



SAFETY DATA SHEET

CHEMSET ES 8213 & ES 8214 EPOXY ENAMELLING HARDENERS

Page: 1

Compilation date: 18/03/2020

Revision date: 20/05/2020

Revision No: 2

Section 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product name: CHEMSET ES 8213 & ES 8214 EPOXY ENAMELLING HARDENERS

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

1.3. Details of the supplier of the safety data sheet

Company name: R F Bright Enterprises Ltd
Unit 6, Access 4.20
New Hythe Business Park, Bellingham Way
Aylesford
Kent
ME20 7HP
United Kingdom
Tel: 01622717141
Fax: 01622717163
Email: enquiries@rfbright.co.uk

1.4. Emergency telephone number

Emergency tel: 08450563563 (24 hours)

Section 2: Hazards identification

2.1. Classification of the substance or mixture

Classification under CLP: Acute Tox. 4: H302+H312; Aquatic Chronic 2: H411; Skin Corr. 1B: H314; Skin Sens. 1A: H317; STOT RE 2: H373

Most important adverse effects: Harmful if swallowed or in contact with skin Causes severe skin burns and eye damage. May cause an allergic skin reaction. May cause damage to organs through prolonged or repeated exposure. Toxic to aquatic life with long lasting effects.

2.2. Label elements

Label elements:

Hazard statements: H302+H312: Harmful if swallowed or in contact with skin
H314: Causes severe skin burns and eye damage.
H317: May cause an allergic skin reaction.
H373: May cause damage to organs through prolonged or repeated exposure.
H411: Toxic to aquatic life with long lasting effects.

Hazard pictograms: GHS05: Corrosion
GHS07: Exclamation mark

[cont...]

SAFETY DATA SHEET

CHEMSET ES 8213 & ES 8214 EPOXY ENAMELLING HARDENERS

Page: 2

GHS08: Health hazard

GHS09: Environmental



Signal words: Danger

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

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

P301+P312: IF SWALLOWED: Call a POISON CENTRE or doctor if you feel unwell.

P301+P330+P331: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting

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

P362+P364: Take off contaminated clothing and wash it before reuse.

2.3. Other hazards

PBT: This product is not identified as a PBT/vPvB substance.

Section 3: Composition/information on ingredients

3.2. Mixtures

Hazardous ingredients:

TRIMETHYLOLPROPANE POLYOXYPROPYLENE TRIAMINE - REACH registered number(s): 01-2119556886-20

EINECS	CAS	PBT / WEL	CLP Classification	Percent
-	39423-51-3	-	Acute Tox. 4: H302+H312; Eye Dam. 1: H318; Aquatic Chronic 2: H411	30-50%

3-AMINOMETHYL-3,5,5-TRIMETHYLCYCLOHEXYLAMINE - REACH registered number(s): 01-2119514687-32

220-666-8	2855-13-2	-	Acute Tox. 4: H312; Acute Tox. 4: H302; Skin Corr. 1B: H314; Skin Sens. 1: H317; Aquatic Chronic 3: H412	10-30%
-----------	-----------	---	--	--------

BENZYL ALCOHOL

202-859-9	100-51-6	-	Acute Tox. 4: H332; Acute Tox. 4: H302	10-30%
-----------	----------	---	--	--------

TRIMETHYLHEXANE-1,6-DIAMINE - REACH registered number(s): 01-2119560598-25

247-063-2	25513-64-8	-	Skin Corr. 1A: H314; Eye Dam. 1: H318; Acute Tox. 4: H302; Skin Sens. 1A: H317	1-10%
-----------	------------	---	--	-------

BENZOIC ACID - REACH registered number(s): 01-2120759525-46-0000

200-618-2	65-85-0	-	STOT RE 1: H372; Skin Irrit. 2: H315; Eye Dam. 1: H318	1-10%
-----------	---------	---	--	-------

Section 4: First aid measures

[cont...]

