



# SAFETY DATA SHEET

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

Product Name: **NITOBOND EP BASE**

Application: Base component of epoxy bonding agent system.

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, inorganic fillers, pigment.

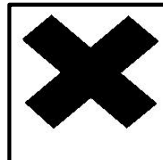
Hazardous Ingredient(s)	Symbol	Risk Phrases	Other Information	%
epoxy resin (number average molecular weight <700)	Xi, N	R36/38, 43, 51/53	Cas No: 25068-38-6 Cas No: Cas No: Cas No:	>50

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

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



IRRITANT



Dangerous for the Environment



## 4: FIRST AID MEASURES

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

Skin: Wash thoroughly with soap and water or suitable skin cleanser as soon as possible. Obtain medical advice if skin disorders develop.

Inhalation: Remove from exposure.

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: 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.

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## 7: HANDLING AND STORAGE

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Handling: Avoid skin and eye contact. Maintain good standards of personal hygiene. Do not eat, drink or smoke whilst using this product. Ensure adequate ventilation.

Storage: Keep containers dry and tightly closed.

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## 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

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Occupational Exposure Limits:- None assigned.

Substance	8 Hour TWA	STEL	Source/Other Information
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Engineering Control Measures: No specific ventilation requirement noted.

Personal Protective Equipment: Impervious gloves (eg PVC). Safety glasses (Conforming to EN 166) / Goggles (Conforming to EN 166). Plastic apron. Change contaminated clothing and clean before re-use.

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## 9: PHYSICAL AND CHEMICAL PROPERTIES

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Physical State: Viscous liquid.

Colour: White

Odour: Mild.

pH(concentrate): Not applicable.

pH(working dilution):

Boiling Point/Range (°C): Not determined.

Melting Point/Range (°C):

Flash Point (closed, °C): >150

Autoflammability (°C): Not determined.

Viscosity (at 20°C):

Explosive Properties (%): Not known.

Oxidising Properties:

Vapour Pressure (kPa at 20°C): <0.1

Relative Density (at 20°C): 1.12

Water Solubility: Insoluble.

Fat Solubility: Not determined.

Partition Coefficient (n-octanol/water):

Other data:

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## 10: STABILITY AND REACTIVITY

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Stability: Stable: reacts with compounds containing amino, hydroxyl or carboxyl groups to give stable, cross linked materials.

Conditions to Avoid: None known.

Materials to Avoid: Strong acids. Strong alkalis. Strong oxidising agents.

Hazardous Decomposition Products: Thermal decomposition:- Oxides of carbon. Irritant fumes.

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## 11: TOXICOLOGICAL INFORMATION

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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: Causes transient irritation.

On Skin: Irritation. May cause sensitisation.

By Inhalation: May cause respiratory irritation.

By Ingestion: May cause irritation of mouth, throat and digestive tract.

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

Other:

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## 12: ECOLOGICAL INFORMATION

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Environmental Assessment: When used and disposed of as intended, no adverse environmental effects are foreseen.

Mobility: Viscous liquid. Insoluble in water.

Persistence and Degradability: Not readily biodegradable.

Bioaccumulative Potential: Has the potential to bioaccumulate.

Ecotoxicity: Ecotoxic to fish/daphnia/algae.

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## 13: DISPOSAL CONSIDERATIONS

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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.

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## 14: TRANSPORT INFORMATION

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UN Number: 3082

IMO: Class: 9 Packing Group: III Marine Pollutant:

IATA/ICAO: Class: Packing Group: III

ADR: Class: 9 Item: 11(c)

Transport Name: Environmentally hazardous substance, liquid, nos (Epoxy Resin)

Hazchem/Kemler Code:

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## 15: REGULATORY INFORMATION

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### Hazard Label Data:-

Named Ingredients: epoxy resin (number average molecular weight <700).

