008	mg/kg/d
Normal value of STP microorganisms	100	mg/l

Health - Derived no-effect level - DNEL / DMEL

Route of exposure	Effects on consumers.			Chronic systemic	Effects on workers			Chronic systemic
	Acute local	Acute systemic	Chronic local		Acute local	Acute systemic	Chronic local	
Oral.			VND	0,33 mg/kg bw/d				
Inhalation.	VND	VND	VND	1,15 mg/m3	VND	VND	VND	4,7 mg/m3
Skin.	VND	VND	VND	3,33 mg/kg bw/d	VND	VND	VND	6,66 mg/kg bw/d

REACTION PRODUCT: BISPHENOL F-(EPICHLORHYDRIN)

Predicted no-effect concentration - PNEC.

Normal value in fresh water	0,003	mg/l
Normal value in marine water		
Normal value for fresh water sediment	0,294	mg/kg/d
Normal value for marine water sediment	0,029	mg/kg/d
Normal value of STP microorganisms	10	mg/l

Health - Derived no-effect level - DNEL / DMEL

Route of exposure	Effects on consumers.			Chronic systemic	Effects on workers			Chronic systemic
	Acute local	Acute systemic	Chronic local		Acute local	Acute systemic	Chronic local	
Skin.							VND	266,6 mg/kg bw/d

TRIMETHYLOLPROPANE TRIGLYCIDYL ETHER

Predicted no-effect concentration - PNEC.

Normal value in fresh water	0,004	mg/l
Normal value in marine water		
Normal value for fresh water sediment	0,02	mg/kg/d
Normal value for marine water sediment	0,002	mg/kg/d
Normal value for water, intermittent release	0,037	mg/l
Normal value of STP microorganisms	16,8	mg/l
Normal value for the terrestrial compartment	0,002	mg/kg/d

Health - Derived no-effect level - DNEL / DMEL

Route of exposure	Effects on consumers.			Chronic systemic	Effects on workers			Chronic systemic
	Acute local	Acute systemic	Chronic local		Acute local	Acute systemic	Chronic local	
Oral.	VND	NPI	VND	NPI				
Inhalation.	NPI	NPI	NPI	NPI	VND	NPI	VND	1,17 mg/m3
Skin.	NPI	NPI	NPI	NPI	VND	NPI	VND	0,67 mg/kg bw/d

1,6 Hexanediol Diglycidyl Ether

Predicted no-effect concentration - PNEC.

Normal value in fresh water	0,011	mg/l
Normal value in marine water	0,001	mg/l
Normal value for fresh water sediment	0,283	mg/kg/d
Normal value for marine water sediment	0,028	mg/kg/d
Normal value for water, intermittent release	0,115	mg/l
Normal value of STP microorganisms	1	mg/l
Normal value for the terrestrial compartment	0,223	mg/kg/d

Health - Derived no-effect level - DNEL / DMEL

Route of exposure	Effects on consumers.			Chronic systemic	Effects on workers			Chronic systemic
	Acute local	Acute systemic	Chronic local		Acute local	Acute systemic	Chronic local	
Oral.	VND	0,83 mg/kg bw/d	VND	0,83 mg/kg bw/d				
Inhalation.	VND	2,9 mg/m3	0,27 mg/m3	2,9 mg/m3	VND	4,9 mg/m3	0,44 mg/m3	4,9 mg/m3
Skin.	0,014 mg/cm2	1,7 mg/kg bw/d	0,014 mg/cm2	1,7 mg/kg bw/d	0,023 mg/cm2	VND	0,023 mg/cm2	2,8 mg/kg bw/d

Legend:

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. 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).

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 Directive 89/686/EEC 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 B 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.

SECTION 9. Physical and chemical properties.

9.1. Information on basic physical and chemical properties.

Appearance	pasty
Colour	white
Odour	mild
Odour threshold.	Not available.
pH.	Not applicable.
Melting point / freezing point.	-21,5°C (ECHA site, 1,4-BIS(2,3-EPOSSIPROPOSSI)-BUTANO)
Initial boiling point.	266°C (0110 ICSC, 1,4-BIS(2,3-EPOSSIPROPOSSI)-BUTANO)
Boiling range.	Not available.
Flash point.	> 60 °C.
Evaporation rate	0,012 – 0,018 Pas at 25°C (CID 17046 PUBCHEM, 1,4-BIS(2,3-EPOSSIPROPOSSI)-BUTANO)
Flammability (solid, gas)	not applicable
Lower inflammability limit.	Not available.
Upper inflammability limit.	Not available.
Lower explosive limit.	Not available.

