

SAFETY DATA SHEET

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

Product Name: **NITOFLOR FC140 BASE**

Application: Base component of two part solvent based epoxy coating.

Company: **Fosroc Limited**

Address: Coleshill Road, Tamworth, Staffordshire. B78 3TL

Telephone: 01827 262222 (Out of Hours) 01827 265279 Fax: 01827 262444

2: COMPOSITION/INFORMATION ON INGREDIENTS

Composition: epoxy resin, xylene, 1-methoxy-2-propanol, diisobutyl ketone, inert fillers, pigment.

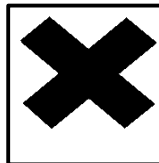
Hazardous Ingredient(s)	Symbol	Risk Phrases	Other Information	%
epoxy resin (number average molecular weight <700)	Xi, N	R36/38, 43, 51/53	Cas No: 25068-38-6	>25 <50
xylene, mixture of isomers	Xn	R10, 20/21, 38	Cas No: 1330-20-7	>10 <25
di-isobutyl ketone	Xi	R10, 37	Cas No: 108-83-8	>2.5 <10
1-methoxy-2-propanol	none	R10	Cas No: 107-98-2	>2.5 <10

All constituents of this product are listed in EINECS (European Inventory of Existing Commercial Chemical Substances) or ELINCS (European List of New Chemical Substances) or are exempt.

Refer to Section 8 for Occupational Exposure Limits.

3: HAZARDS IDENTIFICATION

Flammable
Harmful by inhalation and in contact with skin.
May cause sensitisation by skin contact



HARMFUL

4: FIRST AID MEASURES

Eyes: Irrigate immediately with copious quantities of water for several minutes. Obtain medical attention urgently.

Skin: Wash immediately with soap and water or suitable skin cleanser. Obtain medical advice if skin disorders develop.

Inhalation: Remove from exposure, rest and keep warm and obtain medical attention urgently.

Ingestion: Obtain medical attention. Do NOT induce vomiting. Beware of aspiration if vomiting occurs.

5: FIRE FIGHTING MEASURES

Suitable Extinguishing Media: Carbon dioxide, powder, foam or water fog - Do not use water jets.

Special Exposure Hazards: Toxic fumes. For further information see Section 10.

Special Protective Equipment: Self-contained breathing apparatus.

6: ACCIDENTAL RELEASE MEASURES

Personal Precautions: Immediately issue NO SMOKING and NO NAKED FLAMES warnings. Wear suitable protective clothing, gloves and eye/face protection.

Environmental Precautions: Prevent entry into drains, sewers and water courses.

Decontamination Procedures: Soak up with inert absorbent or contain and remove by best available means. Gather into containers. Dispose of as waste.

7: HANDLING AND STORAGE

Handling:	Maintain good standards of personal hygiene. Avoid skin and eye contact. Do not eat, drink or smoke whilst using this product. Ensure adequate ventilation. In case of insufficient ventilation, wear suitable respiratory equipment.
Storage:	Store in conformity with local fire regulations. Store away from sources of ignition. Store in a cool place away from sources of heat and out of direct sunlight to avoid pressure build up.

8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational Exposure Limits:-

Substance	8 Hour TWA		Source/Other Information
2,6-dimethylheptan-4-one (di-isobutyl ketone)	148 mgm ⁻³		EH 40
1-Methoxypropan-2-ol	375 mgm ⁻³	1120 mgm ⁻³	EH 40
xylene, mixed isomers	441 mgm ⁻³	662 mgm ⁻³	EH 40

Engineering Control Measures: Use only in well ventilated areas. Local exhaust ventilation is recommended.

Personal Protective Equipment: Impervious gloves (eg PVA). Safety glasses / Goggles. In case of insufficient ventilation wear suitable respiratory equipment. Change contaminated clothing and clean before re-use.

9: PHYSICAL AND CHEMICAL PROPERTIES

Physical State:	Liquid.
Colour:	Pigmented.
Odour:	Aromatic.
pH(concentrate):	Not applicable (non-aqueous).
Boiling Point/Range (°C):	135 - 150
Flash Point (closed, °C):	23
Autoflammability (°C):	Autoignition temperature: ~300
Explosive Properties (%):	Lower explosive limit (LEL): 1.0%. Upper explosive limit (UEL): 11.5%.
Oxidising Properties:	Not determined.
Vapour Pressure (kPa at 20°C):	~ 0.8
Relative Density (at 20°C):	1.30 - 1.40
Water Solubility:	Insoluble.
Fat Solubility:	Not determined.

