



SAFETY DATA SHEET NITOBOND EP HARDENER

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

1.1. Product identifier

Product name NITOBOND EP HARDENER
Product number A1711120AE1, A1711119AE1

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

Identified uses Hardener Component of Two-Part Epoxy Bonding System

1.3. Details of the supplier of the safety data sheet

Supplier Al Gurg Fosroc LLC
 PO Box 657
 Dubai
 United Arab Emirates
 + 971 4 2858606

1.4. Emergency telephone number

Emergency telephone +97142039699 (08:00 to 16:30) // +971506258232 (16:30 to 08:00)GMT+4

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (EC 1272/2008)

Physical hazards Not Classified

Health hazards Acute Tox. 4 - H302 Acute Tox. 4 - H332 Skin Sens. 1 - H317 Muta. 2 - H341 Carc. 1B - H350 Repr. 1B - H360 STOT SE 1 - H370 STOT RE 2 - H373

Environmental hazards Aquatic Acute 1 - H400 Aquatic Chronic 1 - H410

Human health Contains a substance which may be potentially carcinogenic.

Environmental The product contains a substance which is toxic to aquatic organisms and which may cause long-term adverse effects in the aquatic environment.

2.2. Label elements

Hazard pictograms



Signal word

Danger

NITOBOND EP HARDENER

Hazard statements

H302+H332 Harmful if swallowed or if inhaled.
 H317 May cause an allergic skin reaction.
 H341 Suspected of causing genetic defects.
 H350 May cause cancer.
 H360 May damage fertility or the unborn child.
 H370 Causes damage to organs .
 H373 May cause damage to organs through prolonged or repeated exposure.
 H410 Very toxic to aquatic life with long lasting effects.

Precautionary statements

P271 Use only outdoors or in a well-ventilated area.
 P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
 P302+P352 IF ON SKIN: Wash with plenty of water.
 P501 Dispose of contents/ container in accordance with national regulations.

Contains

DIBUTYL PHTHALATE: DBP, 4,4'-METHYLENEDIANILINE

Supplementary precautionary statements

P201 Obtain special instructions before use.
 P202 Do not handle until all safety precautions have been read and understood.
 P260 Do not breathe vapour/ spray.
 P261 Avoid breathing vapour/ spray.
 P264 Wash contaminated skin thoroughly after handling.
 P270 Do not eat, drink or smoke when using this product.
 P272 Contaminated work clothing should not be allowed out of the workplace.
 P273 Avoid release to the environment.
 P301+P312 IF SWALLOWED: Call a POISON CENTRE/doctor if you feel unwell.
 P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
 P308+P311 IF exposed or concerned: Call a POISON CENTER or doctor.
 P308+P313 IF exposed or concerned: Get medical advice/ attention.
 P314 Get medical advice/ attention if you feel unwell.
 P321 Specific treatment (see medical advice on this label).
 P330 Rinse mouth.
 P333+P313 If skin irritation or rash occurs: Get medical advice/ attention.
 P362+P364 Take off contaminated clothing and wash it before reuse.
 P391 Collect spillage.
 P405 Store locked up.

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

DIBUTYL PHTHALATE	30-60%
CAS number: 84-74-2	EC number: 201-557-4
M factor (Acute) = 1	
Substance of very high concern (SVHC).	
Classification	
Repr. 1B - H360Df	
Aquatic Acute 1 - H400	

NITOBOND EP HARDENER

4,4'-METHYLENEDIANILINE			10-30%
CAS number: 101-77-9	EC number: 202-974-4		
M factor (Acute) = 1	M factor (Chronic) = 10		
Substance of very high concern (SVHC).			
Classification Acute Tox. 3 - H301 Acute Tox. 2 - H330 Skin Sens. 1 - H317 Muta. 2 - H341 Carc. 1B - H350 STOT SE 1 - H370 STOT RE 2 - H373 Aquatic Acute 1 - H400 Aquatic Chronic 1 - H410			

XYLENE			1-5%
CAS number: 1330-20-7	EC number: 215-535-7	REACH registration number: 01-2119488216-32-0000	
Classification Flam. Liq. 3 - H226 Acute Tox. 4 - H312 Acute Tox. 4 - H332 Skin Irrit. 2 - H315			

ETHYLBENZENE			<1%
CAS number: 100-41-4	EC number: 202-849-4		
Classification Flam. Liq. 2 - H225 Acute Tox. 4 - H332 STOT RE 2 - H373 Asp. Tox. 1 - H304			

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

Inhalation	Move affected person to fresh air at once. Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Get medical attention if any discomfort continues.
Ingestion	Get medical attention immediately. Rinse mouth thoroughly with water. Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Do not induce vomiting. Never give anything by mouth to an unconscious person. Do not induce vomiting.
Skin contact	Remove affected person from source of contamination. Get medical attention promptly if symptoms occur after washing.