UN Number:

Symbol(s): Xi,N

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: S28: After contact with skin, wash immediately with plenty of soap and water.  
S37/39: Wear suitable gloves and eye/face protection.  
S26: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.  
S0062: 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).  
Health & Safety at Work, etc. Act 1974.  
Consumer Protection Act 1987.  
Control of Substances Hazardous to Health Regs. 1999 (SI 3246).  
Environmental Protection Act 1990.

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

Guidance Notes: Occupational skin diseases: health and safety precautions (EH 26).

The above publications are available from HMSO

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## 16: OTHER INFORMATION

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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: 28/06/2002

SDS Reference: 0203/1 NBEP BASE

### REVISION

Supersedes issue no: 02 dated: 13.08.96

Sections updated/revised - no(s): 1, 12, 14.



# SAFETY DATA SHEET

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

Product Name: **NITOBOND EP HARDENER**

Application: Hardener component of epoxy bonding agent system.

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: modified aromatic amine, pigment, inorganic fillers.

Hazardous Ingredient(s)	Symbol	Risk Phrases	Other Information	%
4,4'-diaminodiphenyl methane	T, N	R45-39/23/24/25-48/20/21/22-43-51/53	Cas No: 101-77-9	>25 <50
dibutyl phthalate	T, N	R61, 62, 50	Cas No: 84-74-2 Cas No: Cas No: Cas No:	>50

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

R45: May cause cancer  
R39/23/24/25: Toxic: danger of very serious irreversible effects through inhalation, in contact with skin and if swallowed  
R48/20/21/22: Harmful: danger of serious damage to health by prolonged exposure through inhalation, in contact with skin and if swallowed  
R62: Possible risk of impaired fertility  
R61: May cause harm to the unborn child.  
R43: May cause sensitisation by skin contact.  
R50/53: Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment



TOXIC

Dangerous for the Environment

## 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. Remove contaminated clothing immediately.

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

Ingestion: Wash out mouth with water and give sips of cold water to soothe the affected parts. Do NOT induce vomiting. Obtain medical attention urgently.

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## 5: FIRE FIGHTING MEASURES

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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.

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## 6: ACCIDENTAL RELEASE MEASURES

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Personal Precautions: 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.

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## 7: HANDLING AND STORAGE

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Handling: Maintain good standards of personal hygiene. Ensure adequate ventilation. Do not eat, drink or smoke whilst using this product. Do not use near sources of ignition. Avoid breathing vapours. Avoid skin and eye contact. Never transfer to an unlabelled container.  
Storage: Store in cool, dry area. Keep away from foodstuffs and food containers. Store only in original container.

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## 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

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Occupational Exposure Limits:-

Substance	8 Hour TWA	STEL	Source/Other Information
4,4'-methylenedianiline ( 4,4'-diaminodiphenyl methane )	0.08 mgm <sup>-3</sup> (MEL)	---	EH 40
dibutyl phthalate	5 mgm <sup>-3</sup>	10 mgm <sup>-3</sup>	EH 40

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Engineering Control Measures: Use only in well ventilated areas. Local exhaust ventilation is recommended.  
Personal Protective Equipment: In case of insufficient ventilation wear suitable respiratory equipment. (Class 1 respirator CE marked to EN 140, with EN 141/143 Type A1 filter.). Avoid skin and eye contact. Impervious gloves (eg PVC). Goggles (Conforming to EN 166). Change contaminated clothing immediately and clean before re-use. A high standard of personal hygiene is essential.

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## 9: PHYSICAL AND CHEMICAL PROPERTIES

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Physical State: Liquid.  
Colour: Green.  
Odour: Amine.  
pH(concentrate): Not applicable (non-aqueous).  
pH(working dilution):  
Boiling Point/Range (°C): >200  
Melting Point/Range (°C):  
Flash Point (closed, °C): 130  
Autoflammability (°C): Not determined.  
Viscosity (at 20°C):  
Explosive Properties (%):  
Oxidising Properties: Not determined.  
Vapour Pressure (kPa at 20°C): 0.01  
Relative Density (at 20°C): 1.15  
Water Solubility: Insoluble  
Fat Solubility:

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Partition Coefficient (n-octanol/water):

Other data:

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## 10: STABILITY AND REACTIVITY

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Stability: Stable.

