

SAFETY DATA SHEET NITOCOTE EP405 BASE

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

1.1. Product identifier

Product name NITOCOTE EP405 BASE
Product number A1754104UK9,A1764344UK9

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

Identified uses Base component of two part epoxy system

1.3. Details of the supplier of the safety data sheet

Supplier FOSROC Limited
 Drayton Manor Business Park
 Coleshill Road
 Tamworth
 Staffordshire
 B78 3XN
 enquiryuk@fosroc.com
 Tel. +44 (0) 1827 262222
 Fax. +44 (0) 1827 262444

1.4. Emergency telephone number

Emergency telephone +44 (0) 1827 265 279 (08.30 to 17.00hrs Mon - Thu; 08.30 to 16.00hrs Fri)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification

Physical hazards Not Classified
Health hazards Skin Irrit. 2 - H315 Eye Irrit. 2 - H319 Skin Sens. 1 - H317
Environmental hazards Aquatic Chronic 2 - H411

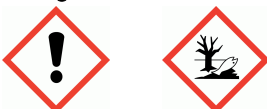
Classification (67/548/EEC or 1999/45/EC) Xi;R36/38. R43. N;R51/53.

Human health The product is irritating to eyes and skin. May cause sensitisation by skin contact.

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

Pictogram



Signal word Warning

NITOCOTE EP405 BASE

Hazard statements	H411 Toxic to aquatic life with long lasting effects. H319 Causes serious eye irritation. H315 Causes skin irritation. H317 May cause an allergic skin reaction.
Precautionary statements	P261 Avoid breathing vapour/spray. 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	EPOXY RESIN (Type A) (Number average MW <= 700), PARATERTIARY BUTYL PHENYL GLYCIDYL ETHER, OXIRANE, MONO [(C12-14- ALKYLOXY)METHYL] DERIVS
Supplementary precautionary statements	P264 Wash contaminated skin thoroughly after handling. P272 Contaminated work clothing should not be allowed out of the workplace. P273 Avoid release to the environment. P321 Specific treatment (see medical advice on this label). P332+P313 If skin irritation occurs: Get medical advice/attention. P333+P313 If skin irritation or rash occurs: Get medical advice/attention. P337+P313 If eye irritation persists: Get medical advice/attention. P362+P364 Take off contaminated clothing and wash it before reuse. P391 Collect spillage.

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

EPOXY RESIN (Type A) (Number average MW <= 700)	10-30%
CAS number: 25068-38-6	EC number: 500-033-5
Classification	
Skin Irrit. 2 - H315	
Eye Irrit. 2 - H319	
Skin Sens. 1 - H317	
Aquatic Chronic 2 - H411	
TITANIUM DIOXIDE	10-30%
CAS number: 13463-67-7	EC number: 236-675-5
Classification	
Not Classified	Classification (67/548/EEC or 1999/45/EC) -
PARATERTIARY BUTYL PHENYL GLYCIDYL ETHER	10-30%
CAS number: 3101-60-8	
Classification	
Skin Irrit. 2 - H315	Classification (67/548/EEC or 1999/45/EC) Xi;R36/38. R43.
Skin Sens. 1 - H317	
Aquatic Chronic 2 - H411	

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OXIRANE, MONO [(C12-14- ALKYLOXY)METHYL] DERIVS	1-5%
CAS number: 68609-97-2	
Classification	
Skin Irrit. 2 - H315	
Skin Sens. 1 - H317	
XYLENE	<1%
CAS number: 1330-20-7 EC number: 215-535-7	
Classification	
Flam. Liq. 3 - H226	
Skin Irrit. 2 - H315	
Acute Tox. 4 - H312	
Acute Tox. 4 - H332	

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

General information	Get medical attention if any discomfort continues.
Inhalation	Move affected person to fresh air at once. Rinse nose and mouth with water. Get medical attention if any discomfort continues.
Ingestion	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. Rinse mouth thoroughly with water. Give plenty of water to drink. Keep affected person under observation. Get medical attention if any discomfort continues. Show this Safety Data Sheet to the medical personnel.
Skin contact	Remove affected person from source of contamination. Remove contaminated clothing. Wash skin thoroughly with soap and water. Get medical attention if irritation persists after washing.
Eye contact	Remove affected person from source of contamination. Remove any contact lenses and open eyelids wide apart. 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	The severity of the symptoms described will vary dependent on the concentration and the length of exposure.
Inhalation	May cause respiratory system irritation.
Ingestion	May cause discomfort if swallowed. May cause stomach pain or vomiting.
Skin contact	Skin irritation. May cause sensitization by skin contact.
Eye contact	Irritation of eyes and mucous membranes.

