Printing date 31.01.2018 Version number 1 Revision: 31.01.2018 SECTION 1: Identification of the substance/mixture and of the company/undertaking 1.1 Product identifier Trade name: EP 52 Rapid Komponente 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: GHS08 health hazard Repr. 2 H361 Suspected of damaging fertility or the unborn child. **GHS05** corrosion Skin Corr. 1A H314 Causes severe skin burns and eye damage. Eye Dam. 1 H318 Causes serious eye damage. GHS09 environment Aquatic Chronic 2 H411 Toxic to aquatic life with long lasting effects. GHS07 H302 Harmful if swallowed. Acute Tox. 4 H332 Harmful if inhaled. Acute Tox. 4 (Contd. on page 2) GB



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

#### 2.2 Label elements

# Labelling according to Regulation EC No 1272/2008 CLP:

The product is classified and labelled according to the CLP regulation. **Hazard pictograms:** 



Signal word: Danger

# Hazard-determining components of labelling:

m-phenylenebis(methylamine)

Benzyl alcohol

4-tert-butylphenol

3-aminomethyl-3,5,5-trimethylcyclohexylamine

trimethylhexane-1,6-diamine

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

# 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.
- H361 Suspected of damaging fertility or the unborn child.
- H411 Toxic to aquatic life with long lasting effects.

# **Precautionary statements**

P260	Do not breathe dust/fume/gas/mist/vapours/spray.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
	IF ON SKIN: Wash with plenty of water.
	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	8
<b>Results of PBT an</b>	id vPvB assessment
<b>PBT:</b> Not applicab	ole.
vPvB: Not applica	ble.

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

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SECTION 3: Composition/inform	ation on ingredients		
<b>3.2 Chemical characterisation: Mixtures</b> <b>Description:</b> Mixture: consisting of the following components.			
Ingredients according Regulation	(EU) <b>830/2015</b> :		
CAS: 100-51-6 EINECS: 202-859-9	Benzyl alcohol	10-<25%	
EINECS: 202-839-9 Index number: 603-057-00-5 Reg.nr.: 01-2119492630-38-XXXX	Acute Tox. 4, H302; Acute Tox. 4, H332		
CAS: 98-54-4	4-tert-butylphenol	10-<25%	
EINECS: 202-679-0 Index number: 604-090-00-8	♦ Repr. 2, H361;   Eye Dam. 1, H318;   Aquatic Chronic 1, H410;   Skin Irrit. 2, H315		
CAS: 1477-55-0	m-phenylenebis(methylamine)	10-<25%	
EINECS: 216-032-5 Reg.nr.: 01-2119480150-50-XXXX	Skin Corr. 1B, H314; Acute Tox. 4, H302; Acute Tox. 4, H332; Skin Sens. 1, H317; Aquatic Chronic 3, H412		
CAS: 25620-58-0	trimethylhexane-1,6-diamine	2.5-<10%	
EINECS: 247-134-8	<ul> <li>Skin Corr. 1B, H314;</li> <li>Acute Tox. 4, H302; Skin Sens. 1, H317; Aquatic Chronic 3, H412</li> </ul>		
CAS: 2855-13-2	3-aminomethyl-3,5,5-trimethylcyclohexylamine	2.5-<10%	
EINECS: 220-666-8	Skin Corr. 1B, H314; () Acute Tox. 4, H302; Acute Tox. 4,		
Index number: 612-067-00-9	H312; Skin Sens. 1, H317; Aquatic Chronic 3, H412		
Reg.nr.: 01-2119514687-32-XXXX			
CAS: 38294-64-3	4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-	2.5-<10%	
NLP: 500-101-4 Pag pr : 01 2110065165 33 XXXX	chloro-2,3-epoxypropane, reaction products with 3-aminomethyl- 3,5,5-trimethylcyclohexylamine		
Reg.nr.: 01-2119965165-33-XXXX	Skin Corr. 1A, H314; () Skin Sens. 1, H317; Aquatic Chronic		
	3, H412		

#### **SECTION 4: First aid measures**

# 4.1 Description of first aid measures

#### **General information:**

Immediately remove any clothing soiled by the product.

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

#### After inhalation:

Remove the victim into fresh air.

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

Seek medical treatment in case of complaints.

#### After skin contact:

Immediately wash with water and soap and rinse thoroughly.

If skin irritation continues, consult a doctor.

In case of skin irritation, consult a physician.

#### 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

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

After swallowing:

Rinse mouth and drink plenty of water.

Consult a physician or poison control center.

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 fire with foam.

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.

#### **6.1.2** For emergency responders

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

#### 6.2 Environmental precautions:

Do not allow to enter sewers/ surface or ground water.

Do not allow to penetrate the ground/soil.

Inform respective authorities in case of seepage into water course or sewage system.

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

Absorb with liquid-binding material: (sand, diatomite, acid binders, universal binders and sawdust). Dispose contaminated material as waste according to item 13.

