



SAFETY DATA SHEET

FIRWOOD 86 2-PACK EPOXY SURFACE TOLERANT ALUMINIUM GLASS FLAKE - CURE

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

1.1. Product identifier

Product name	FIRWOOD 86 2-PACK EPOXY SURFACE TOLERANT ALUMINIUM GLASS FLAKE - CURE
Product number	86C
Container size	2.5 litre container

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

Supplier	Firwood Paints Ltd. Oakenbottom Road Bolton BL2 6DP T: +44 (0)1204 525231 F: +44(0)1204 362522
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Contact person	e-mail: sales@firwood.co.uk
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1.4. Emergency telephone number

Emergency telephone	+44 (0) 1204 525231 (08.00-17.00)
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SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification

Physical hazards	Flam. Liq. 3 - H226
Health hazards	Acute Tox. 4 - H312 Acute Tox. 4 - H332 Skin Corr. 1B - H314 Eye Irrit. 2 - H319 Skin Sens. 1 - H317 STOT SE 3 - H335 STOT SE 3 - H335 Eye Dam. 1 - H318
Environmental hazards	Not Classified

Classification (67/548/EEC or 1999/45/EC) -

Environmental The product is not expected to be hazardous to the environment.

Physicochemical Heating may generate flammable vapours. Vapours may form explosive mixtures with air.

2.2. Label elements

Pictogram



Signal word

Danger

FIRWOOD 86 2-PACK EPOXY SURFACE TOLERANT ALUMINIUM GLASS FLAKE - CURE

Hazard statements	<p>H226 Flammable liquid and vapour. H312+H332 Harmful in contact with skin or if inhaled. H314 Causes severe skin burns and eye damage. H317 May cause an allergic skin reaction. H319 Causes serious eye irritation. H335 May cause respiratory irritation.</p>
Precautionary statements	<p>P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing. P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P333+P313 If skin irritation or rash occurs: Get medical advice/attention. P337+P313 If eye irritation persists: Get medical advice/attention. P501 Dispose of contents/container in accordance with national regulations.</p>
Contains	<p>BENZYL ALCOHOL, XYLENE, m-PHENYLENEBIS(METHYLAMINE) 1,3BENZENEDINETHANAMINE, TRIETHYLENETETRAMINE</p>
Supplementary precautionary statements	<p>P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P240 Ground/bond container and receiving equipment. P241 Use explosion-proof electrical equipment. P242 Use only non-sparking tools. P243 Take precautionary measures against static discharge. P260 Do not breathe vapour/spray. P261 Avoid breathing vapour/spray. P264 Wash contaminated skin thoroughly after handling. P271 Use only outdoors or in a well-ventilated area. P272 Contaminated work clothing should not be allowed out of the workplace. P280 Wear protective gloves/protective clothing/eye protection/face protection. P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. P302+P352 IF ON SKIN: Wash with plenty of water. P310 Immediately call a POISON CENTER/doctor. P312 Call a POISON CENTER/doctor if you feel unwell. P321 Specific treatment (see medical advice on this label). P362+P364 Take off contaminated clothing and wash it before reuse. P363 Wash contaminated clothing before reuse. P370+P378 In case of fire: Use foam, carbon dioxide, dry powder or water fog to extinguish. P403+P233 Store in a well-ventilated place. Keep container tightly closed. P403+P235 Store in a well-ventilated place. Keep cool. P405 Store locked up.</p>