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

Notes for the doctor	Treat symptomatically.
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SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	Extinguish with alcohol-resistant foam, carbon dioxide, dry powder or water fog.
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Unsuitable extinguishing media Do not use water jet as an extinguisher, as this will spread the fire.

5.2. Special hazards arising from the substance or mixture

Specific hazards No unusual fire or explosion hazards noted.

Hazardous combustion products Carbon monoxide (CO). Oxides of carbon. Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapours.

5.3. Advice for firefighters

Protective actions during firefighting No specific firefighting precautions known. Control run-off water by containing and keeping it out of sewers and watercourses.

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. Spillages or uncontrolled discharges into watercourses must be reported immediately to the Environmental Agency or other appropriate regulatory body.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up Stop leak if possible without risk. Absorb in vermiculite, dry sand or earth and place into containers. Flush contaminated area with plenty of water. Avoid the spillage or runoff entering drains, sewers or watercourses.

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 Provide adequate ventilation. Avoid the formation of mists. Avoid inhalation of vapours/spray and contact with skin and eyes.

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. Keep only in the original container.

Storage class Chemical 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

TITANIUM DIOXIDE

Long-term exposure limit (8-hour TWA): WEL 10 mg/m³

XYLENE

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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

ISO-BUTANOL

Long-term exposure limit (8-hour TWA): WEL 50 ppm 154 mg/m³

Short-term exposure limit (15-minute): WEL 75 ppm 231 mg/m³

WEL = Workplace Exposure Limit

Sk = Can be absorbed through the skin.

Ingredient comments WEL = Workplace Exposure Limits

EPOXY RESIN (Type A) (Number average MW <= 700) (CAS: 25068-38-6)

DNEL Workers - Inhalation; Short term systemic effects: 12.25 mg/m³
Workers - Inhalation; Long term systemic effects: 12.25 mg/m³

PNEC - Fresh water; 0.006 mg/l

TITANIUM DIOXIDE (CAS: 13463-67-7)

DNEL Industry - Inhalation; Long term local effects: 10 mg/m³
Consumer - Oral; Long term systemic effects: 700 mg/kg/day

PNEC - Fresh water; 0.127 mg/l
- Sediment (Freshwater); >=1000 mg/kg
- Marine water; 1 mg/l
- Sediment (Marinewater); >= 100 mg/kg
- Soil; 100 mg/kg
- STP; 100 mg/l

PARATERTIARY BUTYL PHENYL GLYCIDYL ETHER (CAS: 3101-60-8)

DNEL Workers - Inhalation; Long term, Short term systemic effects: 19.6 mg/m³
Workers - Inhalation; Long term local effects: 19.6 mg/m³
Workers - Dermal; Long term, Short term systemic effects: 5.6 mg/kg/day
Workers - Dermal; Long term, Short term local effects: 1.6 µg/cm²

PNEC - Fresh water; 7.5 µg/l
- Marine water; 0.75 µg/l
- STP; 100 mg/l

OXIRANE, MONO [(C12-14- ALKYLOXY)METHYL] DERIVS (CAS: 68609-97-2)

DNEL Workers - Inhalation; Long term systemic effects: 3.6 mg/m³
Workers - Dermal; Long term systemic effects: 1 mg/kg bw/day

PNEC - Fresh water; 0.0072 mg/l
- Marine water; 0.00072 mg/l

XYLENE (CAS: 1330-20-7)

DNEL Workers - Inhalation; Long term systemic effects: 77 mg/m³
Workers - Inhalation; Short term systemic effects: 289 mg/m³
Workers - Dermal; Long term systemic effects: 180 mg/kg/day

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PNEC	- Fresh water; 0.327 mg/l - Marine water; 0.327 mg/l - STP; 6.58 mg/l
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ISO-BUTANOL (CAS: 78-83-1)

DNEL	Workers - Inhalation; Long term local effects: 310 mg/m ³
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PNEC	- Fresh water; 0.4 mg/l - Marine water; 0.04 mg/l
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8.2. Exposure controls

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

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 or face shield.