SAFETY DATA SHEET

CHEMSET ES 8213 & ES 8214 EPOXY ENAMELLING HARDENERS

Page: 3

4.1. Description of first aid measures

Skin contact: Wash immediately with plenty of soap and water. Remove all contaminated clothes and footwear immediately unless stuck to skin. Drench the affected skin with running water for 10 minutes or longer if substance is still on skin. Transfer to hospital if there are burns or symptoms of poisoning.

Eye contact: Bathe the eye with running water for 15 minutes. Transfer to hospital for specialist examination.

Ingestion: Wash out mouth with water. Do not induce vomiting. Give 1 cup of water to drink every 10 minutes. If unconscious, check for breathing and apply artificial respiration if necessary. If unconscious and breathing is OK, place in the recovery position. Transfer to hospital as soon as possible.

Inhalation: Remove casualty from exposure ensuring one's own safety whilst doing so. If unconscious, check for breathing and apply artificial respiration if necessary. If unconscious and breathing is OK, place in the recovery position. If conscious, ensure the casualty sits or lies down. Transfer to hospital as soon as possible.

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

Skin contact: Severe burns may occur.

Eye contact: Corneal burns may occur. May cause permanent damage.

Ingestion: Corrosive burns may appear around the lips. Blood may be vomited.

Inhalation: There may be shortness of breath with a burning sensation in the throat. Exposure may cause coughing or wheezing.

Delayed / immediate effects: Immediate effects can be expected after short-term exposure.

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

Immediate / special treatment: Eye bathing equipment should be available on the premises.

Section 5: Fire-fighting measures

5.1. Extinguishing media

Extinguishing media: Suitable extinguishing media for the surrounding fire should be used. Use water spray to cool containers.

5.2. Special hazards arising from the substance or mixture

Exposure hazards: Corrosive. In combustion emits toxic fumes.

5.3. Advice for fire-fighters

Advice for fire-fighters: Wear self-contained breathing apparatus. Wear protective clothing to prevent contact with skin and eyes.

Section 6: Accidental release measures

[cont...]

SAFETY DATA SHEET

CHEMSET ES 8213 & ES 8214 EPOXY ENAMELLING HARDENERS

Page: 4

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions: Mark out the contaminated area with signs and prevent access to unauthorised personnel. Do not attempt to take action without suitable protective clothing - see section 8 of SDS. Turn leaking containers leak-side up to prevent the escape of liquid.

6.2. Environmental precautions

Environmental precautions: Do not discharge into drains or rivers. Contain the spillage using bunding.

6.3. Methods and material for containment and cleaning up

Clean-up procedures: Clean-up should be dealt with only by qualified personnel familiar with the specific substance. Absorb into dry earth or sand. Transfer to a closable, labelled salvage container for disposal by an appropriate method.

6.4. Reference to other sections

Reference to other sections: Refer to section 8 of SDS.

Section 7: Handling and storage

7.1. Precautions for safe handling

Handling requirements: Avoid direct contact with the substance. Ensure there is sufficient ventilation of the area. Do not handle in a confined space.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions: Store in a cool, well ventilated area. Keep container tightly closed.

Suitable packaging: Must only be kept in original packaging.

7.3. Specific end use(s)

Specific end use(s): No data available.

Section 8: Exposure controls/personal protection

8.1. Control parameters

Workplace exposure limits: No data available.

DNEL/PNEC Values

Hazardous ingredients:

TRIMETHYLOLPROPANE POLYOXYPROPYLENE TRIAMINE

Type	Exposure	Value	Population	Effect
DNEL	Dermal	1.6 mg/kg	Workers	-
DNEL	Inhalation	14 mg/l	Workers	-
PNEC	Fresh water	0.0044 mg/l	-	-

[cont...]