10: STABILITY AND REACTIVITY

Stability:	Contains volatile solvent. Stable: reacts with compounds containing amino, hydroxyl or carboxyl groups to give stable, cross linked materials.
Conditions to Avoid:	Any source of ignition.
Materials to Avoid:	Strong acids. Strong alkalis. Strong oxidising agents.
Hazardous Decomposition Products:	Thermal decomposition:- Oxides of carbon. Toxic fumes.

11: TOXICOLOGICAL INFORMATION

The following toxicological assessment is based on a knowledge of the toxicity of the product's components.
Expected oral LD50, rat > 2g/kg.
Classified as a skin sensitiser.

Health Effects

On Eyes:	Irritating and may injure eye tissue if not removed promptly. Vapour may cause irritation.
On Skin:	Irritation. May cause sensitisation. Harmful by absorption through the skin. May defat the skin.
By Inhalation:	Harmful by inhalation. Vapours may cause headaches, dizziness and central nervous system depression. High concentrations of vapour can cause narcosis and asphyxiation.

By Ingestion: May cause irritation of mouth, throat and digestive tract. Aspiration of liquid during ingestion or from vomiting may cause severe chemical pneumonitis.

Chronic: Repeated and prolonged skin contact may lead to skin disorders.

12: ECOLOGICAL INFORMATION

Environmental Assessment: Contains volatile organic compounds.
Mobility: Mobile liquid. Contains volatile components. Insoluble in water.
Persistence and Degradability: Not readily biodegradable.
Bioaccumulative Potential: Has the potential to bioaccumulate.
Ecotoxicity: Ecotoxic to fish/daphnia/algae.

13: DISPOSAL CONSIDERATIONS

Disposal must be in accordance with local and national legislation.

Unused Product: Dispose of through an authorised waste contractor to a licensed site.

Used/Contaminated Product: As for Unused product.

Packaging: Must be disposed of through an authorised waste contractor.

14: TRANSPORT INFORMATION

UN Number: 1263

IMO: Class: 3.3 Packing Group: III Marine Pollutant: No

IATA/ICAO: Class: 3 Packing Group: III

ADR: Class: 3 Item: 31(c)

Transport Name: Paint Related Material

Hazchem/Kemler Code: 3[Y] / 30

15: REGULATORY INFORMATION

Hazard Label Data:-

Named Ingredients: epoxy resin (number average molecular weight <700).
xylene (mixture of isomers)

UN Number: 1263

Symbol(s): Xn

Risk Phrases: Flammable.
Harmful by inhalation and in contact with skin.
Irritating to eyes and skin.
May cause sensitisation by skin contact.

Safety Phrases: Keep away from sources of ignition - No smoking.
In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
Wear suitable protective clothing, gloves and eye/face protection.
Use only in well ventilated areas.
Contains epoxy constituents. See information supplied by the manufacturer.

EC Directives: Dangerous Substances Directive, 67/548/EEC and adaptations.
Dangerous Preparations Directive, 88/379/EEC.
Safety Data Sheets Directive, 91/155/EEC.

Statutory Instruments: Chemicals (Hazard Information and Packaging for Supply) (Amendment) Regs. 1996 (SI 1092).
Control of Substances Hazardous to Health Regs. 1994 (SI 3246).
Health & Safety at Work, etc. Act 1974.
Environmental Protection Act 1990.
Highly Flammable Liquids & Liquefied Petroleum Gases Regs. 1972 (SI 917).

Codes of Practice: Waste Management. The Duty of Care.

Guidance Notes: Occupational skin diseases: health and safety precautions (EH 26).
Occupational exposure limits (EH 40).
The storage of highly flammable liquids (CS 2).

The above publications are available from HMSO

16: OTHER INFORMATION

Also refer to the Safety Data Sheet(s) for information on other components of this product.

