Safety Data Sheet (SDS)
FORTAPROOF 3521 component B

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND COMPANY/UNDERTAKING

Identification of the substance or preparation: FORTAPROOF 3521 component B

Manufacturer/distributor: International Coatings Limited
Street: Ballycorus
Town: Kilternan
County: Dublin 18
Country : Ireland
Telephone: 01-2822877/2822141 Telefax: 01-2822653
Emergency: 01-2893290

2. HAZARDS IDENTIFICATION

The preparation is classified as dangerous according to Directive 1999/45/EC and its amendments.
Classification: R36/38, Irritating to eyes and skin; R 43, May cause sensitisation by skin contact; R51/53, Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. Component B may be a skin sensitiser. It may also be a skin irritant and repeated contact may increase this effect.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance/preparation: Preparation

Chemical name*	CAS no.	%	EC number	Classification
Bisphenol-A-epoxy resin avg. mol. Wt. <700		50-100	500-033-5	Xi; R36/38 R43 N; R51/53
Bisphenol-F-epoxy resin avg. mol. Wt. <700		10-25	500-006-8	Xi; R36/38 R43 N; R51/53
C12-C15 Alkylglycidylether	68608-97-2	10-25	271-846-8	Xi; R36/38 R43

* Occupational Exposure Limit(s), if available, are listed in Section 8
See Section 16 for the full text of the R-phrases declared above

4. FIRST AID MEASURES

4.0 General
In all cases of doubt, or when symptoms persist, seek medical attention. Never give anything by mouth to an unconscious person.

4.1 Inhalation
Remove to fresh air. Keep person warm and at rest. If not breathing, if irregular breathing, or respiratory arrest occurs provide artificial respiration or oxygen by trained personnel. Give nothing by mouth. If unconscious, place in recovery position and seek medical advice.

4.2 Ingestion
If swallowed, seek medical advice immediately and show this container or label. Keep person warm and at rest. Do not induce vomiting.

4.3 Skin contact
Remove contaminated clothing and shoes. Wash skin thoroughly with soap and water or use recognised skin cleanser. **Do not** use solvents or thinners.

4.4 Eye contact
Check for and remove any contact lenses. Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open.
See section 11 for more detailed information in health effects and symptoms.

5. FIRE – FIGHTING MEASURES

5.1 Extinguishing media
Recommended: alcohol resistant foam, CO_2, powders, water spray/mist. Not to be used: waterjet.
5.2 Recommendation
Fire will produce dense black smoke. Exposure to decomposition products may cause a health hazard. Appropriate breathing apparatus may be required. Cool closed containers exposed to fire with water. Do not release runoff from fire to sewers or waterways.
5.3 Special fire-fighting procedures
Fire-fighters should wear positive pressure self-contained breathing apparatus (SCBA) and full turnout gear.
5.4 Hazardous thermal decomposition products
If involved in a fire, toxic gases including CO, CO2 and smoke can be generated.

6. ACCIDENTAL RELEASE MEASURES

6.2 Personal precautions
Exclude sources of ignition and ventilate the area. Refer to protective measures listed in Section 7 and 8.
6.1 Spill clean up methods
Contain and collect spillage with non-combustible absorbent materials, e.g. sand, earth, vermiculite, diatomaceous earth, and place in container for disposal according to local regulations (see Section 13). Place in suitable container. The contaminated area should be cleansed immediately with a suitable decontaminant. One possible (flammable) decontaminant comprises (by volume): water (45 parts), ethanol or isopropyl alcohol (50 parts), concentrated (d:0,880) ammonia solution (5 parts). A non-flammable alternate is sodium carbonate (5 parts), water (95 parts). Add the same decontaminant to the remnants and let stand for several days until no further reaction in unsealed container. Once this stage is reached, close container and dispose of according to the local regulations (see Section 13). Do not allow to enter drains or watercourses. If the product contaminates lakes, rivers, or sewers, inform the appropriate authorities in accordance with local regulations.
Note: See Section 8 for personal protective equipment and Section 13 for waste disposal.
7.1 Handling
Care should be taken when re-opening partly used containers. Keep away from heat, sparks and flame. Avoid contact with skin and eyes. Avoid the inhalation of dust, particulates and spray mist arising from the application of this preparation. Avoid inhalation of dust from sanding. Eating, drinking and smoking should be prohibited in area where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Put on appropriate personal protective equipment (see Section 8). Never use pressure to empty: container is not a pressure vessel. Always keep in containers made from the same material as the original one. Comply with the health and safety at work laws.
7.2 Storage
Store in accordance with local regulations. Observe label precautions. Store in a cool, well-ventilated area away from incompatible materials and ignition sources. Keep away from heat and directs sunlight, oxidizing agents, strong alkalis, strong acids, amines, alcohols, water. No smoking. Prevent unauthorized access. Containers that are opened must be carefully resealed and kept upright to prevent leakage. Do not empty into drains.

