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SAFETY DATA SHEET

Resiply resiDUAL Part B

According to Regulation (EC) No 1907/2006, Annex II, as amended by Regulation (EU) No 453/2010

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

1.1. Product identifier

Product name Resiply resiDUAL Part B

Product number 2986

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

Identified uses Resin.

Uses advised against No specific uses advised against are identified.

1.3. Details of the supplier of the safety data sheet

Supplier Reagent Chemical Services
 18 Aston Fields Road
 Whitehouse Industrial Estate
 Runcorn
 Cheshire WA7 3DL

T: 01928 716903 (08.30 - 17.00)

F: 01928 716425

E: info@reagent.co.uk

1.4. Emergency telephone number

Emergency telephone Emergency Telephone : +44 (0) 1928 716903 Between 08.30 - 17.00 NHS Direct. Tel. 0845 4647 (24 Hours)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification

Physical hazards Not Classified

Health hazards Acute Tox. 4 - H302 Skin Corr. 1B - H314 Eye Dam. 1 - H318 Skin Sens. 1 - H317

Environmental hazards Aquatic Chronic 3 - H412

2.2. Label elements

Pictogram



Signal word Danger

Hazard statements
 H302 Harmful if swallowed.
 H314 Causes severe skin burns and eye damage.
 H317 May cause an allergic skin reaction.
 H412 Harmful to aquatic life with long lasting effects.

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Precautionary statements	P273 Avoid release to the environment. P280 Wear protective gloves and eye protection. P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P337+P313 If eye irritation persists: Get medical advice/attention.
Contains	BENZYL ALCOHOL, 2-PIPERAZIN-1-YLETHYLAMINE, DIETHYLENETRIAMINE, ETHANEDIOL, Aliphatic Glycidylether
Supplementary precautionary statements	P261 Avoid breathing vapour/spray. P264 Wash contaminated skin thoroughly after handling. P272 Contaminated work clothing should not be allowed out of the workplace. P280 Wear protective gloves/protective clothing/eye protection/face protection. P302+P352 IF ON SKIN: Wash with plenty of water. P321 Specific treatment (see medical advice on this label). P332+P313 If skin irritation occurs: Get medical advice/attention. P333+P313 If skin irritation or rash occurs: Get medical advice/attention. P362+P364 Take off contaminated clothing and wash it before reuse. P501 Dispose of contents/container in accordance with national regulations.

2.3. Other hazards

This product does not contain any substances classified as PBT or vPvB.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

BENZYL ALCOHOL	10-30%
CAS number: 100-51-6	EC number: 202-859-9
Classification	Classification (67/548/EEC or 1999/45/EC)
Acute Tox. 4 - H302	Xn;R20/22
Acute Tox. 4 - H332	
2-PIPERAZIN-1-YLETHYLAMINE	10-30%
CAS number: 140-31-8	EC number: 205-411-0
Classification	Classification (67/548/EEC or 1999/45/EC)
Skin Corr. 1B - H314	C;R34 Xn;R21/22 R43 R52/53
Skin Sens. 1 - H317	
Acute Tox. 4 - H302	
Acute Tox. 4 - H312	
Eye Dam. 1 - H318	
Aquatic Chronic 3 - H412	

