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Compilation date: 12/03/14

Revision No: 5

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

1.1. Product identifier

Product name: SLOW CURE EPOXY TWIN CARTRIDGE PART A

Product code: D311

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

Use of substance / mixture: Epoxy resin preparation

1.3. Details of the supplier of the safety data sheet

Company name: Delta Adhesives Limited

Units 39-40

Claycliffe Business Park

Cannon Way Barugh Green

Barnsley, South Yorkshire

S75 1JU

Tel: +44 (0) 1226 381 571 **Fax:** +44 (0) 1226 381 722

Email: info@delta-adhesives.co.uk

1.4. Emergency telephone number

Section 2: Hazards identification

2.1. Classification of the substance or mixture

Classification under CHIP: Xi: R36/38; Sens.: R43; N: R51/53

Classification under CLP: Aquatic Chronic 2: H411; Eye Irrit. 2: H319; Skin Irrit. 2: H315; Skin Sens. 1: H317; -:

EUH205

Most important adverse effects: Irritating to eyes and skin. May cause sensitisation by skin contact. Toxic to aquatic

organisms, may cause long-term adverse effects in the aquatic environment.

2.2. Label elements

Label elements under CLP:

Hazard statements: H315: Causes skin irritation.

H317: May cause an allergic skin reaction.

H319: Causes serious eye irritation.

H411: Toxic to aquatic life with long lasting effects.

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

Signal words: Warning

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Hazard pictograms: GHS07: Exclamation mark

GHS09: Environmental





Precautionary statements: P264: Wash thoroughly after handling.

P273: Avoid release to the environment.

P280: Wear.

P305+351+338: IF IN EYES: Rinse cautiously with water for several minutes. Remove

contact lenses, if present and easy to do. Continue rinsing.

P321: Specific treatment (see on this label).
P332+313: If skin irritation occurs: Get medical.

Label elements under CHIP:

Hazard symbols: Irritant.

Dangerous for the environment.





Risk phrases: R36/38: Irritating to eyes and skin.

R43: May cause sensitisation by skin contact.

R51/53: Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic

environment.

Safety phrases: S2: Keep out of the reach of children.

S24: Avoid contact with skin.S29: Do not empty into drains.S37: Wear suitable gloves.

S61: Avoid release to the environment. Refer to special instructions / safety data sheets.

Precautionary phrases: Contains epoxy constituents. See information supplied by the manufacturer.

2.3. Other hazards

PBT: This substance is not identified as a PBT substance.

Section 3: Composition/information on ingredients

3.2. Mixtures

Hazardous ingredients:

BISPHENOL A-(EPICHLORHYDRIN) {REACTION PRODUCT}

EINECS	CAS	CHIP Classification	CLP Classification	Percent	
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500-033-5	25068-38-6	Xi: R36/38; Sens.: R43; N: R51/53	Eye Irrit. 2: H319; Skin Irrit. 2: H315; Skin Sens. 1: H317; Aquatic Chronic 2: H411	70-90%
BISPHENOL F				
-	28064-14-4	Xi: R36/38; Sens.: R43; N: R51/53	Skin Irrit. 2: H315; Skin Sens. 1: H317; Eye Irrit. 2: H319; Aquatic Chronic 2: H411; -: EUH205	5-10%

Section 4: First aid measures

4.1. Description of first aid measures

Skin contact: Remove all contaminated clothes and footwear immediately unless stuck to skin. Wash

immediately with plenty of soap and water. Consult a doctor.

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

examination.

Ingestion: Wash out mouth with water. If conscious, give half a litre of water to drink immediately.

Do not induce vomiting. Consult a doctor.

Inhalation: Remove casualty from exposure ensuring one's own safety whilst doing so. Consult a

doctor.

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

Skin contact: There may be irritation and redness at the site of contact.

Eye contact: There may be irritation and redness. The eyes may water profusely.

Ingestion: There may be soreness and redness of the mouth and throat.

Inhalation: There may be irritation of the throat with a feeling of tightness in the chest. 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. Water spray.

Water fog. Foam. Carbon dioxide. Dry chemical powder. Use water spray to cool

containers.

5.2. Special hazards arising from the substance or mixture

Exposure hazards: 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.