8. EXPOSURE CONTROL/PERSONAL PROTECTION

8.1 Engineering measures
Provide adequate ventilation. Where reasonably practicable, this should be achieved by the use of local exhaust ventilation and good general extraction. Air-fed protective respiratory equipment must be worn by the spray operator, even when good ventilation is provided. In other operations, if local exhaust ventilation and good general extraction are not sufficient to maintain concentrations of particulates and solvent vapours below the OEL, suitable respiratory protection must be worn. (See Personal Protection)

8.2 Hygiene measures
Keep away from food, drink and animal feeding stuffs. Never eat, drink or smoke in work areas. Practice good personal hygiene when using this material, especially before eating, drinking smoking, using the toilet, or applying cosmetics. It is generally recognised that contact lenses should be not worn when working with chemicals because contact lenses may contribute to the severity of an eye injury. After handling, always wash hands thoroughly with soap and water.
8.3 Occupational exposure limits- not available

8.4 Recommended monitoring procedures
Air monitoring should be used to determinate ventilation requirements and compliance with applicable employee exposure limits. Frequency of monitoring and levels at which suspension and re-exposure to product may take should be at the discretion of an occupational physician.
8.5 Occupational exposure controls
Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapours below their respective occupational exposure limits. Ensure that eyewash stations and safety showers are proximal to the workstation location.
8.6 Respiratory system
By spraying: air-fed respirator. By other operations than spraying: in well areas, air-fed respirators could be replaced by a combination charcoal filter and particulate filter mask.
8.7 Hand protection
For prolonged or repeated handling, use gloves: nitrile. Barrier creams may help to protect the exposed areas of the skin, but should not be applied once exposure has occurred.
8.8 Eye protection
Use safety eyewear designed to protect against splash of liquids.
8.9 Skin and body
Personnel should wear antistatic clothing made of natural fibres or of high-temperature-resistant synthetic fibres.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Appearance: Liquid
9.2 Colour: Yellowish
9.3 Odour: Odourless
9.4 Specific gravity: 1.13 (Water=1)
9.5 pH: 8 (Basic)
9.6 Melting point: may start to solidify at -10°C (-14°F)
9.7 Boiling Point (°C): decomposition temperature >200°C (392°F)
9.8 Auto-ignition temperature: 465°C (869°F)
9.9 Flash point: closed cup: >177°C (350°F).
9.10 Vapour pressure: <0.0001 hPa (at 20°C)
9.11 Solubility: Insoluble in cold water, hot water.
9.12 Viscosity: Dynamic: 7000-10000 cP
9.13 Volatility (%): 0% (v/v). 0% (w/w)
9.14 VOC (W/W): 0 (g/l)

10. STABILITY AND REACTIVITY

10.1 Stability: Stable under recommended storage and handling conditions (see Section 7).
10.2 Conditions to avoid: Keep away from the following materials to prevent strong exothermic reactions: oxidizing agents, strong alkalis, strong acids, amines, alcohol, and water. Uncontrolled exothermic reactions occur with amines and alcohols.
The product reacts slowly with water, resulting in the production of carbon dioxide. In closed containers, pressure build-up could result in distortion, expansion and, in extreme cases, bursting of the container.
10.3 Hazardous decomposition products: smoke, Carbon monoxide, Carbon dioxide, oxides of nitrogen, hydrogen cyanide.

11. TOXICOLOGICAL INFORMATION

There is no data available on the preparation itself. On the basis of its ingredients, the preparation has been assessed as follows:
11.1 Inhalation:
Inhalation of the spray mist may produce severe irritation of respiratory tract, characterized by coughing, choking, or shortness of breath.
11.2 Ingestion
Slightly hazardous in case of ingestion.
11.3 Skin contact
Hazardous in case of skin contact (sensitizer). Slightly hazardous in case of skin contact (irritant). Skin inflammation is characterized by itching, scaling, reddening, or, occasionally, blistering.
11.4 Eye contact
Slightly hazardous in case of eye contact (irritant).

