SAFETY DATA SHEET
NITOCOTE EPS HARDENER

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

1.1. Product identifier

Product name NITOCOTE EPS HARDENER

Product number A1760002AE1

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

Identified uses Hardener Component of Epoxy Polysulphide Protective Coating

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 Flam. Liq. 3 - H226

Health hazards Acute Tox. 4 - H302 Skin Corr. 1B - H314 Eye Dam. 1 - H318 Skin Sens. 1 - H317 Repr. 2 - H361fd STOT RE 2 - H373

Environmental hazards Aquatic Chronic 2 - H411

2.2. Label elements

Hazard pictograms

Signal word Danger

Hazard statements

H226 Flammable liquid and vapour.
H302 Harmful if swallowed.
H314 Causes severe skin burns and eye damage.
H317 May cause an allergic skin reaction.
H361fd Suspected of damaging fertility. Suspected of damaging the unborn child.
H373 May cause damage to organs through prolonged or repeated exposure.
H411 Toxic to aquatic life with long lasting effects.

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Precautionary statements	P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P280 Wear protective gloves/ protective clothing/ eye protection/ face protection. P302+P352 IF ON SKIN: Wash with plenty of water. P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P501 Dispose of contents/ container in accordance with national regulations.
Contains	O,O'-Bis(2-aminopropyl)polypropyleneglycol, NONYLPHENOL, 1-METHOXY-2-PROPANOL, LIQUID POLYSULPHIDE POLYMER
Supplementary precautionary statements	P201 Obtain special instructions before use. P202 Do not handle until all safety precautions have been read and understood. P233 Keep container tightly closed. P240 Ground and bond container and receiving equipment. P241 Use explosion-proof electrical equipment. P242 Use non-sparking tools. P243 Take action to prevent static discharges. 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. P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing. P308+P313 IF exposed or concerned: Get medical advice/ attention. P310 Immediately call a POISON CENTER/ doctor. P314 Get medical advice/ attention if you feel unwell. P321 Specific treatment (see medical advice on this label). P333+P313 If skin irritation or rash occurs: Get medical advice/ attention. 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. P391 Collect spillage. P403+P235 Store in a well-ventilated place. Keep cool. 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

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O,O'-Bis(2-aminopropyl)polypropyleneglycol **10-30%**

CAS number: 9046-10-0

Classification
Acute Tox. 4 - H302
Acute Tox. 4 - H312
Skin Corr. 1B - H314
Eye Dam. 1 - H318
Aquatic Chronic 3 - H412

NONYLPHENOL **10-30%**

CAS number: 84852-15-3 EC number: 284-325-5

M factor (Acute) = 1 M factor (Chronic) = 1

Substance of very high concern (SVHC).

Classification
Acute Tox. 4 - H302
Skin Corr. 1B - H314
Eye Dam. 1 - H318
Repr. 2 - H361
Aquatic Acute 1 - H400
Aquatic Chronic 1 - H410

1-METHOXY-2-PROPANOL **10-30%**

CAS number: 107-98-2 EC number: 203-539-1

Classification
Flam. Liq. 3 - H226
STOT SE 3 - H336

LIQUID POLYSULPHIDE POLYMER **10-30%**

CAS number: 68611-50-7

Classification
Aquatic Chronic 2 - H411

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2-piperazin-1-ylethylamine		**1-5%**
CAS number: 140-31-8	EC number: 205-411-0	REACH registration number: 01-2119471486-30-XXXX

Classification
Acute Tox. 4 - H302
Acute Tox. 3 - H311
Skin Corr. 1B - H314
Eye Dam. 1 - H318
Skin Sens. 1 - H317
Repr. 2 - H361fd
STOT RE 1 - H372
Aquatic Chronic 3 - H412

TRIETHYLENETETRAMINE		**1-5%**
CAS number: 112-24-3	EC number: 203-950-6	

Classification
Acute Tox. 4 - H312
Skin Corr. 1B - H314
Eye Dam. 1 - H318
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

Inhalation Remove affected person from source of contamination. 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 Rinse mouth thoroughly with water. Do not induce vomiting. Never give anything by mouth to an unconscious person. Get medical attention immediately.

Skin contact Remove affected person from source of contamination. Take off immediately all contaminated clothing. Rinse immediately with plenty of water. Get medical attention promptly if symptoms occur after washing.

Eye contact Remove affected person from source of contamination. Rinse with water. Remove contact lenses, if present and easy to do. Continue rinsing. 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 May cause respiratory irritation.

Ingestion May cause chemical burns in mouth and throat. May cause stomach pain or vomiting.

Skin contact Causes severe burns. May cause an allergic skin reaction. May cause skin irritation.