#### 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

Ensure good ventilation.

Do not breathe vapor or mist.

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: Prevent any seepage into the ground.

Information about storage in one common storage facility: Not required.

Further information about storage conditions: Keep container tightly sealed.

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

# **SECTION 8: Exposure controls/personal protection**

#### 8.1 Control parameters

#### Ingredients with limit values that require monitoring at the workplace:

The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

#### DNEL Workers Acute/short term exposure systemic effects

reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight ≤ 700), CAS Number: 25068-38-6

8.3 mg/kg bw/day - Dermal Exposure 12.25 mg/m<sup>3</sup> - Inhalation Exposure

#### DNEL Workers Long term exposure systemic effects

reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight ≤ 700), CAS Number: 25068-38-6

8.3 mg/kg bw/day - Dermal Exposure

12.25 mg/m<sup>3</sup> - Inhalation Exposure

# DNEL Consumers Acute/Short term exposure systemic effects

reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight ≤ 700), CAS Number: 25068-38-6

0.75 mg/kg bw/day<sup>3</sup> - Oral Exposure

3.6 mg/kg bw/day - Dermal Exposure

0.75 mg/kg bw/day - Inhalation Exposure

# DNEL Consumers Long-term exposure systemic effects

reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight ≤ 700), CAS Number: 25068-38-6

0.75 mg/kg bw/day<sup>3</sup> - Oral Exposure

3.6 mg/kg bw/day - Dermal Exposure

0.75 mg/kg bw/day - Inhalation Exposure

# 8.2 Exposure controls

# 8.2.1. Appropriate engineering controls

Take appropriate protective measures with regard to the handling of chemicals and mixtures.

# Personal protective equipment

#### General protective and hygienic measures:

Keep away from foodstuffs, beverages and feed.

Avoid contact with the eyes and skin.

Be sure to clean skin thoroughly after work and before breaks.

Remove contaminated clothing and protective equipment before entering eating areas.

# **Respiratory protection:**



Use suitable respiratory protective device in case of insufficient ventilation.

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# **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation **Material of gloves** 

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a mixture of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

#### Butyl rubber, BR, Nitrile rubber, NBR Penetration time of glove material

The determined penetration times according to EN 374 part III are not performed under practical conditions. Therefore a maximum wearing time, which corresponds to 50% of the penetration time, is recommended. Eye protection:



Tightly sealed goggles

**Body protection:** 



Protective work clothing

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:	>100 °C		
Flammability (solid, gas):	Not applicable		
Auto-ignition temperature:	435 °C		
Decomposition temperature:	Not determined		
		(Contd. on page 7) GB	

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		(Contd. of page
Auto-ignition temperature:	Product is not selfigniting.	
Explosive properties:	Product does not present an explosion haza	ard.
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 <sup>3</sup>	
Relative density	Not determined	
Vapour density	Not determined	
Evaporation rate	Not determined	
Solubility in / Miscibility with		
water:	Partly soluble.	
Partition coefficient: n-octanol/	water: Not determined	
Viscosity:		
Dynamic:	Not determined	
Kinematic:	Not determined	
9.2 Other information	No further relevant information available.	
SECTION 10: Stability and rea	•	
<b>10.1 Reactivity</b> Stable under norm		
	is stable under normal conditions.	
<b>A</b>	ions to be avoided Stable at environment tempera actions No dangerous reactions known.	ature.
	her relevant information available.	
	further relevant information available.	
10.6 Hazardous decomposition		
	products minute Bacco, rapouro	
SECTION 11: Toxicological inf	ormation	
11.1 Information on toxicologica		

Acute toxicity

Harmful if swallowed or if inhaled.

# LD/LC50 values relevant for classification:

ATE (Acute Toxicity Estimates)		
Oral	LD50	>1,325-3,918 mg/kg
Dermal	LD50	>11,000-44,000 mg/kg
Inhalative	LC50/4 h (vapour)	>7.88-19.7 mg/l
	•	(Contd. on page 8)

Printing date 31.01.2018 Version number 1 Revision: 31.01.2018 Trade name: EP 52 Rapid Komponente B (Contd. of page 7) 100-51-6 Benzyl alcohol Oral LD50 1,230 mg/kg (rat) LD50 2,000 mg/kg (rabbit) Dermal Inhalative LC50/4 h (vapour) 8.8 mg/l (rat) 98-54-4 4-tert-butylphenol Oral LD50 2,951 mg/kg (rat) LD50 2,288 mg/kg (rabbit) Dermal 1477-55-0 m-phenylenebis(methylamine) Oral LD50 1,040 mg/kg (rat) Inhalative LC50/4 h (vapour) 2.4 mg/l (rat) 25620-58-0 trimethylhexane-1,6-diamine Oral LD50 900 mg/kg (rat) **Skin corrosion/irritation** Causes severe skin burns and eye damage. Serious eve damage/irritation Causes serious eye damage. **Respiratory or skin sensitisation** May cause an allergic skin reaction. CMR effects (carcinogenity, mutagenicity and toxicity for reproduction) Repr. 2 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** Suspected of damaging fertility or the unborn child. **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 Based on available data, the classification criteria are not met. **SECTION 12: Ecological information** 12.1 Toxicity Aquatic toxicity:

