

Safety data sheet
complying with Regulation 1907/2006/EC (REACH Regulation),
EU 2015/830 and Regulation No 1272/2008/EC (CLP)

Printing date 11.09.2018

Version number 1

Revision: 11.09.2018

SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1 Product identifier****Trade name:** EP 211 ESD B**1.2 Relevant identified uses of the substance or mixture and uses advised against**

No further relevant information available.

Application of the substance / the mixture:

Epoxy coating

Hardening agent/ Curing agent

1.3 Details of the supplier of the safety data sheet**Manufacturer/Supplier:**

PENETRON HELLAS S.A. G.E.MH. No: 07278001000

50, THRAKOMAKEDONON AV., 136 79 ACHARNES, GREECE

TEL.: +30 210 2448250 - FAX: + 30 210 2476803

Email: info@penetron.gr Site: www.penetron.gr

1.4 Emergency telephone number:

European Emergency Tel.: 112

SECTION 2: Hazards identification**2.1 Classification of the substance or mixture****Classification according to Regulation EC No 1272/2008 CLP:**

GHS05 corrosion

Skin Corr. 1A H314 Causes severe skin burns and eye damage.

Eye Dam. 1 H318 Causes serious eye damage.



GHS07

Acute Tox. 4 H302 Harmful if swallowed.

Acute Tox. 4 H332 Harmful if inhaled.

Skin Sens. 1 H317 May cause an allergic skin reaction.

Aquatic Chronic 3 H412 Harmful to aquatic life with long lasting effects.

2.2 Label elements**Labelling according to Regulation EC No 1272/2008 CLP:**

The product is classified and labelled according to the CLP regulation.

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Hazard pictograms:

GHS05 GHS07

Signal word: Danger**Hazard-determining components of labelling:**

m-phenylenebis(methylamine)

3-aminomethyl-3,5,5-trimethylcyclohexylamine

Benzyl alcohol

4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, reaction products with 3-aminomethyl-3,5,5-trimethylcyclohexylamine

alpha-(2-Aminomethylethyl)-omega-(2-aminomethylethoxy)-poly(oxy(methyl-1,2-ethandiyl))

Hazard statements:

H302+H332 Harmful if swallowed or if inhaled.

H314 Causes severe skin burns and eye damage.

H317 May cause an allergic skin reaction.

H412 Harmful to aquatic life with long lasting effects.

Precautionary statements

P260 Do not breathe dust/fume/gas/mist/vapours/spray.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P302+P352 IF ON SKIN: Wash with plenty of water.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

2.3 Other hazards**Results of PBT and vPvB assessment****PBT:** Not applicable.**vPvB:** Not applicable.**SECTION 3: Composition/information on ingredients****3.2 Chemical characterisation: Mixtures****Description:** Mixture: consisting of the following components.**Ingredients according Regulation (EU) 830/2015:**

CAS: 100-51-6	Benzyl alcohol	10-<25%
EINECS: 202-859-9	⚠ Acute Tox. 4, H302; Acute Tox. 4, H332	
Index number: 603-057-00-5		
Reg.nr.: 01-2119492630-38-XXXX		

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CAS: 1477-55-0 EINECS: 216-032-5 Reg.nr.: 01-2119480150-50-XXXX	m-phenylenebis(methylamine) ⚠ Skin Corr. 1B, H314; ⚠ Acute Tox. 4, H302; Acute Tox. 4, H332; Skin Sens. 1, H317; Aquatic Chronic 3, H412	10-<25%
CAS: 2855-13-2 EINECS: 220-666-8 Index number: 612-067-00-9 Reg.nr.: 01-2119514687-32-XXXX	3-aminomethyl-3,5,5-trimethylcyclohexylamine ⚠ Skin Corr. 1B, H314; ⚠ Acute Tox. 4, H302; Acute Tox. 4, H312; Skin Sens. 1, H317; Aquatic Chronic 3, H412	10-<25%
CAS: 38294-64-3 NLP: 500-101-4 Reg.nr.: 01-2119965165-33-XXXX	4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, reaction products with 3-aminomethyl-3,5,5-trimethylcyclohexylamine ⚠ Skin Corr. 1A, H314; ⚠ Skin Sens. 1, H317; Aquatic Chronic 3, H412	10-<25%
CAS: 9046-10-0 Reg.nr.: 01-2119557899-12-XXXX	alpha-(2-Aminomethylethyl)-omega-(2-aminomethylethoxy)-poly(oxy(methyl-1,2-ethandiyl)) ⚠ Skin Corr. 1B, H314; Eye Dam. 1, H318; Aquatic Chronic 3, H412	10-<25%
CAS: 64-17-5 EINECS: 200-578-6 Index number: 603-002-00-5 Reg.nr.: 01-2119457610-43-XXXX	ethanol ⚠ Flam. Liq. 2, H225	2.5-<10%

SECTION 4: First aid measures**4.1 Description of first aid measures****General information:** Seek immediate medical advice.**After inhalation:**

Supply fresh air and to be sure call for a doctor.