11.5 Other toxic effects on humans:
May cause sensitistion by skin contact. Repeated exposure may cause allergic skin rash, itching, and swelling. The onset of symptoms may be delayed. Persons with a history of skin sensitization problems should not be employed in any process in which this preparation is used.
11.6 Other adverse effect:

11.7 Acute Data (LD_{50}, LC_{50}) – toxicity to Test Animals

Ingredient name	Test	Result	Route	Species
C12-C15 Alkylglycidylether	LD50	>10000 mg/kg	Oral	Rat
Bisphenol-a-epoxy resin avg. mol. Wt. <700	LD50 LD50 LD50 LC50	13,600 mg/kg 738 mg/kg 20,000 mg/kg >2000 mg/kg >10000mg/kg	Oral Oral Dermal Oral	Rat Mouse Rabbit Rat
Carcinogenicity	No known significant effect or critical hazard.			
Mutagenicity	No known significant effect or critical hazard.			
Reproductive toxicity	No known significant effect or critical hazard.			

12. ECOLOGICAL INFORMATION

There is no data available on the preparation itself. Do not allow to enter drains or watercourses. The preparation has been assessed following the conventional method of the Dangerous Preparations Directive 1999/45/EC and is classified for eco-toxicological properties accordingly. See Section 3 and 15 for details.

Ecotoxicity data

Ingredients name	Species	Period	Result
Bisphenol-A-epoxy resin avg. mol. Wt. <700	Zebra fish (brachydaniorerio)(LC50) Daphnia (EC50) Daphnia (EC50) Fathead minnow	24 hours 24 hours 48 hours 24 hours	9.4 mg/l 1.0 mg/l 1-10 mg/l 3.1 mg/l

Ingredient name	Persistence/ Degradability					Bioaccumulative potential		
	BOD_5	COD	ThOD	Aquatic half-life	Photolysis	Biodegra--dability	$LogP_{ow}$	BCF	Potential
Bisphenol-A-epoxy resin avg. mol. Wt. <700 Bisphenol-A-epoxy resin avg. mol. Wt. <700						not readily not readily	>3		high
C12-C15 Alkylglycidylether							>3		high

Mobility: Non-volatile

13. DISPOSAL CONSIDERATIONS

Do not allow to enter drains or watercourses. Residues in empty containers should be neutralized with a decontaminant (see Section 6). Dispose of according to all federal, state and local applicable regulations.

13.1 Disposal methods: Type: Hazardous chemical waste
13.2 Waste of residues: Location: European Union
13.3 Contaminated packaging: Classification: Non classified; Disposal: via incineration
13.4 Storage:
No specific storage is required. Use shelves or cabinets sturdy enough to bear the weight of the chemicals. Be sure that is not necessary to strain to reach materials, and that shelves are not overloaded. Storage of controlled substances must comply with applicable regulatory security requirements).
13.5 Recycling: Recycle to process if possible
13.6 European Waste Catalogue (EWC): 080115

14. TRANSPORT INFORMATION

This preparation is not classified as dangerous according to international transport regulations, (not controlled under: ADR/RID, IMDG, ICAO/IATA). Not controlled under ADR (Europe), IMDG, IATA.

Regulatory Information	UN Number	Proper shipping name	Class	Packing Group	Label	Additional Information
ADE/RID Class	3082	Environmentally Hazardous substance, liquid, n.o.s.(Bisphenol-F-epoxy resin avg.mol. wght.<700)	9	III		Hazard identification number 90 Limited quantity LQ28 CEFIC Tremcard 90G01
IMDG Class	3082	Environmentally Hazardous substance, liquid, n.o.s.(Bisphenol-F-epoxy resin avg.mol. wght.<700)	9	III		
IATA-DGR Class	3082	Environmentally Hazardous substance, liquid, n.o.s.(Bisphenol-F-epoxy resin avg.mol. wght.<700)	9	III		

15. REGULATORY INFORMATION

15.0 Labelling: The product is labelled as follow, in accordance with local regulation:

Irritant

Dangerous to the environment.

15.1 Risk phrases
R36/38 – Irritating to skin and eyes.
R43 – May cause sensitization by skin contact.
R51/53 – Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
15.2 Safety phrases
S23 – Do not breathe spray.
S25 – Avoid contact with eyes.
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 – Wear suitable protective clothing and gloves.
S51 – Use only in well-ventilated areas.
S61 - Avoid release to the environment. Refer to special instruction/Safety Data Sheet.
15.3 Contains: Bisphenol-A and F -epoxy resin avg. mol. Wt. <700; C12-C15 Alkylglycidylether

15.3 Product use: Classification and labelling have been performed according to EU directives 67/548/EEC, 1999/45/EC including amendments and the intended use. Industrial applications.
15.4 EC Statistical classification (Tariff Code): 3907 30 00

16. OTHER INFORMATION

16.1 Full Risk phrases text of items appearing in Section 3
R36/38 – Irritating to eyes, and skin.

R43 – May cause sensitization by skin contact.
R51/53 – Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

16.2 Designation of symbols in Section 3

Xi – Irritant
N – Dangerous to the environment.