2.3. Other hazards

SECTION 3: Composition/information on ingredients

3.2. Mixtures

FIRWOOD 86 2-PACK EPOXY SURFACE TOLERANT ALUMINIUM GLASS FLAKE - CURE

XYLENE		10-30%
CAS number: 1330-20-7		EC number: 215-535-7
Classification	Classification (67/548/EEC or 1999/45/EC)	
Flam. Liq. 3 - H226	R10 Xn;R20/21 Xi;R38	
Acute Tox. 4 - H302		
Acute Tox. 4 - H312		
Acute Tox. 4 - H332		
Skin Irrit. 2 - H315		
Eye Irrit. 2 - H319		
STOT SE 3 - H335		
STOT RE 2 - H373		
Asp. Tox. 1 - H304		
STOT SE 3 - H335		
BENZYL ALCOHOL		5-10%
CAS number: 100-51-6		EC number: 202-859-9
		REACH registration number: 01-2119492630-38
Classification	Classification (67/548/EEC or 1999/45/EC)	
Acute Tox. 4 - H302	Xn;R20/22	
Acute Tox. 4 - H332		
m-PHENYLENEBIS(METHYLAMINE) 1,3BENZENEDINETHANAMINE		1-5%
CAS number: 1477-55-0		EC number: 216-032-5
Classification	Classification (67/548/EEC or 1999/45/EC)	
Acute Tox. 4 - H302	Xn;R20/22. C;R34. R52/53.	
Acute Tox. 4 - H332		
Skin Corr. 1B - H314		
Eye Dam. 1 - H318		
Skin Sens. 1 - H317		
Aquatic Chronic 3 - H412		
TRIETHYLENETETRAMINE		<1%
CAS number: 112-24-3		EC number: 203-950-6
Classification	Classification (67/548/EEC or 1999/45/EC)	
Acute Tox. 4 - H302	C;R34 Xn;R21 R43 R52/53	
Acute Tox. 4 - H312		
Acute Tox. 4 - H332		
Skin Corr. 1B - H314		
Skin Sens. 1 - H317		
Aquatic Chronic 3 - H412		

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

SECTION 4: First aid measures

4.1. Description of first aid measures

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General information	Move affected person to fresh air at once. Get medical attention if any discomfort continues.
Inhalation	Move affected person to fresh air at once. Get medical attention. Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. When breathing is difficult, properly trained personnel may assist affected person by administering oxygen.
Ingestion	Never give anything by mouth to an unconscious person. Do not induce vomiting. Do not induce vomiting. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Give plenty of water to drink. Get medical attention immediately. Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing.
Skin contact	Remove affected person from source of contamination. Remove contaminated clothing. Wash skin thoroughly with soap and water. Get medical attention promptly if symptoms occur after washing.
Eye contact	Remove any contact lenses and open eyelids wide apart. Continue to rinse for at least 15 minutes and get medical attention.

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

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

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media Extinguish with the following media: Foam. Dry chemicals, sand, dolomite etc.

5.2. Special hazards arising from the substance or mixture

Specific hazards The product is flammable. Heating may generate flammable vapours. Thermal decomposition or combustion products may include the following substances: Toxic gases or vapours.

5.3. Advice for firefighters

Protective actions during firefighting Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing. Cool containers exposed to flames with water until well after the fire is out.

Special protective equipment for firefighters Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions Wear protective clothing as described in Section 8 of this safety data sheet.

6.2. Environmental precautions

Environmental precautions Avoid discharge into drains or watercourses or onto the ground.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up Eliminate all sources of ignition. No smoking, sparks, flames or other sources of ignition near spillage. Provide adequate ventilation. Absorb spillage with non-combustible, absorbent material. Collect and place in suitable waste disposal containers and seal securely. For waste disposal, see Section 13. Avoid the spillage or runoff entering drains, sewers or watercourses.

6.4. Reference to other sections

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Usage precautions Keep away from heat, sparks and open flame. Avoid spilling. Avoid contact with skin and eyes. Provide adequate ventilation. Avoid inhalation of vapours. Use approved respirator if air contamination is above an acceptable level.

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7.2. Conditions for safe storage, including any incompatibilities

Storage precautions Keep away from oxidising materials, heat and flames. Store in tightly closed original container in a dry, cool and well-ventilated place. Keep only in the original container.

Storage class Flammable liquid storage.