In case of unconsciousness place patient stably in side position for transportation.

After skin contact:

Immediately wash with water and soap and rinse thoroughly.

If skin irritation continues, consult a doctor.

After eye contact:

Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

Remove contact lenses and continue rinsing for several minutes

Avoid strong water jet-risk of cornea damage, consult a doctor.

After swallowing:

Drink plenty of water and provide fresh air. Call for a doctor immediately.

Seek immediate medical advice.

Never give anything by mouth to an unconscious person.

4.2 Most important symptoms and effects, both acute and delayed

No further relevant information available.

4.3 Indication of any immediate medical attention and special treatment needed

No further relevant information available.

SECTION 5: Firefighting measures**5.1 Extinguishing media****Suitable extinguishing agents:**CO₂, powder or water spray. Fight larger fires with water spray.

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Use fire extinguishing methods suitable to surrounding conditions.

5.2 Special hazards arising from the substance or mixture No further relevant information available.**5.3 Advice for firefighters****Protective equipment:**

Self contained breathing apparatus and full protective clothing must be worn in case of fire.

Additional information

Collect contaminated fire fighting water separately. It must not enter the sewage system.

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

Wear protective equipment. Keep unprotected persons away.

Avoid contact with skin and eyes.

Avoid inhalation of dust.

Ensure adequate ventilation.

6.1.1 For non-emergency personnel Avoid contact with dripping or leaking material**6.1.2 For emergency responders**

First-aid responders must wear protective clothing, gloves, goggles and respiratory device.

6.2 Environmental precautions: Do not allow to enter sewers/ surface or ground water.**6.3 Methods and material for containment and cleaning up:**

Use neutralising agent.

Dispose contaminated material as waste according to item 13.

Ensure adequate ventilation.

Send for recovery or disposal in suitable receptacles.

6.4 Reference to other sections:

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

SECTION 7: Handling and storage**7.1 Precautions for safe handling**

No special measures required.

Open and handle receptacle with care.

Prevent formation of dust.

Avoid contact with skin, eyes and clothing.

Information about fire - and explosion protection: No special measures required.**7.2 Conditions for safe storage, including any incompatibilities****Storage:** Store in cool, dry conditions in well sealed receptacles.**Requirements to be met by storerooms and receptacles:** Store in a cool location.**Information about storage in one common storage facility:** Not required.**Further information about storage conditions:**

Keep container tightly sealed.

Store under lock and key and with access restricted to technical experts or their assistants only.

7.3 Specific end use(s) No further relevant information available.

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Eye protection:

Tightly sealed goggles

Body protection:

Protective work clothing

Environmental exposure controls: Prevent enter of the product into drains, surface and groundwater and soil.**SECTION 9: Physical and chemical properties****9.1 Information on basic physical and chemical properties****General Information****Appearance:**

Form:	Liquid
Colour:	Light yellow
Odour:	Amine-like
Odour threshold:	Not determined

pH value: Not determined**Flash point:** 64 °C
Not Flammable**Flammability (solid, gas):** Not applicable**Auto-ignition temperature:** 435 °C**Decomposition temperature:** Not determined**Auto-ignition temperature:** Product is not selfigniting.**Explosive properties:** Product does not present an explosion hazard.**Explosion limits:**

Lower:	1.3 Vol %
Upper:	13 Vol %

Vapour pressure at 20 °C: 0.1 hPa

Density at 20 °C:	1.02 g/cm ³
Relative density	Not determined
Vapour density	Not determined
Evaporation rate	Not determined

Solubility in / Miscibility with water: Insoluble**Partition coefficient: n-octanol/water:** Not determined

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Viscosity:**Dynamic at 20 °C:** 160 mPas**Kinematic:** Not determined**9.2 Other information**

No further relevant information available.

SECTION 10: Stability and reactivity**10.1 Reactivity** Stable under normal conditions**10.2 Chemical stability** Material is stable under normal conditions.**Thermal decomposition / conditions to be avoided** Stable at environment temperature.**10.3 Possibility of hazardous reactions**

Reacts with alkali (lyes).

React with strong oxidising agents.

Reacts with strong acids.