Eye contact May cause serious eye damage.

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

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Notes for the doctor Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media Extinguish with alcohol-resistant foam, carbon dioxide or dry powder.

5.2. Special hazards arising from the substance or mixture

Hazardous combustion products Thermal decomposition or combustion products may include the following substances: Toxic gases or vapours. Ammonia or amines. Oxides of carbon.

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

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 Stop leak if safe to do so. Absorb in vermiculite, dry sand or earth and place into containers. Containers with collected spillage must be properly labelled with correct contents and hazard symbol. Dispose of contents/container in accordance with local regulations.

6.4. Reference to other sections

Reference to other sections For waste disposal, see Section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Usage precautions Avoid contact with skin and eyes. Use only outdoors or in a well-ventilated area. Keep away from heat, sparks and open flame.

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 Flammable liquid storage.

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

1-METHOXY-2-PROPANOL

Sk

Long-term exposure limit (8-hour TWA): WEL 100 ppm 375 mg/m³

Short-term exposure limit (15-minute): WEL 150 ppm 560 mg/m³

Sk = Can be absorbed through the skin.
WEL = Workplace Exposure Limit.

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O,O'-Bis(2-aminopropyl)polypropyleneglycol (CAS: 9046-10-0)

DNEL	Industry/Professional, Workers - ; Long term systemic effects: 2.5 mg/kg bw/day
PNEC	- Fresh water; 0.015 mg/l

1-METHOXY-2-PROPANOL (CAS: 107-98-2)

DNEL	Industry - Inhalation; Short term local effects: 553.5 mg/m³ Industry - Dermal; Long term systemic effects: 50.6 mg/kg/day Industry - Inhalation; Long term systemic effects: 369 mg/m³
PNEC	- Fresh water; 10 mg/l - marine water; 1 mg/l - Intermittent release; 100 mg/l

2-piperazin-1-ylethylamine (CAS: 140-31-8)

DNEL	Workers - Inhalation; Long term systemic effects: 3.6 mg/m³ Workers - Inhalation; Short term systemic effects: 21.4 mg/m³ Workers - Dermal; Long term systemic effects: 3.3 mg/kg/day Workers - Dermal; Short term systemic effects: 20 mg/kg/day
PNEC	- Fresh water; 0.0058 mg/l - marine water; 0.58 mg/l

8.2. Exposure controls

Protective equipment

Appropriate engineering controls	Provide adequate general and local exhaust ventilation.
Eye/face protection	Eyewear complying with an approved standard should be worn if a risk assessment indicates eye contact is possible. The following protection should be worn: Chemical splash goggles.
Hand protection	Wear protective gloves made of the following material: Nitrile rubber. Polyvinylidene chloride/polyethylene (PVDC/PE). Neoprene.
Other skin and body protection	Wear appropriate clothing to prevent skin contamination.
Hygiene measures	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 wet or contaminated.
Respiratory protection	Use an approved air purifying respirator with replaceable filter cartage comply with EN 140and filter EN 141: Organic Vapour cartridge type A1

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	Viscous liquid.
Colour	Brown to black
Odour	Amine.

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Odour threshold	Not determined.
pH	Not applicable.
Melting point	Not determined.
Initial boiling point and range	>180°C @
Flash point	48°C Closed cup.
Evaporation rate	Not determined.
Evaporation factor	Not determined.
Flammability (solid, gas)	Not determined.
Upper/lower flammability or explosive limits	Not determined.
Other flammability	Not determined.
Vapour pressure	Not determined.
Vapour density	Not determined.
Relative density	1.0 @ 20°C
Bulk density	Not determined.
Solubility(ies)	Insoluble in water.
Partition coefficient	Not determined.
Auto-ignition temperature	Not determined.
Decomposition Temperature	Not determined.
Viscosity	~2 P @ 25°C
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 data available.

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity The following materials may react with the product: Acids. Alkalis. Strong oxidising agents.

10.2. Chemical stability

Stability Stable at normal ambient temperatures.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions Under normal conditions of storage and use, no hazardous reactions will occur.

10.4. Conditions to avoid

Conditions to avoid Avoid excessive heat for prolonged periods of time.

10.5. Incompatible materials

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Materials to avoid Avoid contact with strong oxidising agents. Strong acids.

10.6. Hazardous decomposition products

Hazardous decomposition products Thermal decomposition or combustion products may include the following substances: Oxides of carbon. Ammonia or amines.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity - oral

ATE oral (mg/kg) 1,479.25

Acute toxicity - dermal

ATE dermal (mg/kg) 3,501.43

Inhalation May cause respiratory system irritation. May cause respiratory allergy.