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BISPHENOL A-(EPICHLORHYDRIN) (REACTION PRODUCT)	10-30%
CAS number: 25068-38-6	EC number: 500-033-5
Classification	Classification (67/548/EEC or 1999/45/EC)
Skin Irrit. 2 - H315	R43 Xi;R36/38 N;R51/53
Eye Irrit. 2 - H319	
Skin Sens. 1 - H317	
Aquatic Chronic 2 - H411	
REACTION PRODUCT OF EPICHLOROHYDRIN AND BISPHENOL F	1-5%
CAS number: 28064-14-4	
Classification	Classification (67/548/EEC or 1999/45/EC)
Skin Irrit. 2 - H315	Xi;R36/38. N;R51/53. R43.
Eye Irrit. 2 - H319	
Skin Sens. 1 - H317	
Aquatic Chronic 2 - H411	
DIETHYLENETRIAMINE	1-5%
CAS number: 111-40-0	EC number: 203-865-4
Classification	Classification (67/548/EEC or 1999/45/EC)
Acute Tox. 4 - H302	C;R34 Xn;R21/22 R43
Acute Tox. 4 - H312	
Acute Tox. 2 - H330	
Skin Corr. 1B - H314	
Eye Dam. 1 - H318	
Skin Sens. 1 - H317	
STOT SE 3 - H335	
ETHANEDIOL	1-5%
CAS number: 107-21-1	EC number: 203-473-3
Classification	Classification (67/548/EEC or 1999/45/EC)
Acute Tox. 4 - H302	Xn;R22
STOT RE 2 - H373	
Aliphatic Glycidylether	1-5%
CAS number: —	
Classification	
Skin Irrit. 2 - H315	
Eye Irrit. 2 - H319	
Skin Sens. 1 - H317	
Aquatic Chronic 2 - H411	

The Full Text for all R-Phrases and Hazard Statements are Displayed in Section 16.

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SECTION 4: First aid measures

4.1. Description of first aid measures

General information	Get medical attention immediately. Show this Safety Data Sheet to the medical personnel. Chemical burns must be treated by a physician.
Inhalation	Remove affected person from source of contamination. Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Maintain an open airway. Loosen tight clothing such as collar, tie or belt. When breathing is difficult, properly trained personnel may assist affected person by administering oxygen. Place unconscious person on their side in the recovery position and ensure breathing can take place.
Ingestion	Rinse mouth thoroughly with water. Remove any dentures. Do not induce vomiting unless under the direction of medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Never give anything by mouth to an unconscious person. Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Place unconscious person on their side in the recovery position and ensure breathing can take place. Maintain an open airway. Loosen tight clothing such as collar, tie or belt.
Skin contact	It is important to remove the substance from the skin immediately. Take off immediately all contaminated clothing. Rinse immediately with plenty of water. Continue to rinse for at least 15 minutes and get medical attention. Chemical burns must be treated by a physician.
Eye contact	Rinse immediately with plenty of water. Remove contact lenses, if present and easy to do. Continue rinsing. Continue to rinse for at least 10 minutes.
Protection of first aiders	First aid personnel should wear appropriate protective equipment during any rescue. If it is suspected that volatile contaminants are still present around the affected person, first aid personnel should wear an appropriate respirator or self-contained breathing apparatus. Wash contaminated clothing thoroughly with water before removing it from the affected person, or wear gloves. It may be dangerous for first aid personnel to carry out mouth-to-mouth resuscitation.

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

General information	See Section 11 for additional information on health hazards. The severity of the symptoms described will vary dependent on the concentration and the length of exposure.
Inhalation	A single exposure may cause the following adverse effects: Corrosive to the respiratory tract. Symptoms following overexposure may include the following: Severe irritation of nose and throat.
Ingestion	May cause sensitisation or allergic reactions in sensitive individuals. May cause chemical burns in mouth, oesophagus and stomach. Symptoms following overexposure may include the following: Severe stomach pain. Nausea, vomiting.
Skin contact	May cause skin sensitisation or allergic reactions in sensitive individuals. Causes severe burns. Symptoms following overexposure may include the following: Pain or irritation. Redness. Blistering may occur.
Eye contact	Causes serious eye damage. Symptoms following overexposure may include the following: Pain. Profuse watering of the eyes. Redness.

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

Notes for the doctor	Treat symptomatically. May cause sensitisation or allergic reactions in sensitive individuals.
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SECTION 5: Firefighting measures

5.1. Extinguishing media

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Suitable extinguishing media The product is not flammable. Extinguish with alcohol-resistant foam, carbon dioxide, dry powder or water fog. Use fire-extinguishing media suitable for the surrounding fire.