7.3. Specific end use(s)

SECTION 8: Exposure Controls/personal protection

8.1. Control parameters

Occupational exposure limits

XYLENE

Long-term exposure limit (8-hour TWA): WEL 50 ppm(Sk) 220 mg/m³(Sk)

Short-term exposure limit (15-minute): WEL 100 ppm(Sk) 441 mg/m³(Sk)

WEL = Workplace Exposure Limit

Ingredient comments WEL = Workplace Exposure Limits

XYLENE (CAS: 1330-20-7)

DNEL	Industry - Inhalation; Short term : 442 mg/m ³ Industry - Inhalation; Long term local effects: 221 mg/kg/day Industry - Dermal; Long term : 3182 mg/kg/day Consumer - Inhalation; Short term : 260 mg/m ³ Consumer - Inhalation; Long term : 65.3 mg/m ³ Consumer - Dermal; : 1872 mg/kg/day Consumer - Oral; Long term : 12.5 mg/kg/day
PNEC	- Fresh water; 0.327 mg/l - Marine water; 0.327 mg/l - Sediment (Freshwater); 12.46 mg/kg - Sediment (Marinewater); 12.46 mg/kg - Soil; 2.31 mg/kg - STP; 6.58 mg/l

BENZYL ALCOHOL (CAS: 100-51-6)

DNEL	Industry - Inhalation; Short term systemic effects: 450 mg/m ³ Industry - Dermal; Short term systemic effects: 47 mg/m ³ Consumer - Inhalation; Long term systemic effects: 8.11 mg/m ³ Consumer - Oral; Short term systemic effects: 25 mg/m ³ Consumer - Inhalation; Short term systemic effects: 40 mg/m ³ Industry - Inhalation; Long term systemic effects: 90 mg/m ³ Consumer - Dermal; Short term systemic effects: 29 mg/m ³ Industry - Dermal; Long term systemic effects: 9.5 mg/kg/day Consumer - Oral; Long term systemic effects: 5 mg/kg/day
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TRIETHYLENETETRAMINE (CAS: 112-24-3)

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DNEL

Industry - Inhalation; Short term systemic effects: 5380 mg/m³, mg/m³
 Industry - Dermal; Long term systemic effects: 0.57 mg/kg/day
 Industry - Inhalation; Long term systemic effects: 1 mg/m³
 Consumer - Dermal; Short term systemic effects: 8 mg/kg/day
 Consumer - Inhalation; Short term systemic effects: 20 mg/kg/day
 Industry - Dermal; Long term local effects: 0.0028 mg/m³
 Consumer - Oral; Short term systemic effects: 20 mg/kg/day
 Consumer - Dermal; Short term local effects: 0.1 mg/m³
 Consumer - Dermal; Long term systemic effects: 0.25 mg/kg/day

8.2. Exposure controls

Protective equipment



Appropriate engineering controls

Provide adequate general and local exhaust ventilation.

Eye/face protection

The following protection should be worn: Chemical splash goggles.

Hand protection

Use protective gloves.

Other skin and body protection

Wear appropriate clothing to prevent any possibility of liquid contact and repeated or prolonged vapour contact. Provide eyewash station.

Hygiene measures

DO NOT SMOKE IN WORK AREA! Wash hands at the end of each work shift and before eating, smoking and using the toilet. Promptly remove any clothing that becomes contaminated. Wash promptly with soap and water if skin becomes contaminated. Use appropriate skin cream to prevent drying of skin. When using do not eat, drink or smoke.

Respiratory protection

If ventilation is inadequate, suitable respiratory protection must be worn. Wear a respirator fitted with the following cartridge: Organic vapour filter.

SECTION 9: Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

Appearance	Dark-coloured liquid.
Colour	Amber.
Odour	Amine.
pH	pH (concentrated solution): >8.5
Flash point	> 23°C SCC (Setaflash closed cup).
Evaporation rate	13.0 (butyl acetate = 1)
Upper/lower flammability or explosive limits	Lower flammable/explosive limit: 1.0
Vapour pressure	0.93 kPa @ 20°C
Vapour density	3.7 mg/l
Relative density	0.981 @ 20°C
Solubility(ies)	Insoluble in water
Auto-ignition temperature	490°C

9.2. Other information

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Volatile organic compound This product contains a maximum VOC content of 225 g/l.