NITOBOND EP HARDENER

Eye contact Remove affected person from source of contamination. 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

General information Get medical attention promptly if symptoms occur after washing.

Inhalation Harmful if inhaled.

Ingestion Harmful if swallowed.

Skin contact May cause irritation. May cause an allergic skin reaction.

Eye contact May cause irritation.

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

Notes for the doctor Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media Extinguish with the following media: Foam. Carbon dioxide (CO₂). Dry chemicals, sand, dolomite etc.

5.2. Special hazards arising from the substance or mixture

Specific hazards Does not decompose when used and stored as recommended.

5.3. Advice for firefighters

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 personal protective clothing and equipment, see Section 8.

6.2. Environmental precautions

Environmental precautions Prevent entry into confined spaces such as waterways, sewers, basements.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up Wear suitable protective equipment, including gloves, goggles/face shield, respirator, boots, clothing or apron, as appropriate. Absorb small quantities with paper towels and evaporate in a safe place. Flush spilled material into suitable retaining areas or container with large quantities of water.

6.4. Reference to other sections

Reference to other sections See Section 12 for additional information on ecological hazards.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

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

7.2. Conditions for safe storage, including any incompatibilities

Storage precautions Store in tightly-closed, original container in a dry, cool and well-ventilated place.

Storage class Chemical storage.

NITOBOND EP HARDENER

7.3. Specific end use(s)

Specific end use(s) The identified uses for this product are detailed in Section 1.2.

SECTION 8: Exposure controls/Personal protection

8.1. Control parameters

Occupational exposure limits

DIBUTYL PHTHALATE

Long-term exposure limit (8-hour TWA): WEL 5 mg/m³

Short-term exposure limit (15-minute): WEL 10 mg/m³

4,4'-METHYLENEDIANILINE

Long-term exposure limit (8-hour TWA): WEL 0.01 ppm 0.08 mg/m³

Carc, Sk

XYLENE

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

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

Sk

ETHYLBENZENE

Long-term exposure limit (8-hour TWA): WEL 100 ppm 441 mg/m³

Short-term exposure limit (15-minute): WEL 125 ppm 552 mg/m³

Sk

WEL = Workplace Exposure Limit.

Carc = Capable of causing cancer and/or heritable genetic damage.

Sk = Can be absorbed through the skin.

DIBUTYL PHTHALATE (CAS: 84-74-2)

DNEL	Workers - Inhalation; Long term systemic effects: 0.13 mg/m ³ Workers - Dermal; Long term systemic effects: 0.19 mg/kg bw/day
PNEC	- Fresh water; 10 µg/l - marine water; 1 µg/l

XYLENE (CAS: 1330-20-7)

DNEL	Workers - Inhalation; Long term systemic effects: 77 mg/m ³ Workers - Inhalation; Short term systemic effects: 289 mg/m ³ Workers - Dermal; Long term systemic effects: 180 mg/kg/day
PNEC	- Fresh water; 0.327 mg/l - marine water; 0.327 mg/l - STP; 6.58 mg/l

ETHYLBENZENE (CAS: 100-41-4)

DNEL	Workers - Inhalation; Long term systemic effects: 77 mg/m ³ Workers - Dermal; Long term systemic effects: 180 mg/kg bw/day
PNEC	- Fresh water; 0.1 mg/l - marine water; 0.01 mg/l

8.2. Exposure controls

NITOBOND EP HARDENER

Protective equipment



Appropriate engineering controls

Provide adequate ventilation. Avoid inhalation of vapours. Observe any occupational exposure limits for the product or ingredients.

Eye/face protection

Wear tight-fitting, chemical splash goggles or face shield.

Hand protection

Wear protective gloves made of the following material: Rubber (natural, latex). Neoprene. Polyvinyl chloride (PVC).