Unsuitable extinguishing media Do not use water jet as an extinguisher, as this will spread the fire.

5.2. Special hazards arising from the substance or mixture

Specific hazards Containers can burst violently or explode when heated, due to excessive pressure build-up. Severe corrosive hazard. Water used for fire extinguishing, which has been in contact with the product, may be corrosive.

Hazardous combustion products Thermal decomposition or combustion products may include the following substances: Harmful gases or vapours. Corrosive gases or vapours.

5.3. Advice for firefighters

Protective actions during firefighting Avoid breathing fire gases or vapours. Evacuate area. Keep upwind to avoid inhalation of gases, vapours, fumes and smoke. Cool containers exposed to heat with water spray and remove them from the fire area if it can be done without risk. Cool containers exposed to flames with water until well after the fire is out. If a leak or spill has not ignited, use water spray to disperse vapours and protect men stopping the leak. Avoid discharge to the aquatic environment. Control run-off water by containing and keeping it out of sewers and watercourses. If risk of water pollution occurs, notify appropriate authorities.

Special protective equipment for firefighters Regular protection may not be safe. Wear chemical protective suit. Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing. Firefighter's clothing conforming to European standard EN469 (including helmets, protective boots and gloves) will provide a basic level of protection for chemical incidents.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions No action shall be taken without appropriate training or involving any personal risk. Keep unnecessary and unprotected personnel away from the spillage. Wear protective clothing as described in Section 8 of this safety data sheet. Follow precautions for safe handling described in this safety data sheet. Wash thoroughly after dealing with a spillage. Ensure procedures and training for emergency decontamination and disposal are in place. Do not touch or walk into spilled material. Use suitable respiratory protection if ventilation is inadequate. Avoid contact with skin and eyes. Avoid contact with contaminated tools and objects.

6.2. Environmental precautions

Environmental precautions Slightly soluble in water. Absorb spillage with non-combustible, absorbent material. Avoid discharge into drains or watercourses or onto the ground. Avoid discharge to the aquatic environment. Large Spillages: Inform the relevant authorities if environmental pollution occurs (sewers, waterways, soil or air).

6.3. Methods and material for containment and cleaning up

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Methods for cleaning up	<p>Wear protective clothing as described in Section 8 of this safety data sheet. Clear up spills immediately and dispose of waste safely. This product is corrosive. Provide adequate ventilation. Approach the spillage from upwind. Small Spillages: If the product is soluble in water, dilute the spillage with water and mop it up. Alternatively, or if it is not water-soluble, absorb the spillage with an inert, dry material and place it in a suitable waste disposal container. Large Spillages: If leakage cannot be stopped, evacuate area. Contain and absorb spillage with sand, earth or other non-combustible material. Place waste in labelled, sealed containers. Clean contaminated objects and areas thoroughly, observing environmental regulations. The contaminated absorbent may pose the same hazard as the spilled material. Flush contaminated area with plenty of water. Wash thoroughly after dealing with a spillage. Do not empty into drains. Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.</p>
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6.4. Reference to other sections

Reference to other sections	For personal protection, see Section 8. See Section 11 for additional information on health hazards. See Section 12 for additional information on ecological hazards. For waste disposal, see Section 13.
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SECTION 7: Handling and storage

7.1. Precautions for safe handling

Usage precautions	Read and follow manufacturer's recommendations. Wear protective clothing as described in Section 8 of this safety data sheet. Keep away from food, drink and animal feeding stuffs. Handle all packages and containers carefully to minimise spills. Keep container tightly sealed when not in use. This product is corrosive. Immediate first aid is imperative. Avoid discharge to the aquatic environment. Do not handle until all safety precautions have been read and understood. Do not handle broken packages without protective equipment. Do not reuse empty containers.
Advice on general occupational hygiene	Wash promptly if skin becomes contaminated. Take off contaminated clothing. Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Wash at the end of each work shift and before eating, smoking and using the toilet. Change work clothing daily before leaving workplace.

