



## SAFETY DATA SHEET NITOCOTE EN901 HARDENER

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

#### 1.1. Product identifier

**Product name** NITOCOTE EN901 HARDENER

**Product number** A1748067UK9

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

**Identified uses** Hardener component of two part epoxy based surface coating 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  
 England  
 Tel: +44 (0) 1827 262222  
 Fax: +44 (0) 1827 262444  
 enquiryuk@fosroc.com

#### 1.4. Emergency telephone number

**Emergency telephone** +44 (0) 1827 265 279 (Monday-Sunday 24 hours a day)

### 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 - H312 Skin Corr. 1B - H314 Eye Dam. 1 - H318 Skin Sens. 1 - H317

**Environmental hazards** Aquatic Chronic 3 - H412

**Human health** Prolonged or repeated contact with skin may cause redness, itching, irritation and eczema/chapping. The product contains a small amount of sensitising substance. May cause skin sensitisation or allergic reactions in sensitive individuals.

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

#### 2.2. Label elements

##### Hazard pictograms



## NITOCOTE EN901 HARDENER

|   |  |
|---|--|
| <b>Signal word</b>                            | Danger   |
| <b>Hazard statements</b>                      | H302+H312 Harmful if swallowed or in contact with skin.<br>H314 Causes severe skin burns and eye damage.<br>H317 May cause an allergic skin reaction.<br>H412 Harmful to aquatic life with long lasting effects.   |
| <b>Precautionary statements</b>               | P260 Do not breathe vapour/ spray.<br>P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.<br>P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.<br>P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.<br>P501 Dispose of contents/ container in accordance with national regulations.   |
| <b>Contains</b>                               | BENZYL ALCOHOL, ISOPHORONEDIAMINE  |
| <b>Supplementary precautionary statements</b> | P261 Avoid breathing vapour/ spray.<br>P264 Wash contaminated skin thoroughly after handling.<br>P270 Do not eat, drink or smoke when using this product.<br>P272 Contaminated work clothing should not be allowed out of the workplace.<br>P273 Avoid release to the environment.<br>P301+P312 IF SWALLOWED: Call a POISON CENTRE/doctor if you feel unwell.<br>P310 Immediately call a POISON CENTER/ doctor.<br>P314 Get medical advice/ attention if you feel unwell.<br>P321 Specific treatment (see medical advice on this label).<br>P330 Rinse mouth.<br>P333+P313 If skin irritation or rash occurs: Get medical advice/ attention.<br>P362+P364 Take off contaminated clothing and wash it before reuse. |

### 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

|                       |                      |  |
|-----------------------|----------------------|--|
| <b>BENZYL ALCOHOL</b> |                      | <b>30-60%</b>                                    |
| CAS number: 100-51-6  | EC number: 202-859-9 | REACH registration number: 01-2119492630-38-xxxx |
| <b>Classification</b> |                      |  |
| Acute Tox. 4 - H302   |                      |  |
| Acute Tox. 4 - H332   |                      |  |
| Eye Irrit. 2 - H319   |                      |  |

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|   |                      |  |
|---|----------------------|--|
| <b>ISOPHORONEDIAMINE</b>  |                      | <b>30-60%</b>                                    |
| CAS number: 2855-13-2   | EC number: 220-666-8 | REACH registration number: 01-2119514687-32-xxxx |
| <b>Classification</b><br>Acute Tox. 4 - H302<br>Acute Tox. 4 - H312<br>Skin Corr. 1B - H314<br>Eye Dam. 1 - H318<br>Skin Sens. 1 - H317<br>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

|                     |  |
|---------------------|--|
| <b>Inhalation</b>   | 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.                                   |
| <b>Ingestion</b>    | Never give anything by mouth to an unconscious person. Do not induce vomiting. Rinse mouth thoroughly with water. Give plenty of water to drink. Get medical attention immediately.  |
| <b>Skin contact</b> | 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.   |
| <b>Eye contact</b>  | Remove affected person from source of contamination. Rinse immediately with plenty of water. Remove contact lenses, if present and easy to do. Continue rinsing. Continue to rinse for at least 15 minutes. Get medical attention immediately. |

#### 4.2. Most important symptoms and effects, both acute and delayed

|                            |  |
|----------------------------|--|
| <b>General information</b> | The severity of the symptoms described will vary dependent on the concentration and the length of exposure.  |
| <b>Inhalation</b>          | Difficulty in breathing. Coughing, chest tightness, feeling of chest pressure. May cause an asthma-like shortness of breath. Severe irritation of nose and throat. Headache. Nausea, vomiting. |
| <b>Ingestion</b>           | May cause chemical burns in mouth and throat.  |
| <b>Skin contact</b>        | May cause sensitisation by skin contact. May cause serious chemical burns to the skin.   |
| <b>Eye contact</b>         | Eye contact may cause serious and potentially irreversible injuries.   |

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

|                             |                        |
|-----------------------------|------------------------|
| <b>Notes for the doctor</b> | Treat symptomatically. |
|-----------------------------|------------------------|

### SECTION 5: Firefighting measures

#### 5.1. Extinguishing media

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

#### 5.2. Special hazards arising from the substance or mixture

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**Specific hazards** Harmful to aquatic life with long lasting effects. Keep upwind to avoid inhalation of gases, vapours, fumes and smoke. Water used for fire extinguishing, which has been in contact with the product, may be corrosive.