Other skin and body protection

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

Hygiene measures

Provide eyewash station. Use appropriate skin cream to prevent drying of skin. Wash at the end of each work shift and before eating, smoking and using the toilet. Wash promptly with soap and water if skin becomes contaminated. Promptly remove any clothing that becomes contaminated. Do not eat, drink or smoke when using this product. Do not smoke in work area.

Respiratory protection

Respiratory protection may be required if excessive airborne contamination occurs. Combination filter, type ABEK

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	Liquid.
Colour	Green.
Odour	Amine.
Odour threshold	Not applicable.
Initial boiling point and range	>200°C @
Flash point	130°C
Relative density	1.15 @ 20°C
Solubility(ies)	Insoluble in water.
Decomposition Temperature	Not determined.
Explosive properties	Not considered to be explosive.
Explosive under the influence of a flame	Not considered to be explosive.
Oxidising properties	Does not meet the criteria for classification as oxidising.

9.2. Other information

Other information	No additional information.
-------------------	----------------------------

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity	No dangerous reactions known if used as directed.
------------	---

10.2. Chemical stability

Stability	Stable under the prescribed storage conditions.
-----------	---

NITOBOND EP HARDENER

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions Hazardous polymerization will not occur.

10.4. Conditions to avoid

Conditions to avoid Avoid heat, flames and other sources of ignition. Avoid contact with strong oxidising agents.

10.5. Incompatible materials

Materials to avoid Strong oxidising agents. Strong acids.

10.6. Hazardous decomposition products

Hazardous decomposition products Fire creates: Thermal decomposition or combustion products may include the following substances: Carbon monoxide (CO). Carbon dioxide (CO₂).

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity - oral

ATE oral (mg/kg) 916.98

Acute toxicity - dermal

ATE dermal (mg/kg) 95,474.18

Acute toxicity - inhalation

ATE inhalation (gases ppm) 390,576.18

ATE inhalation (vapours mg/l) 954.74

ATE inhalation (dusts/mists mg/l) 1.6

Inhalation Irritating to respiratory system.

Ingestion Toxic if swallowed.

Skin contact May cause sensitisation by skin contact. Irritating to skin.

Eye contact Irritating to eyes. Symptoms following overexposure may include the following: Redness. Pain.

Route of exposure Ingestion. Skin and/or eye contact

Target organs Eyes Skin

Toxicological information on ingredients.

DIBUTYL PHTHALATE

Acute toxicity - inhalation

Acute toxicity inhalation (LC₅₀ vapours mg/l) 4.25

ATE inhalation (vapours mg/l) 4.25

NITOBOND EP HARDENER

Acute and chronic health hazards INGESTION. May cause stomach pain or vomiting. Inhalation May cause respiratory system irritation. SKIN CONTACT. May cause skin irritation/eczema. May cause sensitisation by skin contact. EYE CONTACT. Irritating to eyes.

4,4'-METHYLENEDIANILINE

Acute toxicity - oral

Acute toxicity oral (LD₅₀ mg/kg) 260.0

Species Guinea pig

ATE oral (mg/kg) 260.0

Acute toxicity - dermal

Acute toxicity dermal (LD₅₀ mg/kg) 2,080.0

Species Rat

ATE dermal (mg/kg) 2,080.0

Acute toxicity - inhalation

Acute toxicity inhalation (LC₅₀ dust/mist mg/l) 0.46

Species Rat

ATE inhalation (dusts/mists mg/l) 0.46

Carcinogenicity

IARC carcinogenicity IARC Group 2B Possibly carcinogenic to humans.

XYLENE

Acute toxicity - dermal

ATE dermal (mg/kg) 1,100.0

Carcinogenicity

IARC carcinogenicity IARC Group 3 Not classifiable as to its carcinogenicity to humans.

ETHYLBENZENE

Carcinogenicity

IARC carcinogenicity IARC Group 2B Possibly carcinogenic to humans.

SECTION 12: Ecological information

Ecotoxicity The product contains a substance which is toxic to aquatic organisms and which may cause long-term adverse effects in the aquatic environment.

12.1. Toxicity

Toxicity The product contains a substance which is toxic to aquatic organisms.

Ecological information on ingredients.