7.2. Conditions for safe storage, including any incompatibilities

Storage precautions	Store in accordance with local regulations. Keep only in the original container. Keep container tightly closed, in a cool, well ventilated place. Keep containers upright. Protect containers from damage. Bund storage facilities to prevent soil and water pollution in the event of spillage. The storage area floor should be leak-tight, jointless and not absorbent.
Storage class	Chemical storage.

7.3. Specific end use(s)

Specific end use(s)	The identified uses for this product are detailed in Section 1.2.
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SECTION 8: Exposure Controls/personal protection

8.1. Control parameters

Occupational exposure limits

DIETHYLENETRIAMINE

Long-term exposure limit (8-hour TWA): WEL 1 ppm(Sk) 4.3 mg/m³(Sk)

ETHANEDIOL

Long-term exposure limit (8-hour TWA): WEL 52 mg/m³(Sk)

Short-term exposure limit (15-minute): WEL 104 mg/m³(Sk)

WEL = Workplace Exposure Limit

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2-PIPERAZIN-1-YLETHYLAMINE (CAS: 140-31-8)

DNEL	Workers - Inhalation; Long term systemic effects: 3.6 mg/m ³ Workers - Inhalation; Short term systemic effects: 21.4 mg/m ³ Workers - Dermal; Long term systemic effects: 3.3 mg/kg/day Workers - Dermal; Short term systemic effects: 20 mg/kg/day Workers - Dermal; Long term local effects: 0.006 mg/cm ² Workers - Dermal; Short term local effects: 0.04 mg/cm ² General population - Inhalation; Long term systemic effects: 0.9 mg/m ³ General population - Inhalation; Short term systemic effects: 5.3 mg/m ³ General population - Dermal; Long term systemic effects: 1.7 mg/kg/day General population - Dermal; Short term systemic effects: 10 mg/kg/day General population - Dermal; Long term local effects: 0.003 mg/m ³ General population - Dermal; Short term local effects: 0.02 mg/cm ² General population - Oral; Long term systemic effects: 0.3 mg/kg/day General population - Oral; Short term systemic effects: 1.5 mg/kg/day
PNEC	<ul style="list-style-type: none"> - Fresh water; 0.058 mg/l - Marine water; 0.0058 mg/l - Intermittent release; 0.58 mg/l - STP; 250 mg/l - Sediment (Freshwater); 215 mg/kg/day - Sediment (Marinewater); 21.5 mg/kg/day - Soil; 42.9 mg/kg/day

BISPHENOL A-(EPICHLORHYDRIN) (REACTION PRODUCT) (CAS: 25068-38-6)

DNEL	Workers - Inhalation; Long term systemic effects: 12.25 mg/m ³ Workers - Inhalation; Short term systemic effects: 12.25 mg/m ³ Workers - Dermal; Long term systemic effects: 8.33 mg/kg/day Workers - Dermal; Long term systemic effects: 8.33 mg/kg/day General population - Dermal; Long term systemic effects: 3.571 mg/kg/day General population - Dermal; Short term systemic effects: 3.571 mg/kg/day General population - Oral; Long term systemic effects: 0.75 mg/kg/day General population - Oral; Short term systemic effects: 0.75 mg/kg/day
PNEC	<ul style="list-style-type: none"> - Fresh water; 0.006 mg/l - Marine water; 0.0006 mg/l - Intermittent release; 0.018 mg/l - STP; 10 mg/l - Soil; 0.196 mg/kg - Sediment; 0.196 mg/kg

DIETHYLENETRIAMINE (CAS: 111-40-0)