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Section 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions: Refer to section 8 of SDS for personal protection details. If outside do not approach from

downwind. If outside keep bystanders upwind and away from danger point. 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: Absorb into dry earth or sand. Transfer to a closable, labelled salvage container for

disposal by an appropriate method. Wash the spillage site with large amounts of water.

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. Avoid the formation or spread of mists in the air.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions: Store in cool, well ventilated area. Keep container tightly closed. The floor of the storage

room must be impermeable to prevent the escape of liquids.

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: Not applicable.

8.2. Exposure controls

Engineering measures: Ensure there is sufficient ventilation of the area. The floor of the storage room must be

impermeable to prevent the escape of liquids.

Respiratory protection: Self-contained breathing apparatus must be available in case of emergency.

Hand protection: Protective gloves.

Eye protection: Safety goggles. Ensure eye bath is to hand.

Skin protection: Protective clothing.

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Section 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

State: Liquid

Colour: Pale yellowOdour: Slight odour

Solubility in water: Insoluble

Kinematic viscosity: 8000-15000

Viscosity test method: @25'C mPa.s

Boiling point/range°C: > 200 Melting point/range°C: N/A

Flash point°C: > 150 Relative density: 1.17@20degC

9.2. Other information

Other information: Not applicable.

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.

10.4. Conditions to avoid

Conditions to avoid: Heat. Flames. Sources of ignition.

10.5. Incompatible materials

Materials to avoid: Strong oxidising agents. Strong acids. Strong bases.

10.6. Hazardous decomposition products

Haz. decomp. products: In combustion emits toxic fumes of carbon dioxide / carbon monoxide. In combustion

emits toxic fumes of nitrogen oxides.

Section 11: Toxicological information

11.1. Information on toxicological effects

Relevant effects for mixture:

Effect	Route	Basis
2000	1 10010	Daoie

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Irritation	OPT DRM	Hazardous: calculated
Sensitisation	DRM	Hazardous: calculated

Symptoms / routes of exposure

Skin contact: There may be irritation and redness at the site of contact.

Eye contact: There may be irritation and redness. The eyes may water profusely.

Ingestion: There may be soreness and redness of the mouth and throat.

Inhalation: There may be irritation of the throat with a feeling of tightness in the chest. 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

Ecotoxicity values: Not applicable.

12.2. Persistence and degradability

Persistence and degradability: Not biodegradable.

12.3. Bioaccumulative potential

Bioaccumulative potential: No data available.

12.4. Mobility in soil

Mobility: Insoluble in water.

12.5. Results of PBT and vPvB assessment

PBT identification: This substance is not identified as a PBT substance.

12.6. Other adverse effects

Other adverse effects: Toxic to aquatic organisms.

Section 13: Disposal considerations

13.1. Waste treatment methods

Disposal operations: Incineration with provision for removal of effluent gases by scrubber. Transfer to a

suitable container and arrange for collection by specialised disposal company.

Disposal of packaging: Dispose of in a regulated landfill site or other method for hazardous or toxic wastes.

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: UN3082

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14.2. UN proper shipping name

Shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.

(BISPHENOL A-(EPICHLORHYDRIN) {REACTION PRODUCT})

14.3. Transport hazard class(es)

Transport class: 9

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

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: This safety data sheet is prepared in accordance with Commission Regulation (EU) No

453/2010.

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

Phrases used in s.2 and 3: EUH205: Contains epoxy constituents. May produce an allergic reaction.

H315: Causes skin irritation.

H317: May cause an allergic skin reaction.

H319: Causes serious eye irritation.

H411: Toxic to aquatic life with long lasting effects.

R36/38: Irritating to eyes and skin.

R43: May cause sensitisation by skin contact.

R51/53: Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic

environment.

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.



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Compilation date: 12/03/14

Revision No: 5

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

1.1. Product identifier

Product name: SLOW CURE EPOXY TWIN CARTRIDGE PART B

Product code: D311

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

Use of substance / mixture: Epoxy hardener preparation

1.3. Details of the supplier of the safety data sheet

Company name: Delta Adhesives Limited

Units 39-40

Claycliffe Business Park

Cannon Way Barugh Green

Barnsley, South Yorkshire

S75 1JU

Tel: +44 (0) 1226 381 571 **Fax:** +44 (0) 1226 381 722

Email: info@delta-adhesives.co.uk

1.4. Emergency telephone number

Section 2: Hazards identification

2.1. Classification of the substance or mixture

Classification under CHIP: Xn: R21/22; C: R34; Sens.: R43; N: R50/53; Xn: R62; Xn: R63

Classification under CLP: Acute Tox. 4: H302; Repr. 2: H361fd; Aquatic Acute 1: H400; Aquatic Chronic 1: H410;

Skin Corr. 1B: H314; Skin Sens. 1: H317

Most important adverse effects: Harmful in contact with skin and if swallowed. Causes burns. May cause sensitisation

by skin contact. Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. Possible risk of impaired fertility. Possible risk of harm to the

unborn child.