Aquatic toxicity: 100-51-6 Benzyl alcohol EC50/96 h 400 mg/l (Daphnia (Wasserfloh)) 640 mg/l (Scenedesmus subspicatus (Alge))

98-54-4 4-tert-butylphenol EC50/48 h 3.4 mg/l (Daphnia (Wasserfloh)) EC50/72h 22.7 mg/l (Selenastrum capricornutum) LC50/96 h 5.1 mg/l (Oryzias latipes (Ricefish))

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))

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(Contd. of page 8) 25620-58-0 trimethylhexane-1,6-diamine EC10 72 mg/l (Pseudomonas putida) EC50/24h 31.5 mg/l (Daphnia (Wasserfloh)) EC50/72h 29.5 mg/l (Scenedesmus subspicatus (Alge)) LC0/96h 150 mg/l (Leuciscus idus (Goldorfe)) LC50/48h 174 mg/l (Leuciscus idus (Goldorfe)) 2855-13-2 3-aminomethyl-3,5,5-trimethylcyclohexylamine EC10 1120 mg/l (Pseudomonas putida) EC50/48 h 23 mg/l (Daphnia (Wasserfloh)) 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. **Ecotoxical effects:** Remark: Toxic for fish Additional ecological information: **General notes:** Also poisonous for fish and plankton in water bodies. Do not allow product to reach ground water, water course or sewage system. Danger to drinking water if even small quantities leak into the ground. The product contains materials that are harmful to the environment. 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.

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Packaging may be reused or recycled after	cleaning	(Contd. of page
	cicaning.	
SECTION 14: Transport information		
14.1 UN-Number		
ADR, IMDG, IATA	UN2735	
14.2 UN proper shipping name ADR	2735 AMINES, LIQUID, CO	PPOSIVE NOS (m
ADK	phenylenebis(methylamine), 4	
IMDG	AMINES, LIQUID, CORROS	
	phenylenebis(methylamine), 4	
	POLLUTANT	
ΙΑΤΑ	AMINES, LIQUID, CORROS	
	phenylenebis(methylamine), 4	1-tert-butylphenol)
14.3 Transport hazard class(es)		
ADR, IMDG		
Class Label	8 Corrosive substances. 8	
ΙΑΤΑ		
Class	8 Corrosive substances.	
Label 14.4 Packing group	8	
ADR, IMDG, IATA	П	
14.5 Environmental hazards:	Environmental Hazardous	
Marine pollutant:	Yes	
Porterino	Symbol (fish and tree)	
Special marking (ADR):	Symbol (fish and tree)	
	Warning: Corrosive substance	es.
14.6 Special precautions for user	e	
14.6 Special precautions for user Danger code (Kemler):	86	
14.6 Special precautions for user Danger code (Kemler): EMS Number:	86 F-A,S-B	
Danger code (Kemler):		
Danger code (Kemler): EMS Number:	F-A,S-B	
Danger code (Kemler): EMS Number: Segregation groups	F-A,S-B Alkalis	acids.
Danger code (Kemler): EMS Number: Segregation groups Stowage Category	F-A,S-B Alkalis A SG35 Stow "separated from" :	acids.

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Transport/Additional information:			
ADR			
Limited quantities (LQ) Excepted quantities (EQ)	1L Code: E2 Maximum net quantity per in Maximum net quantity per ou		
Transport category Tunnel restriction code	2 E	ner promiging. e co mi	
IMDG			
Limited quantities (LQ) Excepted quantities (EQ)	1L 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, PHENYLENEBIS(METHYL BUTYLPHENOL), 8, II	, CORROSIVE, N.O.S. (M-	

#### **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 **REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 3

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**

H302 Harmful if swallowed.

H312 Harmful in contact with skin.

H314 Causes severe skin burns and eye damage.

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H315 Causes skin irritation.

H317 May cause an allergic skin reaction.

H318 Causes serious eye damage.

H332 Harmful if inhaled.

H361 Suspected of damaging fertility or the unborn child.

H410 Very toxic to aquatic life with long lasting effects.

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) 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 Acute Tox. 4: Acute toxicity - Category 4 Skin Corr. 1A: Skin corrosion/irritation - Category 1A Skin Corr. 1B: Skin corrosion/irritation - Category 1B Skin Irrit. 2: Skin corrosion/irritation - Category 2 Eye Dam. 1: Serious eye damage/eye irritation - Category 1 Skin Sens. 1: Skin sensitisation - Category 1 Repr. 2: Reproductive toxicity - Category 2 Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard - Category 1 Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard - Category 2 Aquatic Chronic 3: Hazardous to the aquatic environment - long-term aquatic hazard - Category 3