DNEL	Workers - Inhalation; Long term systemic effects: 15.4 mg/m ³ Workers - Inhalation; Short term systemic effects: 92.1 mg/m ³ Workers - Inhalation; Long term local effects: 0.87 mg/m ³ Workers - Inhalation; Short term local effects: 2.6 mg/m ³ Workers - Dermal; Long term systemic effects: 11.4 mg/kg Workers - Dermal; Long term local effects: 1.1 mg/cm ² General population - Inhalation; Long term systemic effects: 4.6 mg/m ³ General population - Inhalation; Short term systemic effects: 27.5 mg/m ³ General population - Dermal; Long term systemic effects: 4.88 mg/kg
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ETHANEDIOL (CAS: 107-21-1)

DNEL	Workers - Inhalation; Long term local effects: 35 mg/m ³ Workers - Dermal; Long term systemic effects: 106 mg/kg/day General population - Inhalation; Long term local effects: 7 mg/m ³ General population - Dermal; Long term systemic effects: 53 mg/kg/day
PNEC	<ul style="list-style-type: none"> - Fresh water; 10 mg/l - Marine water; 1 mg/l - Intermittent release; 10 mg/l - STP; 199.5 mg/l - Sediment (Freshwater); 37 mg/kg - Sediment (Marinewater); 3.7 mg/kg - Soil; 1.53 mg/kg

8.2. Exposure controls

Protective equipment



Appropriate engineering controls

Provide adequate ventilation. Personal, workplace environment or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Use process enclosures, local exhaust ventilation or other engineering controls as the primary means to minimise worker exposure. Personal protective equipment should only be used if worker exposure cannot be controlled adequately by the engineering control measures. Ensure control measures are regularly inspected and maintained. Ensure operatives are trained to minimise exposure.

Eye/face protection

Eyewear complying with an approved standard should be worn if a risk assessment indicates eye contact is possible. Personal protective equipment for eye and face protection should comply with European Standard EN166. Wear tight-fitting, chemical splash goggles or face shield. If inhalation hazards exist, a full-face respirator may be required instead.

Hand protection

Chemical-resistant, impervious gloves complying with an approved standard should be worn if a risk assessment indicates skin contact is possible. The most suitable glove should be chosen in consultation with the glove supplier/manufacturer, who can provide information about the breakthrough time of the glove material. To protect hands from chemicals, gloves should comply with European Standard EN374. Considering the data specified by the glove manufacturer, check during use that the gloves are retaining their protective properties and change them as soon as any deterioration is detected. Frequent changes are recommended.

Other skin and body protection

Appropriate footwear and additional protective clothing complying with an approved standard should be worn if a risk assessment indicates skin contamination is possible.

Hygiene measures

Provide eyewash station and safety shower. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse. Clean equipment and the work area every day. Good personal hygiene procedures should be implemented. Wash at the end of each work shift and before eating, smoking and using the toilet. When using do not eat, drink or smoke. Preventive industrial medical examinations should be carried out. Warn cleaning personnel of any hazardous properties of the product.

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Respiratory protection	Respiratory protection complying with an approved standard should be worn if a risk assessment indicates inhalation of contaminants is possible. Ensure all respiratory protective equipment is suitable for its intended use and is 'CE'-marked. Check that the respirator fits tightly and the filter is changed regularly. Gas and combination filter cartridges should comply with European Standard EN14387. Full face mask respirators with replaceable filter cartridges should comply with European Standard EN136. Half mask and quarter mask respirators with replaceable filter cartridges should comply with European Standard EN140.
Environmental exposure controls	Keep container tightly sealed when not in use. Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

SECTION 9: Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

Appearance	Liquid.
Colour	Yellowish.
Odour	Almost odourless.
pH	Not determined.
Melting point	Not determined.
Initial boiling point and range	Not determined.
Flash point	Not determined.
Upper/lower flammability or explosive limits	Not determined.
Vapour pressure	Not determined.
Vapour density	Not determined.
Relative density	Not determined.
Auto-ignition temperature	Not determined.
Decomposition Temperature	Not determined.
Viscosity	Not determined.
Explosive properties	Not relevant.
Oxidising properties	Does not meet the criteria for classification as oxidising.