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Upper explosive limit.	Not available.
Vapour pressure.	1,3 kPa at 20°C (0110 ICSC, 1,4-BIS(2,3-EPOSSIPROPOSSI)-BUTANO)
Vapour density	7,0 (air=1) (0110 ICSC, 1,4-BIS(2,3-EPOSSIPROPOSSI)-BUTANO)
Relative density.	1,850 Kg/l
Solubility	insoluble in water
Partition coefficient: n-octanol/water	Log Pow -0,269 (ECHA site, 1,4-BIS(2,3-EPOSSIPROPOSSI)-BUTANO)
Auto-ignition temperature.	260°C at 98,4 kPa (ECHA site, 1,4-BIS(2,3-EPOSSIPROPOSSI)-BUTANO)
Decomposition temperature.	Not available.
Viscosity	2200 ± 100 Pas
Explosive properties	Product does not present an explosion hazard.
Oxidising properties	not applicable

9.2. Other information.

VOC (Directive 2010/75/EC) :	0
VOC (volatile carbon) :	0

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.

10.4. Conditions to avoid.

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

10.5. Incompatible materials.

Information not available.

10.6. Hazardous decomposition products.

Information not available.

SECTION 11. Toxicological information.

In the absence of experimental data for the product itself, health hazards are evaluated according to the properties of the substances it contains, using the criteria specified in the applicable regulation for classification. It is therefore necessary to take into account the concentration of the individual

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hazardous substances indicated in section 3, to evaluate the toxicological effects of exposure to the product.

Acute effects: stinging eyes. Symptoms may include: rubescence, edema, pain and lachrymation. Ingestion may cause health problems, including stomach pain and sting, nausea and sickness.

Acute effects: contact with skin may cause: irritation, erythema, edema, dryness and chapped skin. Ingestion may cause health disorders, including stomach pain and sting, nausea and sickness.

Upon contact with skin, this product causes sensitization (dermatitis). Dermatitis derives from skin irritation on the areas which repeatedly come into contact with the sensitizing agent. Cutaneous lesions may include: erythemas, edemas, papules, vesicles, pustules, scurvies, ulcerations and exudative phenomena, whose intensity varies according to illness seriousness and affected areas. Erythemas, edemas and exudative phenomena prevail during the acute phase. Scurfy skin, dryness, ulcerations and skin thickening prevail during the chronic phase.

This product contains epoxy resins. Producer's specifications are as follows: Because of epoxy-product properties and according to the toxicological data available for similar products, this preparation may sensitize and irritate the skin and the respiratory system. It contains epoxy components at low molecular weights, which may irritate eyes, mucosas and skin. Frequent contact with skin may cause irritation and sensitization phenomena. Sensitization reactions may also be caused by other epoxy components (cross-sensitization). Avoid contact with skin and exposure to vapours and aerosols.

11.1. Information on toxicological effects.**Data refers to the mix:**

ACUTE TOXICITY: No data available

SKIN CORROSION/IRRITATION: Causes skin irritation (section 3.2 of the safety data sheet)

SERIOUS EYE DAMAGE/IRRITATION: Causes serious eye irritation (section 3.2 of the safety data sheet)

RESPIRATORY OR SKIN SENSITISATION: Contains epoxy constituents. May cause an allergic skin reaction. (section 3.2 of the safety data sheet)

GERM CELL MUTAGENICITY: No data available

CARCINOGENICITY: No data available

REPRODUCTIVE TOXICITY: No data available

STOT-SINGLE EXPOSURE: No data available

STOT-REPEATED EXPOSURE: No data available

ASPIRATION HAZARD: not relevant to viscosity values (section 9 of the safety data sheet)

Data relating to substances hazardous mixture:**TRIMETHYLOLPROPANE TRIGLYCIDYL ETHER**

ACUTE TOXICITY:

LD50 (Oral).3398 mg/kg rat, equivalent or similar to (OECD Guideline 401)

LD50 (Dermal).> 3170 mg/kg rat, equivalent or similar to (OECD Guideline 402)

SKIN CORROSION/IRRITATION: Causes skin irritation. (from SDS supplier)

SERIOUS EYE DAMAGE/IRRITATION: Causes serious eye irritation. (from SDS supplier)

RESPIRATORY OR SKIN SENSITISATION: May cause an allergic skin reaction. (Rif. SDS fornitore).

1,4-BIS(2,3-EPOXYPROPOXY)-BUTANE

ACUTE TOXICITY:

LD50 (Oral).1163 mg/kg rat (OECD Guideline 401)

LD50 (Dermal).> 1030 mg/kg rabbit, (from SDS supplier)

Inhalation toxicity: harmful if inhaled (Annex VI, REGULATION (EC) No 1272/2008)

SKIN CORROSION/IRRITATION: Causes skin irritation. (Annex VI, REGULATION (EC) No 1272/2008)

SERIOUS EYE DAMAGE/IRRITATION: Causes eyes irritationi, rabbit (OECD Guideline 405)

RESPIRATORY OR SKIN SENSITISATION: Causes skin irritation, guinea pig (OECD Guideline 406).