SECTION 10: Stability and reactivity

10.1. Reactivity

10.2. Chemical stability

Stability Stable at normal ambient temperatures.

10.3. Possibility of hazardous reactions

10.4. Conditions to avoid

Conditions to avoid Avoid heat. Avoid contact with the following materials: Strong oxidising agents.

10.5. Incompatible materials

10.6. Hazardous decomposition products

Hazardous decomposition products Oxides of carbon. Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapours.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity - oral

ATE oral (mg/kg) 4,273.5042735

Acute toxicity - dermal

ATE dermal (mg/kg) 1,436.03133159

Acute toxicity - inhalation

ATE inhalation (gases ppm) 64,102.56410256

ATE inhalation (vapours mg/l) 12.45753114

ATE inhalation (dusts/mists mg/l) 21.36752137

Inhalation Gas or vapour is harmful on prolonged exposure or in high concentrations.

Ingestion Liquid irritates mucous membranes and may cause abdominal pain if swallowed.

Skin contact Prolonged or repeated exposure may cause severe irritation. May cause sensitisation by skin contact.

Eye contact Irritating to eyes.

Target organs Skin Eyes Respiratory system, lungs

Toxicological information on ingredients.

XYLENE

Acute toxicity - oral

Acute toxicity oral (LD₅₀ mg/kg) 5,000.0

Species Rat

ATE oral (mg/kg) 500.0

Acute toxicity - dermal

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Acute toxicity dermal (LD₅₀ 1,700.0 mg/kg)

Species Rabbit

ATE dermal (mg/kg) 1,700.0

Acute toxicity - inhalation

Acute toxicity inhalation (LC₅₀ gases ppmV) 5,000.0

Species Rat

ATE inhalation (gases ppm) 5,000.0

BENZYL ALCOHOL**Acute toxicity - oral**

Acute toxicity oral (LD₅₀ mg/kg) 1,620

Species Rat

Inhalation May cause respiratory system irritation. Headache. Symptoms following overexposure may include the following: Drowsiness. Vapours may irritate throat/respiratory system. Dizziness.

Ingestion Harmful if swallowed. Ingestion of large amounts may cause unconsciousness. Diarrhoea. Nausea, vomiting. Headache.

Skin contact Irritating to skin. May cause sensitisation by skin contact. Harmful in contact with skin. Causes burns.

Eye contact Irritating to eyes.

Route of entry Inhalation Ingestion. Skin and/or eye contact.

m-PHENYLENEBIS(METHYLAMINE) 1,3BENZENEDINETHANAMINE**Acute toxicity - oral**

ATE oral (mg/kg) 500.0

Acute toxicity - inhalation

ATE inhalation (vapours mg/l) 11.0

TRIETHYLENETETRAMINE**Acute toxicity - oral**

ATE oral (mg/kg) 500.0

Acute toxicity - inhalation

ATE inhalation (vapours mg/l) 11.0

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SECTION 12: Ecological Information

Ecotoxicity The product is not expected to be toxic to aquatic organisms.

Ecological information on ingredients.

BENZYL ALCOHOL

Ecotoxicity The product components are not classified as environmentally hazardous. However, large or frequent spills may have hazardous effects on the environment.

12.1. Toxicity

Ecological information on ingredients.

XYLENE

Acute toxicity - fish LC₅₀, 96 hours: 4.2 mg/l, Onchorhynchus mykiss (Rainbow trout)

Acute toxicity - aquatic invertebrates EC₅₀, 48 hours: >2.93 mg/l, Daphnia magna

Chronic toxicity - fish early life stage NOEC, hours: mg/l, Fish

Chronic toxicity - aquatic invertebrates NOEC, 96 hours: 3.3 mg/l, Daphnia magna

BENZYL ALCOHOL

Acute toxicity - fish LC₅₀, 96 hours, 96 hours: 460 mg/l,

Acute toxicity - aquatic invertebrates EC₅₀, 48 hours, 48 hours: 230 mg/l, Daphnia magna

Acute toxicity - aquatic plants EC₅₀, 72 hours, 72 hours: 770 mg/l,

m-PHENYLENEBIS(METHYLAMINE) 1,3BENZENEDINETHANAMINE

Chronic aquatic toxicity

NOEC 0.01 < NOEC ≤ 0.1

12.2. Persistence and degradability

Ecological information on ingredients.