SAFETY DATA SHEET

CHEMSET ES 8213 & ES 8214 EPOXY ENAMELLING HARDENERS

Page: 5

PNEC	Marine water	0.00044 mg/l	-	-
------	--------------	--------------	---	---

TRIMETHYLHEXANE-1,6-DIAMINE

Type	Exposure	Value	Population	Effect
PNEC	Fresh water	0.102 mg/l	-	-
PNEC	Marine water	0.01 mg/l	-	-

BENZOIC ACID

Type	Exposure	Value	Population	Effect
DNEL	Inhalation	0.6 mg/m ³	Workers	Systemic
DNEL	Dermal	1 mg/kg bw/day	Workers	Systemic
DNEL	Inhalation	0.1 mug/m ³	Consumers	Systemic
DNEL	Dermal	0.1mg/kg bw/day	Consumers	Systemic
DNEL	Oral	0.1 mg/kg bw/day	Consumers	Systemic
PNEC	Fresh water	1.4 mug/l	General Population	-
PNEC	Fresh water sediments	5.26 mug/kg	General Population	-
PNEC	Marine water	0.14 mug/L	-	-
PNEC	Marine sediments	0.526 mug/l	-	-
PNEC	Microorganisms in sewage treatment	10 mg/l	-	-
PNEC	Soil (agricultural)	0.231 mug/kg	-	-

8.2. Exposure controls

Engineering measures: Ensure there is sufficient ventilation of the area.

Respiratory protection: Respiratory protective device with particle filter.

Hand protection: Impermeable gloves. Recommended thickness of the glove material >0.5mm The resistance of glove material to this product cannot be calculated in advance as quality varies from manufacturer to manufacture. The suitability of the gloves selected must therefore be checked prior to use.

Eye protection: Tightly fitting safety goggles. Ensure eye bath is to hand.

Skin protection: Impermeable protective clothing.

Environmental: The floor of the storage room must be impermeable to prevent the escape of liquids.

Section 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

State: Liquid

Colour: Colourless

Odour: Characteristic odour

Solubility in water: Slightly soluble

Boiling point/range°C: >200C

Autoflammability°C: Not applicable.

Flash point°C: >100C

Relative density: 0.99g/cm³

[cont...]

SAFETY DATA SHEET

CHEMSET ES 8213 & ES 8214 EPOXY ENAMELLING HARDENERS

Page: 6

9.2. Other information

Other information: No data available.

Section 10: Stability and reactivity

10.1. Reactivity

Reactivity: Stable under recommended transport or storage conditions.

10.2. Chemical stability

Chemical stability: Stable under normal conditions.

10.3. Possibility of hazardous reactions

Hazardous reactions: Hazardous reactions will not occur under normal transport or storage conditions.

Decomposition may occur on exposure to conditions or materials listed below. Reacts with acids, alkalis and oxidising agents

10.4. Conditions to avoid

Conditions to avoid: Heat.

10.5. Incompatible materials

Materials to avoid: Strong oxidising agents. Strong acids.

10.6. Hazardous decomposition products

Haz. decomp. products: In combustion emits toxic fumes.

Section 11: Toxicological information

11.1. Information on toxicological effects

Hazardous ingredients:

TRIMETHYLOLPROPANE POLYOXYPROPYLENE TRIAMINE

DERMAL	RAT	LD50	>1000	mg/kg
ORAL	RAT	LD50	550	mg/kg

BENZYL ALCOHOL

IVN	RAT	LD50	53	mg/kg
ORL	MUS	LD50	1360	mg/kg
ORL	RAT	LD50	1230	mg/kg

TRIMETHYLHEXANE-1,6-DIAMINE

ORAL	RAT	LD50	910	mg/kg
------	-----	------	-----	-------

[cont...]

SAFETY DATA SHEET

CHEMSET ES 8213 & ES 8214 EPOXY ENAMELLING HARDENERS

Page: 7

BENZOIC ACID

ORAL	RAT	LD50	2000	mg/kg
------	-----	------	------	-------

Relevant hazards for product:

Hazard	Route	Basis
Acute toxicity (ac. tox. 4)	DRM ING	Hazardous: calculated
Skin corrosion/irritation	DRM	Hazardous: calculated
Serious eye damage/irritation	OPT	Hazardous: calculated
Respiratory/skin sensitisation	-	Hazardous: calculated
STOT-repeated exposure	-	Hazardous: calculated

Symptoms / routes of exposure

Skin contact: Severe burns may occur.