9.2. Other information

Other information	None.
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SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity	The following materials may react with the product: Strong acids. Strong alkalis. Strong oxidising agents.
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10.2. Chemical stability

Stability	Stable at normal ambient temperatures and when used as recommended. Stable under the prescribed storage conditions.
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10.3. Possibility of hazardous reactions

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Possibility of hazardous reactions May generate heat. May polymerise. Under normal conditions of storage and use, no hazardous reactions will occur.

10.4. Conditions to avoid

Conditions to avoid Avoid heat.

10.5. Incompatible materials

Materials to avoid Strong acids. Strong alkalis. Strong oxidising agents.

10.6. Hazardous decomposition products

Hazardous decomposition products Does not decompose when used and stored as recommended. Thermal decomposition or combustion products may include the following substances: Toxic and corrosive gases or vapours.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity - oral

Notes (oral LD₅₀) Acute Tox. 4 - H302 Harmful if swallowed.

ATE oral (mg/kg) 1,052.63

Acute toxicity - dermal

Notes (dermal LD₅₀) Based on available data the classification criteria are not met.

ATE dermal (mg/kg) 5,000.0

Acute toxicity - inhalation

Notes (inhalation LC₅₀) Based on available data the classification criteria are not met.

ATE inhalation (gases ppm) 20,930.23

ATE inhalation (vapours mg/l) 51.16

ATE inhalation (dusts/mists mg/l) 6.98

Skin corrosion/irritation

Animal data Skin Corr. 1B - H314 Causes severe burns.

Serious eye damage/irritation

Serious eye damage/irritation Eye Dam. 1 - H318 Corrosive to skin. Corrosivity to eyes is assumed.

Respiratory sensitisation

Respiratory sensitisation Based on available data the classification criteria are not met.

Skin sensitisation

Skin sensitisation May cause skin sensitisation or allergic reactions in sensitive individuals.

Germ cell mutagenicity

Genotoxicity - in vitro Based on available data the classification criteria are not met.

Carcinogenicity

Carcinogenicity Based on available data the classification criteria are not met.

IARC carcinogenicity

IARC carcinogenicity None of the ingredients are listed or exempt.

Reproductive toxicity

Reproductive toxicity - fertility Based on available data the classification criteria are not met.

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Reproductive toxicity - development Based on available data the classification criteria are not met.

Specific target organ toxicity - single exposure

STOT - single exposure Not classified as a specific target organ toxicant after a single exposure.

Specific target organ toxicity - repeated exposure

STOT - repeated exposure Not classified as a specific target organ toxicant after repeated exposure.

Aspiration hazard

Aspiration hazard Based on available data the classification criteria are not met.

General information The severity of the symptoms described will vary dependent on the concentration and the length of exposure.

Inhalation Corrosive to the respiratory tract. Symptoms following overexposure may include the following: Severe irritation of nose and throat.

Ingestion May cause sensitisation or allergic reactions in sensitive individuals. May cause chemical burns in mouth, oesophagus and stomach. Symptoms following overexposure may include the following: Severe stomach pain. Nausea, vomiting.

Skin contact May cause skin sensitisation or allergic reactions in sensitive individuals. Causes severe burns. Symptoms following overexposure may include the following: Pain or irritation. Redness. Blistering may occur.

Eye contact Causes serious eye damage. Symptoms following overexposure may include the following: Pain. Profuse watering of the eyes. Redness.

Route of entry Ingestion Inhalation Skin and/or eye contact

Target organs No specific target organs known.

Medical considerations Skin disorders and allergies.

Toxicological information on ingredients.