Ingestion Causes burns. May cause chemical burns in mouth and throat. May cause stomach pain or vomiting.

Skin contact Causes burns. May cause an allergic skin reaction.

Eye contact May cause serious eye damage. Causes burns.

Toxicological information on ingredients.

O,O'-Bis(2-aminopropyl)polypropyleneglycol

Acute toxicity - oral

ATE oral (mg/kg) 500.0

Acute toxicity - dermal

ATE dermal (mg/kg) 1,100.0

NONYLPHENOL

Acute toxicity - oral

Acute toxicity oral (LD_{50} mg/kg) 1,620.0

Species Rat

ATE oral (mg/kg) 1,620.0

Acute toxicity - dermal

Acute toxicity dermal (LD_{50} mg/kg) 2,031.0

Species Rat

1-METHOXY-2-PROPANOL

Acute toxicity - oral

Notes (oral LD_{50}) LD_{50} 11700 mg/kg, Oral, Rat

Acute toxicity - dermal

Notes (dermal LD_{50}) LD_{50} 13000 mg/kg, Dermal, Rabbit

Acute toxicity - inhalation

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Notes (inhalation LC_{50})	LC50 10000 ppm, Inhalation, Rat

LIQUID POLYSULPHIDE POLYMER

Acute toxicity - oral

Acute toxicity oral (LD_{50} mg/kg)	5,000.0
Species	Rat
ATE oral (mg/kg)	5,000.0

Acute toxicity - dermal

Acute toxicity dermal (LD_{50} mg/kg)	7,800.0
Species	Rat
ATE dermal (mg/kg)	7,800.0

2-piperazin-1-ylethylamine

Acute toxicity - oral

ATE oral (mg/kg)	500.0

Acute toxicity - dermal

Acute toxicity dermal (LD_{50} mg/kg)	866.0
Species	Rabbit
ATE dermal (mg/kg)	866.0

Germ cell mutagenicity

Genotoxicity - in vivo	Ames test: Negative.

Reproductive toxicity

Reproductive toxicity - fertility	Fertility - NOAEL 150 mg/kg/day, Oral, Rabbit

Specific target organ toxicity - repeated exposure

STOT - repeated exposure	NOAEL 53.5 mg/m³, Inhalation, Rat
Target organs	Respiratory system, lungs

TRIETHYLENETETRAMINE

Acute toxicity - oral

Acute toxicity oral (LD_{50} mg/kg)	2,500.0
Species	Rat
ATE oral (mg/kg)	2,500.0

Acute toxicity - dermal

Acute toxicity dermal (LD_{50} mg/kg)	550.0

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Species	Rabbit
ATE dermal (mg/kg)	1,100.0

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.

O,O'-Bis(2-aminopropyl)polypropyleneglycol

Acute aquatic toxicity

Acute toxicity - fish	LC_{50}, 96 hours: >100 mg/l, Fish
Acute toxicity - aquatic invertebrates	EC_{50}, 48 hours: 15 mg/l, Daphnia magna
Acute toxicity - aquatic plants	IC_{50}, 72 hours: 135 mg/l, Algae

NONYLPHENOL

Acute aquatic toxicity

$LE(C)_{50}$	0.1 < L(E)C50 ≤ 1
M factor (Acute)	1
Acute toxicity - fish	LC_{50}, 96 hours: 0.128 mg/l, Fish
Acute toxicity - aquatic invertebrates	EC_{50}, 48 hours: 0.0848 mg/l, Daphnia magna

Chronic aquatic toxicity

M factor (Chronic)	1

1-METHOXY-2-PROPANOL

Acute aquatic toxicity

Acute toxicity - fish	LC_{50}, 96 hours: 6812 mg/l, Leuciscus idus (Golden orfe)
Acute toxicity - aquatic invertebrates	EC_{50}, 48 hours: >21000 mg/l, Daphnia magna

LIQUID POLYSULPHIDE POLYMER

Acute aquatic toxicity

Acute toxicity - fish	LC_{50}, 96 hours: 1000 mg/l, Cyprinodon variegatus (Sheepshead minnow)
Acute toxicity - aquatic invertebrates	EC_{50}, 24 hours: 20 mg/l, Daphnia magna
Acute toxicity - aquatic plants	EC_{50}, 72 hours: 100 mg/l, Selenastrum capricornutum

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2-piperazin-1-ylethylamine

Acute aquatic toxicity

Acute toxicity - fish	LC_{50}, 96 hours: >100 mg/l, Fish
Acute toxicity - aquatic invertebrates	EC_{50}, 48 hours: 58 mg/l, Daphnia magna
Acute toxicity - aquatic plants	EC_{50}, 72 hours: > 300 mg/l, Freshwater algae

TRIETHYLENETETRAMINE

Acute aquatic toxicity

Acute toxicity - fish	LC_{50}, 96 hours: 330 mg/l, Pimephales promelas (Fat-head Minnow)
Acute toxicity - aquatic invertebrates	EC_{50}, 48 hours: 31.1 mg/L, Daphnia magna
Acute toxicity - aquatic plants	EC_{50}, 72 hours: 20 mg/l, Pseudokirchneriella subcapitata
Acute toxicity - microorganisms	EC_{50}, 16 hour: 680 mg/l, Bacteria

12.2. Persistence and degradability

Persistence and degradability The product is not readily biodegradable.