Hand protection

Chemical-resistant, impervious gloves complying with an approved standard should be worn if a risk assessment indicates skin contact is possible. Wear protective gloves made of the following material: Butyl rubber. Nitrile rubber.

Other skin and body protection

Wear appropriate clothing to prevent any possibility of skin contact. Wear apron or protective clothing in case of contact.

Hygiene measures

Provide eyewash station.

Respiratory protection

No specific recommendations. Respiratory protection may be required if excessive airborne contamination occurs.

SECTION 9: Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

Appearance	Viscous liquid.
Colour	Blue or White
Odour	Mild.
Odour threshold	Not determined.
pH	Not determined.
Melting point	Not determined.
Initial boiling point and range	> 200°C @ 1 atm
Flash point	> 150°C
Evaporation rate	Not determined.
Vapour pressure	0.1 kPa @ 20°C
Relative density	1.90 @ 20°C
Solubility(ies)	Insoluble in water.

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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	Not available.
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SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity	There are no known reactivity hazards associated with this product.
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10.2. Chemical stability

Stability	Stable at normal ambient temperatures.
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10.3. Possibility of hazardous reactions

Possibility of hazardous reactions	Not relevant. Will not polymerise.
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10.4. Conditions to avoid

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

Materials to avoid	Strong acids. Strong bases Strong oxidising agents.
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10.6. Hazardous decomposition products

Hazardous decomposition products	When heated, vapours/gases hazardous to health may be formed.
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SECTION 11: Toxicological information

11.1. Information on toxicological effects

Inhalation	Gas or vapour may irritate the respiratory system.
Ingestion	May cause stomach pain or vomiting.
Skin contact	Irritating to skin. May cause sensitisation by skin contact.
Eye contact	Irritating to eyes.
Route of entry	Skin and/or eye contact

Toxicological information on ingredients.

EPOXY RESIN (Type A) (Number average MW <= 700)

Acute toxicity - oral

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

Species Rat

Notes (oral LD₅₀) Based on available data the classification criteria are not met.

ATE oral (mg/kg) 5,000.0

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Acute toxicity - dermal

Acute toxicity dermal (LD₅₀) 20,000.0
mg/kg)

Species Rabbit

ATE dermal (mg/kg) 20,000.0

Skin corrosion/irritation

Animal data (Rabbit) Moderate Irritation

Skin sensitisation

Skin sensitisation Sensitisation possible through skin contact.

OXIRANE, MONO [(C12-14- ALKYL OXY)METHYL] DERIVS

Acute toxicity - oral

Acute toxicity oral (LD₅₀) 19,200.0
mg/kg)

Species Rat

ATE oral (mg/kg) 19,200.0

Acute toxicity - dermal

Acute toxicity dermal (LD₅₀) 4,500.0
mg/kg)

Species Rat

ATE dermal (mg/kg) 4,500.0

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.

SECTION 12: Ecological Information

Ecotoxicity Dangerous for the environment. May cause long-term adverse effects in the aquatic environment.

12.1. Toxicity

Toxicity Toxic to aquatic organisms.

Ecological information on ingredients.