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.

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## 11: TOXICOLOGICAL INFORMATION

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

Oral LD50, rat >1630 mg/kg

### Health Effects

On Eyes: Irritating and may injure eye tissue if not removed promptly.

On Skin: Harmful by absorption through the skin. Moderately irritating. May cause sensitisation.

By Inhalation: Toxic by inhalation. May cause respiratory irritation.

By Ingestion: Toxic if swallowed. May cause nausea, vomiting and diarrhoea.

Chronic: Based on the results of studies on experimental animals (rodents) 4,4'-diaminodiphenyl methane has shown to be an animal carcinogen. If absorbed into the body by ingestion, inhalation or by contact with skin or eyes it may cause damage to liver, kidney and eyes, especially from excessive exposure by accident or misuse.

Other:

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## 12: ECOLOGICAL INFORMATION

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Environmental Assessment: When used and disposed of as intended, no adverse environmental effects are foreseen.

Mobility: Mobile liquid. Insoluble in water.

Persistence and Degradability: Expected to be not readily biodegradable.

Bioaccumulative Potential: Not known.

Ecotoxicity: Expected to be ecotoxic to fish/daphnia/algae.

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## 13: DISPOSAL CONSIDERATIONS

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Disposal must be in accordance with local and national legislation.

Unused Product: Classified as a special waste. 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.

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## 14: TRANSPORT INFORMATION

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UN Number: 2810

IMO: Class: 6.1

Packing Group: II

Marine Pollutant: Yes

IATA/ICAO: Class: 6.1

Packing Group: II

ADR: Class: 6.1

Item: 14(b)

Transport Name: Toxic liquid, organic mixture, nos (Alkylated phenols)

Hazchem/Kemler Code: 2Z / 60

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## 15: REGULATORY INFORMATION

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Hazard Label Data:-

**Named Ingredients:** 4,4'-diaminodiphenylmethane  
alkylated phenols

**UN Number:** 2810

**Symbol(s):** T, N

**Risk Phrases:** R45: May cause cancer  
R39/23/24/25: Toxic: danger of very serious irreversible effects through inhalation, in contact with skin and if swallowed  
R48/20/21/22: Harmful: danger of serious damage to health by prolonged exposure through inhalation, in contact with skin and if swallowed.  
R43: May cause sensitisation by skin contact  
R62: Possible risk of impaired fertility  
R61: May cause harm to the unborn child  
R50/53: Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment

**Safety Phrases:** S36/37/39: Wear suitable protective clothing, gloves and eye/face protection.  
S53: Avoid exposure - obtain special instructions before use.  
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 sheet.  
S001: Restricted to professional users.

**EC Directives:** Dangerous Substances Directive, 67/548/EEC and adaptations.  
Dangerous Preparations Directive, 88/379/EEC.  
Safety Data Sheets Directive, 91/155/EEC.  
Carcinogens Directive, 90/394/EEC.

**Statutory Instruments:** Chemicals (Hazard Information and Packaging for Supply) (Amendment) Regs. 1996 (SI 1092).  
Health & Safety at Work, etc. Act 1974.  
Control of Substances Hazardous to Health Regs. 1999 (SI 3246).  
The Special Waste Regulations 1996 (SI 972).

**Codes of Practice:** Control of substances hazardous to health & control of carcinogenic substances (L5).  
Waste Management. The Duty of Care.

**Guidance Notes:** Occupational skin diseases: health and safety precautions (EH 26).  
Occupational exposure limits (EH 40).

The above publications are available from HMSO

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## 16: OTHER INFORMATION

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

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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: 12/09/2002

SDS Reference: 0204/1 NBEP HARD

### REVISION

Supersedes issue no: 02 dated: 13.08.96

Sections updated/revised - no(s): 1, 2, 15.