2-PIPERAZIN-1-YLETHYLAMINE

Acute toxicity - oral

Notes (oral LD₅₀) LD₅₀ 2097 mg/kg, Oral, Rat

Acute toxicity - dermal

ATE dermal (mg/kg) 300.0

DIETHYLENETRIAMINE

Acute toxicity - oral

Notes (oral LD₅₀) LD₅₀ 1553 mg/kg, Oral, Rat

Acute toxicity - inhalation

ATE inhalation (vapours mg/l) 0.5

ETHANEDIOL

Acute toxicity - oral

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Notes (oral LD₅₀) LD₅₀ 7712 (30% sol) mg/kg, Oral, Rat

Acute toxicity - inhalation

Notes (inhalation LC₅₀) LC50 > 2.5 mg/L in air for 6 hours , Inhalation, Rat

Inhalation Irritating to respiratory system.

Ingestion Harmful if swallowed.

Skin contact Irritating to skin. May be absorbed through the skin.

Eye contact Irritating to eyes.

SECTION 12: Ecological Information

Ecological information on ingredients.

ETHANEDIOL

Ecotoxicity Low acute toxicity to aquatic organisms. Although not classified as environmentally hazardous, harmful effects cannot be excluded in the event of improper handling or disposal.

12.1. Toxicity

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

Ecological information on ingredients.

2-PIPERAZIN-1-YLETHYLAMINE

Acute toxicity - fish LC₅₀, 96 hours: 2190 mg/l, Pimephales promelas (Fat-head Minnow)

Acute toxicity - aquatic invertebrates EC₅₀, 48 hours: 58 mg/l, Daphnia magna

BISPHENOL A-(EPICHLORHYDRIN) (REACTION PRODUCT)

Acute toxicity - fish LC₅₀, 96 hours: 1.2 mg/l, Onchorhynchus mykiss (Rainbow trout)

Acute toxicity - aquatic invertebrates EC₅₀, 48 hours: 2.7 mg/l, Daphnia magna

Acute toxicity - aquatic plants EC₅₀, 72 hours: 9.4 mg/l, Scenedesmus capricornutum

ETHANEDIOL

Acute toxicity - fish LC₅₀, 96 hours: 72860 mg/l, Pimephales promelas (Fat-head Minnow)

Acute toxicity - aquatic invertebrates EC₅₀, 48 hours: >100 mg/l, Daphnia magna

12.2. Persistence and degradability

Persistence and degradability The product is biodegradable.

Ecological information on ingredients.

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ETHANEDIOL

Persistence and degradability Good biodegradability

12.3. Bioaccumulative potential

Bioaccumulative potential Bioaccumulation is unlikely.

Ecological information on ingredients.

ETHANEDIOL

Bioaccumulative potential Low bioaccumulation potential.

12.4. Mobility in soil

Mobility The product is partly soluble in water and may spread in the aquatic environment. The product is non-volatile. Readily adsorbed into soil.

Ecological information on ingredients.

ETHANEDIOL

Adsorption/desorption coefficient Soil - : $k_{oc} = 1 @ ^\circ C$

12.5. Results of PBT and vPvB assessment

Results of PBT and vPvB assessment This product does not contain any substances classified as PBT or vPvB.

Ecological information on ingredients.

ETHANEDIOL

Results of PBT and vPvB assessment This substance is not classified as PBT or vPvB according to current EU criteria.

12.6. Other adverse effects

Other adverse effects None known.

Ecological information on ingredients.

ETHANEDIOL

Other adverse effects Will affect drinking water supplies.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

General information The generation of waste should be minimised or avoided wherever possible. Reuse or recycle products wherever possible. This material and its container must be disposed of in a safe way. Disposal of this product, process solutions, residues and by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any local authority requirements. When handling waste, the safety precautions applying to handling of the product should be considered. Care should be taken when handling emptied containers that have not been thoroughly cleaned or rinsed out. Empty containers or liners may retain some product residues and hence be potentially hazardous.