DIBUTYL PHTHALATE

NITOBOND EP HARDENER

Acute aquatic toxicity

LE(C) ₅₀	0.1 < L(E)C ₅₀ ≤ 1
M factor (Acute)	1
Acute toxicity - fish	LC ₅₀ , 96 hours: 0.85 mg/l, Pimephales promelas (Fat-head Minnow) LC ₅₀ , 96 hours: 1.6 mg/l, Salmo gairdneri
Acute toxicity - aquatic invertebrates	LC ₅₀ , 48 hours: 3.7 mg/l, Daphnia magna
Acute toxicity - aquatic plants	EC ₅₀ , 96 hours: 0.75 mg/l, Selenastrum capricornutum

4,4'-METHYLENEDIANILINE

Acute aquatic toxicity

LE(C) ₅₀	0.1 < L(E)C ₅₀ ≤ 1
M factor (Acute)	1
Acute toxicity - fish	LC ₅₀ , 96 hours: 20.6 mg/l, Oryzias latipes (Red killifish)
<u>Chronic aquatic toxicity</u>	
M factor (Chronic)	10

XYLENE

Toxicity	Not considered toxic to fish.
----------	-------------------------------

12.2. Persistence and degradability

Persistence and degradability The product is not readily biodegradable.

Ecological information on ingredients.

XYLENE

Persistence and degradability	Expected to be not readily biodegradable.
-------------------------------	---

12.3. Bioaccumulative potential

Bioaccumulative potential	Not determined.
---------------------------	-----------------

12.4. Mobility in soil

Mobility	The product is immiscible with water and will spread on the water surface.
----------	--

Ecological information on ingredients.

XYLENE

Mobility	The product is insoluble in water.
----------	------------------------------------

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.
------------------------------------	---

12.6. Other adverse effects

Other adverse effects	None known.
-----------------------	-------------

NITOBOND EP HARDENER

SECTION 13: Disposal considerations

13.1. Waste treatment methods

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

14.1. UN number

UN No. (ADR/RID)	3082
UN No. (IMDG)	3082
UN No. (ICAO)	3082
UN No. (ADN)	3082

14.2. UN proper shipping name

Proper shipping name (ADR/RID) ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (CONTAINS DIBUTYL PHTHALATE: DBP, 4,4'-METHYLENEDIANILINE)

Proper shipping name (IMDG) ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (CONTAINS DIBUTYL PHTHALATE: DBP, 4,4'-METHYLENEDIANILINE)

Proper shipping name (ICAO) ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (CONTAINS DIBUTYL PHTHALATE: DBP, 4,4'-METHYLENEDIANILINE)

Proper shipping name (ADN) ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (CONTAINS DIBUTYL PHTHALATE: DBP, 4,4'-METHYLENEDIANILINE)

14.3. Transport hazard class(es)

ADR/RID class	9
ADR/RID classification code	M6
ADR/RID label	9
IMDG class	9
ICAO class/division	9
ADN class	9

Transport labels



14.4. Packing group

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

14.5. Environmental hazards

NITOBOND EP HARDENER

Environmentally hazardous substance/marine pollutant



14.6. Special precautions for user

EmS	F-A, S-F
ADR transport category	3
Emergency Action Code	•3Z
Hazard Identification Number (ADR/RID)	90
Tunnel restriction code	(E)

14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not applicable.

SECTION 15: Regulatory information

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

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).
----------------	--

15.2. Chemical safety assessment

No chemical safety assessment has been carried out.

SECTION 16: Other information

General information	Only trained personnel should use this material.
Revision comments	NOTE: Lines within the margin indicate significant changes from the previous revision.
Revision date	26/08/2021
Revision	3
Supersedes date	09/08/2016

NITOBOND EP HARDENER

Hazard statements in full

H225 Highly flammable liquid and vapour.
H226 Flammable liquid and vapour.
H301 Toxic if swallowed.
H302 Harmful if swallowed.
H304 May be fatal if swallowed and enters airways.
H312 Harmful in contact with skin.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H330 Fatal if inhaled.
H332 Harmful if inhaled.
H341 Suspected of causing genetic defects.
H350 May cause cancer.
H360 May damage fertility or the unborn child.
H360Df May damage the unborn child. Suspected of damaging fertility.
H370 Causes damage to organs .
H373 May cause damage to organs (Hearing organs) through prolonged or repeated exposure.
H373 May cause damage to organs through prolonged or repeated exposure.
H400 Very toxic to aquatic life.
H410 Very toxic 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.