XYLENE

Persistence and degradability The product is biodegradable.

BENZYL ALCOHOL

Persistence and degradability The product is readily biodegradable.

12.3. Bioaccumulative potential

Ecological information on ingredients.

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XYLENE

Bioaccumulative potential The product contains potentially bioaccumulating substances.
Partition coefficient :

BENZYL ALCOHOL

Bioaccumulative potential May accumulate in soil and water systems.
Partition coefficient log Kow: 1.10

12.4. Mobility in soil

Ecological information on ingredients.

XYLENE

Mobility The product contains volatile organic compounds (VOCs) which will evaporate easily from all surfaces.

BENZYL ALCOHOL

Mobility The product is soluble in water.
Surface tension 39 mN/m @ @ 20 C°C

12.5. Results of PBT and vPvB assessment

Ecological information on ingredients.

XYLENE

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

BENZYL ALCOHOL

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

12.6. Other adverse effects

Ecological information on ingredients.

BENZYL ALCOHOL

Other adverse effects Not known.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

General information Waste should be treated as controlled waste. Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.

Disposal methods Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.

SECTION 14: Transport information

FIRWOOD 86 2-PACK EPOXY SURFACE TOLERANT ALUMINIUM GLASS FLAKE - CURE

14.1. UN number

UN No. (ADR/RID)	1263
UN No. (IMDG)	1263
UN No. (ICAO)	1263
UN No. (ADN)	1263

14.2. UN proper shipping name

Proper shipping name (ADR/RID)	PAINT
Proper shipping name (IMDG)	PAINT
Proper shipping name (ICAO)	PAINT
Proper shipping name (ADN)	PAINT

14.3. Transport hazard class(es)

ADR/RID class	3
ADR/RID classification code	F1
ADR/RID label	3
IMDG class	3
ICAO class/division	3
ADN class	3

Transport labels



14.4. Packing group

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

14.5. Environmental hazards

Environmentally hazardous substance/marine pollutant

No.

14.6. Special precautions for user

EmS	F-E, S-E
ADR transport category	3
Emergency Action Code	•3YE
Hazard Identification Number (ADR/RID)	33
Tunnel restriction code	(D/E)

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

SECTION 15: Regulatory information

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

National regulations	The Chemicals (Hazard Information and Packaging for Supply) Regulations 2009 (SI 2009 No. 716). Control of Substances Hazardous to Health Regulations 2002 (as amended)
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).
Guidance	Workplace Exposure Limits EH40. Introduction to Local Exhaust Ventilation HS(G)37. CHIP for everyone HSG228. Approved Classification and Labelling Guide (Sixth edition) L131.

15.2. Chemical safety assessment

SECTION 16: Other information

Issued by	HS&E Manager.
Revision date	18/11/2014
Revision	2
Supersedes date	13/11/2014
SDS number	20437
SDS status	Approved.
Risk phrases in full	R10 Flammable. R20/21 Harmful by inhalation and in contact with skin. R20/22 Harmful by inhalation and if swallowed. R21 Harmful in contact with skin. R34 Causes burns. R38 Irritating to skin. R43 May cause sensitisation by skin contact. R52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
Hazard statements in full	H226 Flammable liquid and vapour. H302 Harmful if swallowed. H304 May be fatal if swallowed and enters airways. 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. H332 Harmful if inhaled. H335 May cause respiratory irritation. H373 May cause damage to organs (Respiratory system, lungs) through prolonged or repeated exposure. H412 Harmful to aquatic life with long lasting effects.

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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.