Ecological information on ingredients.

1-METHOXY-2-PROPANOL

Persistence and degradability	The product is biodegradable.

2-piperazin-1-ylethylamine

Persistence and degradability	The product is not readily biodegradable.

12.3. Bioaccumulative potential

Bioaccumulative potential No data available on bioaccumulation. Not determined.

Partition coefficient Not determined.

Ecological information on ingredients.

1-METHOXY-2-PROPANOL

Bioaccumulative potential	The product does not contain any substances expected to be bioaccumulating.

2-piperazin-1-ylethylamine

Partition coefficient	log Pow: -1.48

12.4. Mobility in soil

Mobility The product is insoluble in water.

12.5. Results of PBT and vPvB assessment

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

Ecological information on ingredients.

O,O'-Bis(2-aminopropyl)polypropyleneglycol

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

TRIETHYLENETETRAMINE

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.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

General information Waste is classified as hazardous waste.

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) 2734

UN No. (IMDG) 2734

UN No. (ICAO) 2734

UN No. (ADN) 2734

14.2. UN proper shipping name

Proper shipping name (ADR/RID) POLYAMINES, LIQUID, CORROSIVE, FLAMMABLE, N.O.S. (CONTAINS O,O'-Bis(2-aminopropyl)polypropyleneglycol, 1-METHOXY-2-PROPANOL)

Proper shipping name (IMDG) POLYAMINES, LIQUID, CORROSIVE, FLAMMABLE, N.O.S. (CONTAINS O,O'-Bis(2-aminopropyl)polypropyleneglycol, 1-METHOXY-2-PROPANOL, NONYLPHENOL, LIQUID POLYSULPHIDE POLYMER)

Proper shipping name (ICAO) POLYAMINES, LIQUID, CORROSIVE, FLAMMABLE, N.O.S. (CONTAINS O,O'-Bis(2-aminopropyl)polypropyleneglycol, 1-METHOXY-2-PROPANOL)

Proper shipping name (ADN) POLYAMINES, LIQUID, CORROSIVE, FLAMMABLE, N.O.S. (CONTAINS O,O'-Bis(2-aminopropyl)polypropyleneglycol, 1-METHOXY-2-PROPANOL)

14.3. Transport hazard class(es)

ADR/RID class 8

ADR/RID subsidiary risk 3

ADR/RID classification code FC

ADR/RID label 8

IMDG class 8

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IMDG subsidiary risk	3
ICAO class/division	8
ICAO subsidiary risk	3
ADN class	8
ADN subsidiary risk	3

Transport labels

14.4. Packing group

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

14.5. Environmental hazards

Environmentally hazardous substance/marine pollutant

14.6. Special precautions for user

IMDG Code segregation group	18. Alkalis
EmS	F-E, S-C
ADR transport category	2
Emergency Action Code	•2W
Hazard Identification Number (ADR/RID)	83
Tunnel restriction code	(D/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).
Guidance	Workplace Exposure Limits EH40. Respiratory protective equipment at work (HSG53).

15.2. Chemical safety assessment

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No chemical safety assessment has been carried out.

SECTION 16: Other information

General information	The user must be instructed in the proper work procedure and be familiar with the contents of these instructions.
Revision comments	NOTE: Lines within the margin indicate significant changes from the previous revision.
Revision date	24/12/2019
Revision	3a
Supersedes date	17/08/2019
SDS number	11159
Hazard statements in full	H226 Flammable liquid and vapour. H302 Harmful if swallowed. H311 Toxic in contact with skin. H312 Harmful in contact with skin. H314 Causes severe skin burns and eye damage. H317 May cause an allergic skin reaction. H318 Causes serious eye damage. H336 May cause drowsiness or dizziness. H361 Suspected of damaging fertility or the unborn child. H361fd Suspected of damaging fertility. Suspected of damaging the unborn child. H372 Causes damage to 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. H411 Toxic to aquatic life with long lasting effects. H412 Harmful to aquatic life with long lasting effects.