10.4 Conditions to avoid No further relevant information available.**10.5 Incompatible materials** No further relevant information available.**10.6 Hazardous decomposition products** Corrosive gases/vapours**SECTION 11: Toxicological information****11.1 Information on toxicological effects****Acute toxicity**

Harmful if swallowed or if inhaled.

LD/LC50 values relevant for classification:**ATE (Acute Toxicity Estimates)**

Oral	LD50	>1,060-2,649 mg/kg
Dermal	LD50	>4,400-11,000 mg/kg
Inhalative	LC50/4 h (vapour)	>7.88-19.7 mg/l

CAS: 100-51-6 Benzyl alcohol

Oral	LD50	1,230 mg/kg (rat)
Dermal	LD50	2,000 mg/kg (rabbit)
Inhalative	LC50/4 h (vapour)	8.8 mg/l (rat)

CAS: 1477-55-0 m-phenylenebis(methylamine)

Oral	LD50	1,040 mg/kg (rat)
Inhalative	LC50/4 h (vapour)	2.4 mg/l (rat)

CAS: 9046-10-0 alpha-(2-Aminomethylethyl)-omega-(2-aminomethylethoxy)-poly(oxy(methyl-1,2-ethandiyl))

Oral	LD50	480 mg/kg (rat)
Dermal	LD50	2,090 mg/kg (rabbit)

CAS: 64-17-5 ethanol

Oral	LD50	7,060 mg/kg (rat)
Inhalative	LC50/4 h (vapour)	20,000 mg/l (rat)

Skin corrosion/irritation

Causes severe skin burns and eye damage.

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Serious eye damage/irritation

Causes serious eye damage.

Respiratory or skin sensitisation

May cause an allergic skin reaction.

Repeated dose toxicity Based on the data, the classification criteria are not fulfilled.**CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)****Germ cell mutagenicity** Based on available data, the classification criteria are not met.**Carcinogenicity** Based on available data, the classification criteria are not met.**Reproductive toxicity** Based on available data, the classification criteria are not met.**STOT-single exposure** Based on available data, the classification criteria are not met.**STOT-repeated exposure** Based on available data, the classification criteria are not met.**Aspiration hazard**Not classified as a risk for aspiration according to paragraphs 3.10.3.3.1.1. & 3.10.3.3.1.2 of CLP Regulation 1272/2008 / EC. The viscosity of the mixture at 40 ° C is greater than 20.5 mm² / s.**SECTION 12: Ecological information****12.1 Toxicity****Aquatic toxicity:**

100-51-6 Benzyl alcohol

EC50/96 h 400 mg/l (Daphnia (Wasserfloh))

640 mg/l (Scenedesmus subspicatus (Alge))

1477-55-0 m-phenylenebis(methylamine)

EC50/48 h 15.2 mg/l (Daphnia (Wasserfloh))

EC50/72h 20.3 mg/l (Scenedesmus subspicatus (Alge))

LC50/96 h 87.6 mg/l (Oryzias latipes (Ricefish))

2855-13-2 3-aminomethyl-3,5,5-trimethylcyclohexylamine

EC10 1120 mg/l (Pseudomonas putida)

EC50/48 h 23 mg/l (Daphnia (Wasserfloh))

Ethanol, cas: 64-17-5

Fish toxicity LC50:> 10000 mg / l

Daphnia toxicity, CEE0:> 7800 mg / l

Bacterial toxicity (Ps putida) CEE0:> 6500 mg / l

Algal toxicity (SC. Quadricauda), CEE0:> 5000 mg / l

Algal toxicity (M. Acruginosa), CEE0:> 1450 mg / l

CAS: 9046-10-0 alpha-(2-Aminomethylethyl)-omega-(2-aminomethylethoxy)-poly(oxy(methyl-1,2-ethandiyl))

EC50 15 mg/l (daphnia magna)

12.2 Persistence and degradability No further relevant information available.**12.3 Bioaccumulative potential** No further relevant information available.**12.4 Mobility in soil** No further relevant information available.**Ecotoxicological effects:****Remark:** Harmful to fish**Additional ecological information:****General notes:**

Must not reach sewage water or drainage ditch undiluted or unneutralised.

The product contains materials that are harmful to the environment.

Harmful to aquatic organisms

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12.5 Results of PBT and vPvB assessment**PBT:** Not applicable.**vPvB:** Not applicable.**12.6 Other adverse effects** No further relevant information available.**SECTION 13: Disposal considerations****13.1 Waste treatment methods****Recommendation**

Dispose according to National Regulations.



Must not be disposed together with household garbage. Do not allow product to reach sewage system.