EPOXY RESIN (Type A) (Number average MW <= 700)

Acute toxicity - fish LC₅₀, 96 hours: 3.6 mg/l, Leuciscus idus (Golden orfe)

Acute toxicity - aquatic invertebrates EC₅₀, 48 hours: 2.8 mg/l, Daphnia magna

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PARATERTIARY BUTYL PHENYL GLYCIDYL ETHER

Acute toxicity - fish	LC ₅₀ , 96 hours: 7.5 mg/l, Onchorhynchus mykiss (Rainbow trout)
Acute toxicity - aquatic plants	EC ₅₀ , 72 hours: 9 mg/l, Pseudokirchneriella subcapitata

OXIRANE, MONO [(C12-14- ALKYLOXY)METHYL] DERIVS

Acute toxicity - fish	LC ₅₀ , 96 hours: 1 - 10 mg/l, Fish
Acute toxicity - aquatic invertebrates	EC ₅₀ , 48 hours: 1 - 10 mg/l, Daphnia magna

XYLENE

Toxicity	Not considered toxic to fish.
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12.2. Persistence and degradability

Persistence and degradability The product is not expected to be biodegradable.

Ecological information on ingredients.

EPOXY RESIN (Type A) (Number average MW <= 700)

Persistence and degradability	The product is not readily biodegradable.
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XYLENE

Persistence and degradability	The product is biodegradable.
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12.3. Bioaccumulative potential

Bioaccumulative potential Has the potential to bioaccumulate.

12.4. Mobility in soil

Mobility Viscous liquid. Insoluble in water.

Ecological information on ingredients.

EPOXY RESIN (Type A) (Number average MW <= 700)

Adsorption/desorption coefficient	Soil - Koc: 445 @ °C
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XYLENE

Mobility	The product is insoluble in water.
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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.

Ecological information on ingredients.

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EPOXY RESIN (Type A) (Number average MW <= 700)

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

PARATERTIARY BUTYL PHENYL GLYCIDYL ETHER

Results of PBT and vPvB assessment This substance is not classified as PBT or vPvB according to current EU criteria.

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) 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 EPOXY RESIN (Type A) (Number average MW <= 700), PARATERTIARY BUTYL PHENYL GLYCIDYL ETHER)

Proper shipping name (IMDG) ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (CONTAINS EPOXY RESIN (Type A) (Number average MW <= 700), PARATERTIARY BUTYL PHENYL GLYCIDYL ETHER)

Proper shipping name (ICAO) ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (CONTAINS EPOXY RESIN (Type A) (Number average MW <= 700), PARATERTIARY BUTYL PHENYL GLYCIDYL ETHER)

Proper shipping name (ADN) ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (CONTAINS EPOXY RESIN (Type A) (Number average MW <= 700), PARATERTIARY BUTYL PHENYL GLYCIDYL ETHER)

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

NITOCOTE EP405 BASE

ADN class 9

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



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 MARPOL73/78 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

National regulations The Control of Substances Hazardous to Health Regulations 2002 (SI 2002 No. 2677) (as amended).
The Chemicals (Hazard Information and Packaging for Supply) Regulations 2009 (SI 2009 No. 716).

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).
Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures (as amended).
Commission Regulation (EU) No 453/2010 of 20 May 2010.

Guidance Workplace Exposure Limits EH40.
Approved Classification and Labelling Guide (Sixth edition) L131.
Safety Data Sheets for Substances and Preparations.

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15.2. Chemical safety assessment

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	12/06/2015
Revision	3
SDS number	11903
Risk phrases in full	NC Not classified. R10 Flammable. R20/21 Harmful by inhalation and in contact with skin. R36/38 Irritating to eyes and skin. R38 Irritating to skin. R43 May cause sensitisation by skin contact. R51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
Hazard statements in full	H226 Flammable liquid and vapour. H312 Harmful in contact with skin. H315 Causes skin irritation. H317 May cause an allergic skin reaction. H319 Causes serious eye irritation. H332 Harmful if inhaled. H411 Toxic to aquatic life with long lasting effects.

The information on this data sheet represents our current data and is reliable provided that the product is used under the prescribed conditions and in accordance with the application specified on the packaging and/or in the technical guidance literature. Any other use of the product which involves using the product in combination with any other product or any other process is the responsibility of the user.