REACTION PRODUCT: BISPHENOL A-(EPICHLORHYDRIN)

ACUTE TOXICITY:

LD50 (Oral).> 2000 mg/kg rat, according to (OECD Guideline 420)

LD50 (Dermal).> 2000 mg/kg rat, according to (OECD Guideline 402)

SKIN CORROSION/IRRITATION: Causes skin irritation, rabbit (OECD Guideline 404, GLP).

SERIOUS EYE DAMAGE/IRRITATION: Causes eye damage. (Annex VI, REGULATION (EC) No 1272/2008)

RESPIRATORY OR SKIN SENSITISATION: skin sensitizing, mouse (OECD Guideline 429, GLP).

REACTION PRODUCT: BISPHENOL F-(EPICHLORHYDRIN)

ACUTE TOXICITY:

LD50 (Oral).> 5000 mg/kg rat, equivalent or similar to (OECD Guideline 401)

LD50 (Dermal).> 2000 mg/kg rat, equivalent or similar to (OECD Guideline 4029)

SKIN CORROSION/IRRITATION: Skin irritating, rabbit (OECD Guideline 404, GLP)

RESPIRATORY OR SKIN SENSITISATION: skin sensitizer, mouse (OECD Guideline 429, GLP).

1,6-HEXANEDIOL DIGLYCIDYL ETHER

SKIN CORROSION/IRRITATION: Causes skin irritation. (rabbit, Guidelines of the US EPA, Federal Register, Vol. 43, No. 163, August 22, 1978)

SERIOUS EYE DAMAGE/IRRITATION: Causes eye irritation. (Rabbit, Equivalente o similare a OECD Guideline 405)

RESPIRATORY OR SKIN SENSITISATION: skin sensitizer (Mouse, OECD Guideline 429, GLP).

SECTION 12. Ecological information.

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

12.1. Toxicity.

TRIMETHYLOLPROPANE TRIGLYCIDYL ETHER

LC50 - for Fish.	75 mg/l/96h Cyprinus carpio (OECD Guideline 203)
EC50 - for Crustacea.	3,7 mg/l/48h Daphnia magna (OECD Guideline 202, GLP)
EC50 - for Algae / Aquatic Plants.	9 mg/l/72h Pseudokirchnerella subcapitata (OECD Guideline 201, GLP)
Chronic NOEC for Crustacea.	2 mg/l Daphnia magna (OECD Guideline 202, GLP)
Chronic NOEC for Algae / Aquatic Plants.	2,5 mg/l Pseudokirchnerella subcapitata (OECD Guideline 201, GLP)

1,4-bis(2,3-Epoxypropoxy)-butane

LC50 - for Fish.	19,8 mg/l/96h Brachydanio rerio (OECD Guideline 203) SDS supplier
EC50 - for Crustacea.	75 mg/l/48h 24 h, Daphnia magna (OECD Guideline 202) SDS supplier
EC50 - for Algae / Aquatic Plants.	110 mg/l/72h endpoint EL50, Pseudokirchnerella subcapitata (OECD Guideline 201)

REACTION PRODUCT: BISPHENOL A-(EPICHLORHYDRIN)

LC50 - for Fish.	1,2 mg/l/96h Oncorhynchus mykiss (Equivalent or similar to EPA-660/3-75-009)
EC50 - for Crustacea.	2,7 mg/l/48h Daphnia magna (Equivalent or similar to EPA-660/3-75-009)
EC50 - for Algae / Aquatic Plants.	9,4 mg/l/72h Scenedesmus capricornutum (Equivalent or similar to EPA-660/3-75-009)

REACTION PRODUCT: BISPHENOL F-(EPICHLORHYDRIN)

LC50 - for Fish.	172 mg/l CL50, Leuciscus idus (Leucisco dorato), Prova statica, 48 h,
EC50 - for Algae / Aquatic Plants.	> 1,8 mg/l/72h Pseudokirchnerella subcapitata, equivalent or similar to (OECD Guideline 201)
Chronic NOEC for Crustacea.	0,3 mg/l Daphnia magna, 21d equivalent or similar to (OECD Guideline 211)

1,6 Hexanediol Diglycidyl Ether

LC50 - for Fish.	30 mg/l/96h Oncorhynchus mykiss, Prova semistatica (Rif. SDS DOW)
EC50 - for Crustacea.	47 mg/l/48h Test effettuato a 24h, Daphnia Magna, prova statica, immobilizzazione, (Rif. SDS DOW)
EC50 - for Algae / Aquatic Plants.	23,1 mg/l/72h Selenastrum capricornutum, (from ECHA site)

12.2. Persistence and degradability.

1,6 HEXANEDIOL DIGLYCIDYL ETHER

Biodegradation testing:
biodegradation: 47%
Exposure time: 28 d
Metod: OECD 301D.