Eye contact: Corneal burns may occur. May cause permanent damage.

Ingestion: Corrosive burns may appear around the lips. Blood may be vomited.

Inhalation: There may be shortness of breath with a burning sensation in the throat. Exposure may cause coughing or wheezing.

Delayed / immediate effects: Immediate effects can be expected after short-term exposure.

Section 12: Ecological information

12.1. Toxicity

Hazardous ingredients:

TRIMETHYLOLPROPANE POLYOXYPROPYLENE TRIAMINE

ALGAE	48H EC50	4.4	mg/l
DAPHNIA	48H EC50	13	mg/l
FISH	96H LC50	>100	mg/l

TRIMETHYLHEXANE-1,6-DIAMINE

ALGAE	72H ErC50	43.5	mg/l
DAPHNIA	48H EC50	31.5	mg/l
FISH	48H EC50	174	mg/l

BENZOIC ACID

FISH	96H LC50	1.4	mg/l
------	----------	-----	------

12.2. Persistence and degradability

Persistence and degradability: Biodegradable.

[cont...]

SAFETY DATA SHEET

CHEMSET ES 8213 & ES 8214 EPOXY ENAMELLING HARDENERS

Page: 8

12.3. Bioaccumulative potential

Bioaccumulative potential: No bioaccumulation potential.

12.4. Mobility in soil

Mobility: Readily absorbed into soil.

12.5. Results of PBT and vPvB assessment

PBT identification: This product is not identified as a PBT/vPvB substance.

12.6. Other adverse effects

Other adverse effects: Toxic to aquatic organisms.

Section 13: Disposal considerations

13.1. Waste treatment methods

Disposal operations: Transfer to a suitable container and arrange for collection by specialised disposal company.

NB: The user's attention is drawn to the possible existence of regional or national regulations regarding disposal.

Section 14: Transport information

14.1. UN number

UN number: UN2735

14.2. UN proper shipping name

Shipping name: AMINES, LIQUID, CORROSIVE, N.O.S.
(Trimethylolpropane polyoxypropylene triamine, Isophoronediamine)

14.3. Transport hazard class(es)

Transport class: 8

14.4. Packing group

Packing group: III

14.5. Environmental hazards

Environmentally hazardous: Yes

Marine pollutant: No

14.6. Special precautions for user

Special precautions: No special precautions.

Tunnel code: E

Transport category: 3

Section 15: Regulatory information

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

Specific regulations: Not applicable.

[cont...]

SAFETY DATA SHEET

CHEMSET ES 8213 & ES 8214 EPOXY ENAMELLING HARDENERS

Page: 9

15.2. Chemical Safety Assessment

Chemical safety assessment: A chemical safety assessment has not been carried out for the substance or the mixture by the supplier.

Section 16: Other information

Other information

Other information: according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

* indicates text in the SDS which has changed since the last revision.

Phrases used in s.2 and s.3: H302: Harmful if swallowed.

H302+H312: Harmful if swallowed or in contact with skin

H312: Harmful in contact with skin.

H314: Causes severe skin burns and eye damage.

H315: Causes skin irritation.

H317: May cause an allergic skin reaction.

H318: Causes serious eye damage.

H332: Harmful if inhaled.

H372: Causes damage to organs ({{{0||message=<or state all organs affected, if known>||filter=(_)?ORGAN_.+}}}) through prolonged or repeated exposure ({{{1||message=<state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard>||filter=(_)?EXP_ROUTE_.+}}}).

H373: May cause damage to organs ({{{0||message=<or state all organs affected, if known>||filter=(_)?ORGAN_.+}}}) through prolonged or repeated exposure ({{{1||message=<state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard>||filter=(_)?EXP_ROUTE_.+}}}).

H411: Toxic to aquatic life with long lasting effects.

H412: Harmful to aquatic life with long lasting effects.

Legal disclaimer: The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. This company shall not be held liable for any damage resulting from handling or from contact with the above product.