SAFETY DATA SHEET NITOCOTE EP405 HARDENER

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

1.1. Product identifier

Product name NITOCOTE EP405 HARDENER

Product number A1754116

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

Identified uses Hardener component of two part epoxy system

1.3. Details of the supplier of the safety data sheet

Supplier FOSROC Limited
Drayton Manor Business Park
Coleshill Road
Tamworth
Staffordshire
B78 3XN
enquiryuk@fosroc.com
Tel. +44 (0) 1827 262222
Fax. +44 (0) 1827 262444

1.4. Emergency telephone number

Emergency telephone +44 (0) 1827 265 279 (08.30 to 17.00hrs Mon - Thu; 08.30 to 16.00hrs Fri)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification

Physical hazards Not Classified

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

Environmental hazards Aquatic Chronic 2 - H411

Classification (67/548/EEC or 1999/45/EC) Xn;R20/22. Repr. Cat. 3;R62,R63. C;R34. Xi;R37. R43. N;R50/53.

Human health Contains a substance/a group of substances which may impair fertility. Contains a substance/a group of substances which may damage the unborn child. May cause sensitisation by skin contact. Causes burns. Irritating to respiratory system. Harmful by inhalation and if swallowed.

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

NITOCOTE EP405 HARDENER

Pictogram



Signal word

Danger

Hazard statements

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.
 H411 Toxic to aquatic life with long lasting effects.

Precautionary statements

P273 Avoid release to the environment.
 P280 Wear protective gloves/protective clothing/eye protection/face protection.
 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/shower.
 P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Contains

4-TERT-BUTYLPHENOL, m-XYLYLENEDIAMINE,
 TRIMETHYLHEXAMETHYLENEDIAMINE, NONYLPHENOL

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.
 P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/doctor.
 P302+P352 IF ON SKIN: Wash with plenty of water.
 P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
 P308+P313 IF exposed or concerned: Get medical advice/attention.
 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.
 P391 Collect spillage.
 P405 Store locked up.
 P501 Dispose of contents/container in accordance with national regulations.

2.3. Other hazards

None.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

NITOCOTE EP405 HARDENER

4-TERT-BUTYLPHENOL	30-60%
CAS number: 98-54-4	EC number: 202-679-0
Classification Skin Irrit. 2 - H315 Eye Dam. 1 - H318 Repr. 2 - H361f	Classification (67/548/EEC or 1999/45/EC) Xi;R36/37/38. N;R51/53. R43.
m-XYLYLENEDIAMINE	10-30%
CAS number: 1477-55-0	REACH registration number: 01-2119480150-50-xxxx
Classification Acute Tox. 4 - H302 Acute Tox. 4 - H332 Skin Corr. 1A - H314 Eye Dam. 1 - H318 Skin Sens. 1 - H317 Aquatic Chronic 3 - H412	Classification (67/548/EEC or 1999/45/EC) Xn;R20/22. C;R35. R52/53,R43.
TRIMETHYLHEXAMETHYLENEDIAMINE	10-30%
CAS number: 25620-58-0	EC number: 247-134-8
Classification Acute Tox. 4 - H302 Skin Corr. 1A - H314 Skin Sens. 1 - H317 Aquatic Chronic 3 - H412	Classification (67/548/EEC or 1999/45/EC) Xn;R22. C;R35. R43,R52/53.
NONYLPHENOL	5-10%
CAS number: 25154-52-3	EC number: 246-672-0
M factor (Acute) = 1	M factor (Chronic) = 1
Classification Acute Tox. 4 - H302 Skin Corr. 1B - H314 Eye Dam. 1 - H318 Repr. 2 - H361fd Aquatic Acute 1 - H400 Aquatic Chronic 1 - H410	

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

General information

CAUTION! First aid personnel must be aware of own risk during rescue!

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.

NITOCOTE EP405 HARDENER

Ingestion	Do not induce vomiting. Never give anything by mouth to an unconscious person. Do not induce vomiting. Rinse mouth thoroughly with water. Give a few small glasses of water or milk to drink. Never give anything by mouth to an unconscious person. Remove affected person from source of contamination. 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 affected person from source of contamination. Remove any contact lenses and open eyelids wide apart. Remove any contact lenses and open eyelids wide apart. Continue to rinse for at least 15 minutes. 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	The severity of the symptoms described will vary dependent on the concentration and the length of exposure.
Inhalation	May cause damage to mucous membranes in nose, throat, lungs and bronchial system. Delayed, often serious, breathing problems.
Ingestion	May cause chemical burns in mouth and throat.
Skin contact	Chemical burns. Corrosive to skin. May cause sensitisation by skin contact.
Eye contact	Corneal damage.