The data and advice given apply when the product is used for the stated application or applications. The product is not sold as suitable for any other application. Use of the product for applications other than as stated in this sheet may give rise to risks not mentioned in this sheet. The product should not be used other than for the stated application or applications without seeking advice from Fosroc Ltd.

If this product has been purchased for supply to a third party for use at work, it is the purchaser's duty to take all necessary steps to secure that any person handling or using the product is provided with the information in this sheet.

It is the responsibility and duty of the employer to inform employees and others who may be affected of any hazards described in this sheet and of any precautions which should be taken.

This sheet does not constitute or substitute for the users own assessment of workplace risk, as required by other health and safety legislation.

Further copies of this Safety Data Sheet may be obtained from Fosroc Limited.

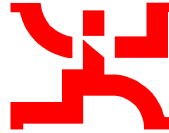
Date Printed: 05/01/1999

SDS Reference: 2505/1 FC140 BAS

REVISION

Supersedes issue no: 03 dated: 01.10.96

Sections updated/revised - no(s): 1 , 8.



SAFETY DATA SHEET

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

Product Name: **NITOFLOR FC140 HARDENER**

Application: Hardener component of two part solvent based epoxy coating.

Company: **Fosroc Limited**

Address: Coleshill Road, Tamworth, Staffordshire. B78 3TL

Telephone: 01827 262222 (Out of Hours) 01827 265279 Fax: 01827 262444

2: COMPOSITION/INFORMATION ON INGREDIENTS

Composition: aliphatic amine, xylene, 1-methoxy-2-propanol, butanol.

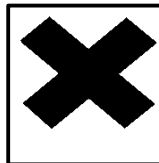
Hazardous Ingredient(s)	Symbol	Risk Phrases	Other Information	%
1-methoxy-2-propanol	none	R10	Cas No: 107-98-2	>25 <50
butanol	Xn	R10, 20	Cas No: 71-36-3 [1]	>10 <25
xylene, mixture of isomers	Xn	R10, 20/21, 38	Cas No: 1330-20-7	>10 <25
ethylenediamine	C	R10, 21/22, 34, 42/43	Cas No: 107-15-3	>2.5 <10

All constituents of this product are listed in EINECS (European Inventory of Existing Commercial Chemical Substances) or ELINCS (European List of New Chemical Substances) or are exempt.

Refer to Section 8 for Occupational Exposure Limits.

3: HAZARDS IDENTIFICATION

Flammable
Harmful by inhalation and in contact with skin.
May cause sensitisation by skin contact



HARMFUL

4: FIRST AID MEASURES

Eyes: Irrigate immediately with copious quantities of water for several minutes. Obtain medical attention urgently.

Skin: Wash immediately with soap and water or suitable skin cleanser. Obtain medical advice if skin disorders develop.

Inhalation: Remove from exposure, rest and keep warm and obtain medical attention urgently.

Ingestion: Obtain medical attention. Do NOT induce vomiting. Beware of aspiration if vomiting occurs.

5: FIRE FIGHTING MEASURES

Suitable Extinguishing Media: Carbon dioxide, powder, foam or water fog - Do not use water jets.

Special Exposure Hazards: Toxic fumes. For further information see Section 10.

Special Protective Equipment: Self-contained breathing apparatus.

6: ACCIDENTAL RELEASE MEASURES

Personal Precautions: Immediately issue NO SMOKING and NO NAKED FLAMES warnings. Wear suitable protective clothing, gloves and eye/face protection.

Environmental Precautions: Prevent entry into drains, sewers and water courses.

Decontamination Procedures: Soak up with inert absorbent or contain and remove by best available means. Gather into containers. Dispose of as waste.

7: HANDLING AND STORAGE

Handling:	Maintain good standards of personal hygiene. Avoid skin and eye contact. Do not eat, drink or smoke whilst using this product. Ensure adequate ventilation. In case of insufficient ventilation, wear suitable respiratory equipment.
Storage:	Store in conformity with local fire regulations. Store away from sources of ignition. Store in a cool place away from sources of heat and out of direct sunlight to avoid pressure build up.