TRIMETHYLOLPROPANE TRIGLYCIDYL ETHER

NOT rapidly biodegradable.

OECD Guideline 301 B

REACTION PRODUCT: BISPHENOL A-(EPICHLORHYDRIN)

Solubility in water.

mg/l 0,1 - 100

NOT rapidly biodegradable.

REACTION PRODUCT: BISPHENOL F-(EPICHLORHYDRIN)

NOT rapidly biodegradable.

1,6 Hexanediol Diglycidyl Ether

NOT rapidly biodegradable.

12.3. Bioaccumulative potential.

REACTION PRODUCT: BISPHENOL A-(EPICHLORHYDRIN)

Partition coefficient: n-octanol/water.

> 2,918

BCF.

31

REACTION PRODUCT: BISPHENOL F-(EPICHLORHYDRIN)

Partition coefficient: n-octanol/water.

3,6 Valore stimato (Rif. SDS DOW)

1,6 Hexanediol Diglycidyl Ether

BCF.

822 (OECD 107)

12.4. Mobility in soil.

1,6 HEXANEDIOL DIGLYCIDYL ETHER

Partition coefficient organic carbon / water in the soil (Koc) = 962 (OECD 121).

REACTION PRODUCT: BISPHENOL A-(EPICHLORHYDRIN)

Partition coefficient: soil/water.

2,65

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 greater than 0,1%.

12.6. 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: 3077

14.2. UN proper shipping name.

ADR / RID: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
 IMDG: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
 IATA: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.

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 Special Provision: -	Limited Quantities: 5 kg	Tunnel restriction code: (E)
IMDG:	EMS: F-A, S-F	Limited Quantities: 5 kg	
IATA:	Cargo:	Maximum quantity: 400 Kg	Packaging instructions: 956
	Pass.:	Maximum quantity: 400 Kg	Packaging instructions: 956
	Special Instructions:	A97, A158, A179, A197	

14.7. Transport in bulk according to Annex II of MARPOL73/78 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. None.

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

Product.
Point 3. *Liquid substances or mixtures fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008:*
(a) hazard classes 2.1 to 2.4, 2.6 and 2.7, 2.8 types A and B, 2.9, 2.10, 2.12, 2.13 categories 1 and 2, 2.14 categories 1 and 2, 2.15 types A to F;
(b) hazard classes 3.1 to 3.6, 3.7 adverse effects on sexual function and fertility or on development, 3.8 effects other than narcotic effects, 3.9 and 3.10;
(c) hazard class 4.1;
(d) hazard class 5.1.

Substances in Candidate List (Art. 59 REACH).

None.

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.

Product not intended for uses provided for by Dir. 2004/42/CE.

15.2. Chemical safety assessment.

No chemical safety assessment has been processed for the mixture and the substances it contains.

SECTION 16. Other information.

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

Acute Tox. 4	Acute toxicity, category 4
Eye Irrit. 2	Eye irritation, category 2
Skin Irrit. 2	Skin irritation, category 2
Skin Sens. 1	Skin sensitization, category 1
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.
H312	Harmful in contact with skin.
H332	Harmful if inhaled.
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.
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
- 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
- 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 STEL: Short-term exposure limit
- TWA: Time-weighted average exposure limit
- VOC: Volatile organic Compounds
- vPvB: Very Persistent and very Bioaccumulative as for REACH Regulation
- WGK: Water hazard classes (German).

GENERAL BIBLIOGRAPHY

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2. Regulation (EU) 1272/2008 (CLP) of the European Parliament

3. Regulation (EU) 790/2009 (I Atp. CLP) of the European Parliament
 4. Regulation (EU) 2015/830 of the European Parliament
 5. Regulation (EU) 286/2011 (II Atp. CLP) of the European Parliament
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 9. Regulation (EU) 605/2014 (VI Atp. CLP) of the European Parliament
- 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
 - ECHA website

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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.

Training for workers:

Worker training should include content, updates and duration depending on the risk profiles assigned to the business sectors they belong.

Classification according to Regulation (EC) Nr. 1272/2008

Skin Irrit. 2, H315

Skin Sens. 1, H317

Eye Irrit. 2, H319

Aquatic Chronic 3, H412

Classification procedure

Calculation method

Calculation method

Calculation method

Calculation method