2.2. Label elements

Label elements under CLP:

Hazard statements: H302: Harmful if swallowed.

H314: Causes severe skin burns and eye damage.

H317: May cause an allergic skin reaction.

H361fd: Suspected of damaging fertility. Suspected of damaging the unborn child.

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H400: Very toxic to aquatic life.

H410: Very toxic to aquatic life with long lasting effects.

Signal words: Danger

Hazard pictograms: GHS05: Corrosion

GHS07: Exclamation mark GHS08: Health hazard GHS09: Environmental









Precautionary statements: P102: Keep out of reach of children.

P280: Wear.

P301+310: IF SWALLOWED: Immediately call a POISON CENTER or doctor.

P305+351+338: IF IN EYES: Rinse cautiously with water for several minutes. Remove

contact lenses, if present and easy to do. Continue rinsing.

P308+313: IF exposed or concerned: Get medical.

P321: Specific treatment (see on this label).

Label elements under CHIP:

Hazard symbols: Dangerous for the environment.

Corrosive.





Risk phrases: R21/22: Harmful in contact with skin and if swallowed.

R34: Causes burns.

R43: May cause sensitisation by skin contact.

R50/53: Very toxic to aquatic organisms, may cause long-term adverse effects in the

aquatic environment.

R62: Possible risk of impaired fertility.

R63: Possible risk of harm to the unborn child.

Safety phrases: S1/2: Keep locked up and out of the reach of children.

S26: In case of contact with eyes, rinse immediately with plenty of water and seek

medical advice.

S29: Do not empty into drains.

S36/37/39: Wear suitable protective clothing, gloves and eye \slash face protection.

S45: In case of accident or if you feel unwell, seek medical advice immediately (show

the label where possible).

S61: Avoid release to the environment. Refer to special instructions / safety data sheets.

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2.3. Other hazards

PBT: This substance is not identified as a PBT substance.

Section 3: Composition/information on ingredients

3.2. Mixtures

Hazardous ingredients:

NONYLPHENOL

EINECS	CAS	CHIP Classification	CLP Classification	Percent
246-672-0	25154-52-3	Xn: R62; Xn: R63; Xn: R22; C: R34; N: R50/53	Repr. 2: H361fd; Acute Tox. 4: H302; Skin Corr. 1B: H314; Aquatic Acute 1:	50-90%
			H400; Aquatic Chronic 1: H410	

2-PIPERAZIN-1-YLETHYLAMINE

205-411-0	140-31-8	Xn: R21/22; C: R34; Sens.: R43; -:	Acute Tox. 4: H312; Acute Tox. 4:	10-30%
		R52/53	H302; Skin Corr. 1B: H314; Skin Sens.	
			1: H317; Aquatic Chronic 3: H412	

Section 4: First aid measures

4.1. Description of first aid measures

Skin contact: 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 and breathing is OK, place in the recovery position. If conscious, ensure the casualty sits or lies down. If breathing becomes bubbly, have the casualty sit and

provide oxygen if available. Transfer to hospital as soon as possible.

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

Skin contact: Blistering may occur. Progressive ulceration will occur if treatment is not immediate.

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

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

bleeding from the mouth or nose.

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.

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

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

Section 5: Fire-fighting measures

5.1. Extinguishing media

Extinguishing media: Carbon dioxide. Dry chemical powder. Alcohol resistant foam. Do not use direct water

stream, as this may spread the fire. Water can be used to cool fire exposed 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

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions: Notify the police and fire brigade immediately. If outside keep bystanders upwind and

away from danger point. 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. Avoid the formation or spread of mists in the air.

7.2. Conditions for safe storage, including any incompatibilities

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

Suitable packaging: Must only be kept in original packaging.