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

Notes for the doctor	No specific recommendations. If in doubt, get medical attention promptly.
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SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	Use fire-extinguishing media suitable for the surrounding fire.
Unsuitable extinguishing media	None known.

5.2. Special hazards arising from the substance or mixture

Specific hazards	Fire creates: Toxic gases/vapours/fumes of: Carbon monoxide (CO). Carbon dioxide (CO ₂). Nitrous gases (NO _x). Containers can burst violently or explode when heated, due to excessive pressure build-up.
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5.3. Advice for firefighters

Protective actions during firefighting	Control run-off water by containing and keeping it out of sewers and watercourses.
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. Provide adequate ventilation. Avoid inhalation of vapours. Avoid contact with skin and eyes.
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6.2. Environmental precautions

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Environmental precautions Avoid or minimise the creation of any environmental contamination. Spillages or uncontrolled discharges into watercourses must be reported immediately to the Environmental Agency or other appropriate regulatory body.

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. Stop leak if possible without risk. DO NOT touch spilled material! Absorb in vermiculite, dry sand or earth and place into containers. Avoid the spillage or runoff entering drains, sewers or watercourses.

6.4. Reference to other sections

Reference to other sections For personal protection, see Section 8. For waste disposal, see section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Usage precautions 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.

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. Keep only in the original container. Do not store at temperatures above 40°C.

Storage class Corrosive 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

m-XYLYLENEDIAMINE

Short-term exposure limit (15-minute): WEL

WEL = Workplace Exposure Limit

Ingredient comments No exposure limits known for ingredient(s).

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 or face shield.

Hand protection For exposure up to 4 hours, wear gloves made of the following material: Nitrile rubber. For exposure up to 8 hours, wear gloves made of the following material: Butyl rubber. Laminate of polyethylene and ethylene vinyl alcohol (PE/EVOH). It should be noted that liquid may penetrate the gloves. Frequent changes are recommended.

Other skin and body protection Wear apron or protective clothing in case of contact.

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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.
Environmental exposure controls	Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

SECTION 9: Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

Appearance	Liquid.
Colour	Yellow-Brown
Odour	Amine.
pH	pH (diluted solution): 12 50% w/w
Initial boiling point and range	>200°C @ 1 atm
Flash point	130°C PMCC (Pensky-Martens closed cup).
Relative density	1.0 @ 20°C
Solubility(ies)	Miscible with water.
Viscosity	400 - 600 mPa s @ at 25°C

9.2. Other information

Other information	None.
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SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity	There are no known reactivity hazards associated with this product.
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10.2. Chemical stability

Stability	Stable at normal ambient temperatures.
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10.3. Possibility of hazardous reactions

Possibility of hazardous reactions	Hazardous reactions will not occur under normal transport or storage conditions. Will not polymerise.
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10.4. Conditions to avoid

Conditions to avoid	There are no known conditions that are likely to result in a hazardous situation.
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10.5. Incompatible materials

Materials to avoid	Strong acids. Alkalis - organic. Strong oxidising agents.
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10.6. Hazardous decomposition products

Hazardous decomposition products	Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapours. Oxides of carbon. Oxides of nitrogen.
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SECTION 11: Toxicological information

11.1. Information on toxicological effects

NITOCOTE EP405 HARDENER**Acute toxicity - oral**

**Acute toxicity oral (LD₅₀
mg/kg)** 1,300.0

Species Rat

ATE oral (mg/kg) 1,231.49

Acute toxicity - inhalation

**ATE inhalation (dusts/mists
mg/l)** 5.36

Skin sensitisation

Skin sensitisation - Guinea pig: Sensitising.

Inhalation

Harmful by inhalation. May cause damage to mucous membranes in nose, throat, lungs and bronchial system.

Ingestion

Harmful if swallowed. May cause chemical burns in mouth, oesophagus and stomach.