Contact manufacturer for recycling information.

Waste disposal key:

08 04 09 - waste adhesives and sealants containing organic solvents or other dangerous substances.

Uncleaned packaging:**Recommendation:** Disposal must be made according to official regulations.**SECTION 14: Transport information****14.1 UN-Number****ADR, IMDG, IATA**

UN2735

14.2 UN proper shipping name**ADR**

2735 AMINES, LIQUID, CORROSIVE, N.O.S. (alpha-(2-Aminomethylethyl)-omega-(2-aminomethylethoxy)-poly(oxy(methyl-1,2-ethandiyl)), m-phenylenebis(methylamine))

IMDG, IATA

AMINES, LIQUID, CORROSIVE, N.O.S. (alpha-(2-Aminomethylethyl)-omega-(2-aminomethylethoxy)-poly(oxy(methyl-1,2-ethandiyl)), m-phenylenebis(methylamine))

14.3 Transport hazard class(es)**ADR, IMDG, IATA****Class**

8 Corrosive substances.

Label

8

14.4 Packing group**ADR, IMDG, IATA**

II

14.5 Environmental hazards:**Marine pollutant:**

No

14.6 Special precautions for user

Warning: Corrosive substances.

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Danger code (Kemler):	80
EMS Number:	F-A,S-B
Segregation groups	Alkalis
Stowage Category	D
Stowage Code	SW1 Protected from sources of heat. SW2 Clear of living quarters.
Handling Code	H2 Keep as cool as reasonably practicable
14.7 Transport in bulk according to Annex II of Marpol and the IBC Code	Not applicable.

Transport/Additional information:**ADR**

Limited quantities (LQ)	1L
Excepted quantities (EQ)	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
Transport category	2
Tunnel restriction code	E

IMDG

Limited quantities (LQ)	1L
Excepted quantities (EQ)	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
UN "Model Regulation":	UN 2735 AMINES, LIQUID, CORROSIVE, N.O.S. (ALPHA-(2-AMINOMETHYLETHYL)-OMEGA-(2-AMINOMETHYLETHOXY)-POLY(OXY(METHYL-1,2-ETHANDIYL)), M-PHENYLENEBIS(METHYLAMINE)), 8, II

SECTION 15: Regulatory information**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

REACH Regulation 1907/2006/EC

Regulation (EU) 2015/830

CLP Regulation 1272/2008/EC

Directive 98/24/EC on the protection of health and safety of workers from the risks related to chemicals agents at work.

Council Directive 94/33/EC on the protection of young people at work, as ammended.

Directive 92/85/EEC on the introduction of measures to encourage improvements in the safety and health at work of pregnant workers and workers who have recently given birth or are breastfeeding, as ammended

Directive 2012/18/EU**Named dangerous substances - ANNEX I** Substance is not listed.**REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 3, 40

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National regulations:**Other regulations, limitations and prohibitive regulations****Substances of very high concern (SVHC) according to REACH, Article 57**

It doesn't contain substances of very high concern (SVHC).

15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.**SECTION 16: Other information**

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

Relevant phrases

H225 Highly flammable liquid and vapour.

H302 Harmful if swallowed.

H312 Harmful in contact with skin.

H314 Causes severe skin burns and eye damage.

H317 May cause an allergic skin reaction.

H318 Causes serious eye damage.

H332 Harmful if inhaled.

H412 Harmful to aquatic life with long lasting effects.

Training hints

Suitable training on safety in handling, storing and converting the product should be given to the employees based on all the existing information.

Department issuing SDS:

SUSTCHEM Engineering SA
 REACH & Chemical Services Department
 144, 3rd Septemvriou, GR 112 51, Athens, Greece
 Tel.: +30 210 8252510 Fax: +30 210 8252575
 E-mail: info@suschem.gr
 Website: www.sustchem.gr

Abbreviations and acronyms:

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

VOC: Volatile Organic Compounds (USA, EU)

DNEL: Derived No-Effect Level (REACH)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

SVHC: Substances of Very High Concern

vPvB: very Persistent and very Bioaccumulative

Flam. Liq. 2: Flammable liquids – Category 2

Acute Tox. 4: Acute toxicity – Category 4

Skin Corr. 1A: Skin corrosion/irritation – Category 1A

Skin Corr. 1B: Skin corrosion/irritation – Category 1B

Eye Dam. 1: Serious eye damage/eye irritation – Category 1

Skin Sens. 1: Skin sensitisation – Category 1

Aquatic Chronic 3: Hazardous to the aquatic environment - long-term aquatic hazard – Category 3