8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational Exposure Limits:-

Substance	8 Hour TWA	STEL	Source/Other Information
1,2-diaminoethane (ethylenediamine)	25 mgm ⁻³	- - -	EH 40
butan-1-ol	- - -	154 mgm ⁻³	EH 40
1-Methoxypropan-2-ol	375 mgm ⁻³	1120 mgm ⁻³	EH 40
xylene, mixed isomers	441 mgm ⁻³	662 mgm ⁻³	EH 40

Engineering Control Measures: Use only in well ventilated areas. Local exhaust ventilation is recommended.

Personal Protective Equipment: Impervious gloves (eg PVA). Safety glasses / Goggles. In case of insufficient ventilation wear suitable respiratory equipment. Change contaminated clothing and clean before re-use.

9: PHYSICAL AND CHEMICAL PROPERTIES

Physical State:	Liquid.
Colour:	Amber.
Odour:	Sharp / Aromatic.
pH(concentrate):	Not applicable (non-aqueous).
Boiling Point/Range (°C):	116 - 130
Flash Point (closed, °C):	23
Autoflammability (°C):	Autoignition temperature: ~300
Explosive Properties (%):	Lower explosive limit (LEL): 1.0%. Upper explosive limit (UEL): 11.5%.
Oxidising Properties:	Not determined.
Vapour Pressure (kPa at 20°C):	~ 0.6
Relative Density (at 20°C):	0.94
Water Solubility:	Partially soluble.
Fat Solubility:	Not determined.

10: STABILITY AND REACTIVITY

Stability:	Contains volatile solvent.
Conditions to Avoid:	Any source of ignition.
Materials to Avoid:	Strong acids. Strong alkalis. Strong oxidising agents.
Hazardous Decomposition Products:	Thermal decomposition:- Oxides of carbon. Nitrogen compounds, in some fire circumstances, hydrogen cyanide.

11: TOXICOLOGICAL INFORMATION

The following toxicological assessment is based on a knowledge of the toxicity of the product's components.

Expected oral LD50, rat > 2g/kg.

Classified as a skin sensitiser.

Health Effects

On Eyes:	Irritating and may injure eye tissue if not removed promptly. Vapour may cause irritation.
On Skin:	Irritation. May cause sensitisation. Harmful by absorption through the skin. May defat the skin.
By Inhalation:	Harmful by inhalation. Vapours may cause headaches, dizziness and central nervous system depression. High concentrations of vapour can cause narcosis and asphyxiation.

By Ingestion: May cause irritation of mouth, throat and digestive tract. Aspiration of liquid during ingestion or from vomiting may cause severe chemical pneumonitis.

Chronic: Repeated and prolonged skin contact may lead to skin disorders.

12: ECOLOGICAL INFORMATION

Environmental Assessment: Contains volatile organic compounds.
Mobility: Mobile liquid. Contains volatile components. Partially soluble in water.
Persistence and Degradability: Expected to be not readily biodegradable.
Bioaccumulative Potential: Not expected to be bioaccumulative.
Ecotoxicity: Expected to be ecotoxic to fish/daphnia/algae.

13: DISPOSAL CONSIDERATIONS

Disposal must be in accordance with local and national legislation.

Unused Product: Dispose of through an authorised waste contractor to a licensed site.

Used/Contaminated Product: As for Unused product.

Packaging: Must be disposed of through an authorised waste contractor.

14: TRANSPORT INFORMATION

UN Number: 1263

IMO: Class: 3.3 Packing Group: III Marine Pollutant: No

IATA/ICAO: Class: 3 Packing Group: III

ADR: Class: 3 Item: 31(c)

Transport Name: Paint Related Material

Hazchem/Kemler Code: 3[Y]/30

15: REGULATORY INFORMATION

Hazard Label Data:-

Named Ingredients: xylene (mixture of isomers).
ethylene diamine

UN Number: 1263

Symbol(s): Xn

Risk Phrases: Flammable.
Harmful by inhalation and in contact with skin.
Irritating to eyes and skin.
May cause sensitisation by skin contact.

Safety Phrases: Keep away from sources of ignition - No smoking.
In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
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Use only in well ventilated areas.

EC Directives: Dangerous Substances Directive, 67/548/EEC and adaptations.
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Date Printed: 05/01/1999

SDS Reference: 0225/1 FC140 HAR

REVISION

Supersedes issue no: 03 dated: 01.10.96

Sections updated/revised - no(s): 1 . 8.