Skin contact

Causes burns. Corrosive to skin. May cause sensitisation by skin contact.

Eye contact

Causes burns.

**Acute and chronic health
hazards**

p-tertiarybutyl phenol can cause a cosmetic effect known as "occupational vitiligo" or leucoderma. It is believed that repeated contact with this substance can lead to this depigmentation of the skin in sensitive individuals.

Target organs

Skin Eyes Respiratory system, lungs

Toxicological information on ingredients.**m-XYLYLENEDIAMINE****Acute toxicity - oral**

**Acute toxicity oral (LD₅₀
mg/kg)** 930.0

Species Rat

ATE oral (mg/kg) 930.0

Acute toxicity - dermal

**Acute toxicity dermal (LD₅₀
mg/kg)** 3,100.0

Species Rat

Acute toxicity - inhalation

**Acute toxicity inhalation
(LC₅₀ dust/mist mg/l)** 1.34

Species Rat

**ATE inhalation
(dusts/mists mg/l)** 1.34

Skin sensitisation

Skin sensitisation Local Lymph Node Assay (LLNA) - Mouse: Sensitising.

NITOCOTE EP405 HARDENER**Germ cell mutagenicity**

Genotoxicity - in vitro Gene mutation:: Negative.

Carcinogenicity

Carcinogenicity NOAEL 150 mg/kg, Oral, Rat

TRIMETHYLHEXAMETHYLENEDIAMINE**Skin corrosion/irritation**

Extreme pH Irritating. Corrosive

Serious eye damage/irritation

Serious eye damage/irritation Corrosive to eyes

Skin sensitisation

Skin sensitisation - Guinea pig: Sensitising.

Germ cell mutagenicity

Genotoxicity - in vitro : Negative.

Carcinogenicity

Carcinogenicity NOAEL 10 mg/kg, Oral, Rat

Reproductive toxicity

Reproductive toxicity - development Teratogenicity: - NOAEL: >250 000 ppm, , Rabbit

NONYLPHENOL**Acute toxicity - oral**

Acute toxicity oral (LD₅₀ mg/kg) 1,620.0

Species Rat

ATE oral (mg/kg) 1,620.0

Acute toxicity - dermal

Acute toxicity dermal (LD₅₀ mg/kg) 2,031.0

Species Rat

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 May cause long-term adverse effects in the aquatic environment.

Ecological information on ingredients.**m-XYLYLENEDIAMINE**

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Acute toxicity - fish	LC ₅₀ , 96 hours: 87.6 mg/l, Fish
Acute toxicity - aquatic invertebrates	EC ₅₀ , 48 hours: 15.2 mg/l, Daphnia magna
Acute toxicity - aquatic plants	EC ₅₀ , 72 hours, 72 hours: 20.3 mg/l, Freshwater algae
Acute toxicity - microorganisms	EC ₅₀ , 30 min, 30 minutes: > 1000 mg/l, Activated sludge

TRIMETHYLHEXAMETHYLENEDIAMINE

Acute toxicity - aquatic plants	EC ₅₀ , 72 hours, 72 hours: 29.5 mg/l, Freshwater algae
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NONYLPHENOL**Acute aquatic toxicity**

LE(C)₅₀	0.1 < L(E)C ₅₀ ≤ 1
M factor (Acute)	1

Acute toxicity - fish	LC ₅₀ , 96 hours: 0.128 mg/l, Fish
Acute toxicity - aquatic invertebrates	EC ₅₀ , 48 hours: 0.0848 mg/l, Daphnia magna

Chronic aquatic toxicity

M factor (Chronic)	1
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12.2. Persistence and degradability

Persistence and degradability The product is not expected to be biodegradable.