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Disposal methods	Dispose of surplus products and those that cannot be recycled via a licensed waste disposal contractor. Waste, residues, empty containers, discarded work clothes and contaminated cleaning materials should be collected in designated containers, labelled with their contents. Incineration or landfill should only be considered when recycling is not feasible.
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SECTION 14: Transport information

General For limited quantity packaging/limited load information, consult the relevant modal documentation using the data shown in this section.

14.1. UN number

UN No. (ADR/RID)	3267
UN No. (IMDG)	3267
UN No. (ICAO)	3267
UN No. (ADN)	3267

14.2. UN proper shipping name

Proper shipping name (ADR/RID)	CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S. (CONTAINS 2-PIPERAZIN-1-YLETHYLAMINE, DIETHYLENETRIAMINE)
Proper shipping name (IMDG)	CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S. (CONTAINS 2-PIPERAZIN-1-YLETHYLAMINE, DIETHYLENETRIAMINE)
Proper shipping name (ICAO)	CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S. (CONTAINS 2-PIPERAZIN-1-YLETHYLAMINE, DIETHYLENETRIAMINE)
Proper shipping name (ADN)	CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S. (CONTAINS 2-PIPERAZIN-1-YLETHYLAMINE, DIETHYLENETRIAMINE)

14.3. Transport hazard class(es)

ADR/RID class	8
ADR/RID classification code	C7
ADR/RID label	8
IMDG class	8
ICAO class/division	8
ADN class	8

Transport labels



14.4. Packing group

ADR/RID packing group	II
IMDG packing group	II
ADN packing group	II
ICAO packing group	II

14.5. Environmental hazards

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Environmentally hazardous substance/marine pollutant

No.

14.6. Special precautions for user

Always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

EmS	F-A, S-B
ADR transport category	2
Emergency Action Code	2X
Hazard Identification Number	80 (ADR/RID)
Tunnel restriction code	(E)

14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

Transport in bulk according to Not applicable.

Annex II of MARPOL 73/78

and the IBC Code

SECTION 15: Regulatory information

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

National regulations	Health and Safety at Work etc. Act 1974 (as amended). The Chemicals (Hazard Information and Packaging for Supply) Regulations 2009 (SI 2009 No. 716). The Carriage of Dangerous Goods and Use of Transportable Pressure Equipment Regulations 2009 (SI 2009 No. 1348) (as amended) ["CDG 2009"]. EH40/2005 Workplace exposure limits.
EU legislation	Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) (as amended). Commission Regulation (EU) No 453/2010 of 20 May 2010. Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures (as amended).

15.2. Chemical safety assessment

No chemical safety assessment has been carried out.

Inventories

EU - EINECS/ELINCS

None of the ingredients are listed or exempt.

SECTION 16: Other information

General information	This datasheet is not intended to be a replacement for a full risk assessment, these should always be carried out by competent persons. Toxicological and ecotoxicological information has been taken from the ECHA website of registered substances.
Key literature references and sources for data	ECHA website. Raw material safety data sheets. Product based literature.

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Classification procedures according to Regulation (EC) 1272/2008	Acute Tox. 4 - H302: Eye Dam. 1 - H318: Skin Corr. 1B - H314: Skin Sens. 1 - H317: : Calculation method. Aquatic Chronic 3 - H412: : Calculation method.
Training advice	Read and follow manufacturer's recommendations. Only trained personnel should use this material.
Revision comments	This is first issue.
Revision date	16/10/2015
Revision	1
SDS number	21332
Hazard statements in full	H302 Harmful if swallowed. H311 Toxic 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. H319 Causes serious eye irritation. H330 Fatal if inhaled. H332 Harmful if inhaled. H335 May cause respiratory irritation. H373 May cause damage to organs through prolonged or repeated exposure if swallowed. H411 Toxic to aquatic life with long lasting effects. H412 Harmful to aquatic life with long lasting effects.

This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty, guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.