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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: Not applicable.

8.2. Exposure controls

Engineering measures: Ensure there is sufficient ventilation of the area. Local exhaust ventilation may be

required in poorly ventilated areas.

Respiratory protection: Self-contained breathing apparatus must be available in case of emergency.

Hand protection: Butyl gloves. Neoprene gloves. PVC gloves. Rubber gloves. Viton gloves. Breakthrough

time of the glove material > 4 hours.

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

Skin protection: Impermeable protective clothing.

Section 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

State: Liquid

Colour: Colourless to yellow

Odour: Amine-like

Solubility in water: Not miscible **Kinematic viscosity:** 5500 mPas

Boiling point/range°C: >200 Flash point°C: > 100

Vapour pressure: 5 hPa@50C Relative density: 0.98

pH: 8.5 - 11.0 **VOC** g/l: 0

9.2. Other information

Other information: Not applicable.

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.

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10.4. Conditions to avoid

Conditions to avoid: Heat.

10.5. Incompatible materials

Materials to avoid: Strong oxidising agents. Strong acids. Strong bases. Alcohols. Acrylates. Aldehydes.

Halogenated hydrocarbons. Ketones. Nitrites.

10.6. Hazardous decomposition products

Haz. decomp. products: Decomposition products can include and are not limited to: Ammonia, Ethylenediamine,

Phenol, volatile amines and Phenolics.

Section 11: Toxicological information

11.1. Information on toxicological effects

Relevant effects for mixture:

Effect	Route	Basis
Acute toxicity (harmful)	DRM ING	Hazardous: calculated
Corrosivity	OPT INH DRM	Hazardous: calculated
Sensitisation	DRM	Hazardous: calculated
Toxicity for reproduction		Hazardous: calculated

Symptoms / routes of exposure

Skin contact: Blistering may occur. Progressive ulceration will occur if treatment is not immediate.

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

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

bleeding from the mouth or nose.

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

Ecotoxicity values: Not applicable.

12.2. Persistence and degradability

Persistence and degradability: Not readily biodegradable.

12.3. Bioaccumulative potential

Bioaccumulative potential: No data available.

12.4. Mobility in soil

Mobility: No data available.

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12.5. Results of PBT and vPvB assessment

PBT identification: This substance is not identified as a PBT substance.

12.6. Other adverse effects

Other adverse effects: NONYLPHENOL - Material is very toxic to aquatic organisms (LC50/EC50/IC50 below 1

mg/L in the most sensitive species). 2-PIPERAZIN-1-YLETHYLAMINE - Material is harmful to aquatic organisms (LC50/EC50/IC50 between 10 and 100 mg/L in the most

sensitive species).

Section 13: Disposal considerations

13.1. Waste treatment methods

Disposal operations: Should not be released into the environment. Classified as hazardous waste according

to EC-Dir 91/689; disposal of toxic and hazardous waste.

Disposal of packaging: Dispose of in a regulated landfill site or other method for hazardous or toxic wastes.

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: UN2922

14.2. UN proper shipping name

Shipping name: CORROSIVE LIQUID, TOXIC, N.O.S.

(NONYLPHENOL; 2-PIPERAZIN-1-YLETHYLAMINE)

14.3. Transport hazard class(es)

Transport class: 8 (6.1)

14.4. Packing group

Packing group: ||

14.5. Environmental hazards

Environmentally hazardous: Yes Marine pollutant: Yes

14.6. Special precautions for user

Special precautions: No special precautions.

Tunnel code: E
Transport category: 2

Section 15: Regulatory information

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

Specific regulations: EINECS - The components of this product are on the EINECS inventory or are exempt

from inventory requirements.

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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: This safety data sheet is prepared in accordance with Commission Regulation (EU) No

453/2010.

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

Phrases used in s.2 and 3: 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.

H361fd: Suspected of damaging fertility. Suspected of damaging the unborn child.

H400: Very toxic to aquatic life.

H410: Very toxic to aquatic life with long lasting effects.

H412: Harmful to aquatic life with long lasting effects.

R21/22: Harmful in contact with skin and if swallowed.

R22: Harmful if swallowed.

R34: Causes burns.

R43: May cause sensitisation by skin contact.

R50/53: Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

R52/53: Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

R62: Possible risk of impaired fertility.

R63: Possible risk of harm to the unborn child.

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.