Ecological information on ingredients.**m-XYLYLENEDIAMINE**

Biodegradation	- 49%: 28 days
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TRIMETHYLHEXAMETHYLENEDIAMINE

Biodegradation	- Degradation (%) 7%: 28 days Not readily biodegradable.
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12.3. Bioaccumulative potential

Bioaccumulative potential Not expected to be bioaccumulative

Ecological information on ingredients.**m-XYLYLENEDIAMINE**

Bioaccumulative potential	BCF: < 0.3,
Partition coefficient	log Pow: 0.18

TRIMETHYLHEXAMETHYLENEDIAMINE

NITOCOTE EP405 HARDENER

Bioaccumulative potential	Not expected to be bioaccumulative
Partition coefficient	log Pow: 0.77

NONYLPHENOL

Bioaccumulative potential	May accumulate in soil and water systems.
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12.4. Mobility in soil

Mobility	The product is miscible with water. May spread in water systems.
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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.
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12.6. Other adverse effects

Other adverse effects	None known.
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SECTION 13: Disposal considerations

13.1. Waste treatment methods

General information	When handling waste, the safety precautions applying to handling of the product should be considered. 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. Avoid the spillage or runoff entering drains, sewers or watercourses. Residues and empty containers should be taken care of as hazardous waste according to local and national provisions.
Waste class	According to the European Waste Catalogue, Waste Codes are not product specific, but application specific.

SECTION 14: Transport information

14.1. UN number

UN No. (ADR/RID)	2735
UN No. (IMDG)	2735
UN No. (ICAO)	2735
UN No. (ADN)	2735

14.2. UN proper shipping name

Proper shipping name (ADR/RID)	AMINES, LIQUID, CORROSIVE, N.O.S. (CONTAINS 1,3-BIS(AMINOMETHYL)BENZENE (MXDA), NONYLPHENOL)
Proper shipping name (IMDG)	AMINES, LIQUID, CORROSIVE, N.O.S. (CONTAINS 1,3-BIS(AMINOMETHYL)BENZENE (MXDA), NONYLPHENOL)
Proper shipping name (ICAO)	AMINES, LIQUID, CORROSIVE, N.O.S. (CONTAINS 1,3-BIS(AMINOMETHYL)BENZENE (MXDA), NONYLPHENOL)
Proper shipping name (ADN)	AMINES, LIQUID, CORROSIVE, N.O.S. (CONTAINS 1,3-BIS(AMINOMETHYL)BENZENE (MXDA), NONYLPHENOL)

14.3. Transport hazard class(es)

ADR/RID class	8
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ADR/RID classification code	C7
ADR/RID label	8
IMDG class	8
ICAO class/division	8
ADN class	8

Transport labels**14.4. Packing group**

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

14.5. Environmental hazards**Environmentally hazardous substance/marine pollutant****14.6. Special precautions for user**

EmS	F-A, S-B
ADR transport category	1
Emergency Action Code	2X
Hazard Identification Number (ADR/RID)	80
Tunnel restriction code	(E)

14.7. Transport in bulk according to Annex II of MARPOL73/78 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**

National regulations	The Chemicals (Hazard Information and Packaging for Supply) Regulations 2009 (SI 2009 No. 716). EH40/2005 Workplace exposure limits.
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EU legislation	Commission Regulation (EU) No 453/2010 of 20 May 2010. Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures (as amended). 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

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	11/06/2015
Revision	5
SDS number	12583
Risk phrases in full	R20/22 Harmful by inhalation and if swallowed. R22 Harmful if swallowed. R34 Causes burns. R35 Causes severe burns. R36/37/38 Irritating to eyes, respiratory system and skin. R37 Irritating to respiratory system. R43 May cause sensitisation by skin contact. R50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. R51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. R52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment. R62 Possible risk of impaired fertility. R63 Possible risk of harm to the unborn child.
Hazard statements in full	H302 Harmful if swallowed. H314 Causes severe skin burns and eye damage. H315 Causes skin irritation. H317 May cause an allergic skin reaction. H318 Causes serious eye damage. H332 Harmful if inhaled. H361f Suspected of damaging fertility. H361fd Suspected of damaging fertility. Suspected of damaging the unborn child. 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.

NITOCOTE EP405 HARDENER

The information on this data sheet represents our current data and is reliable provided that the product is used under the prescribed conditions and in accordance with the application specified on the packaging and/or in the technical guidance literature. Any other use of the product which involves using the product in combination with any other product or any other process is the responsibility of the user.