**Hazardous combustion products** Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapours. Oxides of nitrogen. Ammonia or amines.

### 5.3. Advice for firefighters

**Protective actions during firefighting** Cool containers exposed to heat with water spray and remove them from the fire area if it can be done without risk. Control run-off water by containing and keeping it out of sewers and watercourses. Contain and collect extinguishing water.

**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. Avoid contact with skin and eyes. Avoid inhalation of vapours. Provide adequate ventilation. Do not touch or walk into spilled material.

### 6.2. Environmental precautions

**Environmental precautions** Avoid or minimise the creation of any environmental contamination. Avoid the spillage or runoff entering drains, sewers or watercourses. 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** Do not touch or walk into spilled material. Stop leak if possible without risk. Absorb spillage with inert, damp, non-combustible material. Collect and place in suitable waste disposal containers and seal securely.

### 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** Provide adequate ventilation. Avoid inhalation of vapours/spray and contact with skin and eyes. Under certain conditions, the material can form nitrosamines. Nitrosamines are carcinogenic in animal studies.

### 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** 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

**Ingredient comments** WEL = Workplace Exposure Limits

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### BENZYL ALCOHOL (CAS: 100-51-6)

|             |  |
|-------------|--|
| <b>DNEL</b> | Workers - Inhalation; Short term systemic effects: 110 mg/m <sup>3</sup><br>Workers - Inhalation; Long term systemic effects: 22 mg/m <sup>3</sup><br>Workers - Dermal; Short term systemic effects: 40 mg/kg bw/day<br>Workers - Dermal; Long term systemic effects: 8 mg/kg bw/day |
| <b>PNEC</b> | - Fresh water; 1 mg/l<br>- marine water; 0.1 mg/l<br>- STP; 39 mg/l  |

### ISOPHORONEDIAMINE (CAS: 2855-13-2)

|             |   |
|-------------|---|
| <b>PNEC</b> | - marine water; 0.006 mg/l<br>- Fresh water; 0.06 mg/l<br>- Soil; 1.121 mg/kg |
|-------------|---|

## 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. To protect hands from chemicals, gloves should comply with European Standard EN374. Butyl rubber. Neoprene. Nitrile rubber. Polyethylene. Polyvinyl chloride (PVC). The most suitable glove should be chosen in consultation with the glove supplier/manufacturer, who can provide information about the breakthrough time of the glove material.

### 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 and safety shower. Do not smoke in work area. Wash 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

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

|                        |                 |
|------------------------|-----------------|
| <b>Appearance</b>      | Liquid.         |
| <b>Colour</b>          | Amber.          |
| <b>Odour</b>           | Amine.          |
| <b>Odour threshold</b> | Not determined. |

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|   |   |
|---|---|
| <b>pH</b>   | pH (concentrated solution): >7                              |
| <b>Melting point</b>                                | Not determined.   |
| <b>Initial boiling point and range</b>              | 222°C @ 101 kPa   |
| <b>Flash point</b>                                  | 104°C   |
| <b>Evaporation rate</b>                             | Not determined.   |
| <b>Flammability (solid, gas)</b>                    | Not applicable.   |
| <b>Upper/lower flammability or explosive limits</b> | Not determined.   |
| <b>Other flammability</b>                           | Not determined.   |
| <b>Vapour pressure</b>                              | 0.02 kPa @ 20°C   |
| <b>Vapour density</b>                               | Not determined.   |
| <b>Relative density</b>                             | 1.04 @ 20°C   |
| <b>Bulk density</b>                                 | Not applicable.   |
| <b>Solubility(ies)</b>                              | Slightly soluble in water.                                  |
| <b>Partition coefficient</b>                        | Not available.  |
| <b>Auto-ignition temperature</b>                    | Not determined.   |
| <b>Decomposition Temperature</b>                    | Not determined.   |
| <b>Explosive properties</b>                         | Not considered to be explosive.                             |
| <b>Explosive under the influence of a flame</b>     | Not considered to be explosive.                             |
| <b>Oxidising properties</b>                         | 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 reducing agents. Under certain circumstances, nitrosamines can form in contact with nitrosating agents (e.g. nitrites, nitrous oxides). Nitrosamines were found to cause cancer in animal experiments.

### 10.2. Chemical stability

**Stability** Stable at normal ambient temperatures.

### 10.3. Possibility of hazardous reactions

**Possibility of hazardous reactions** Not known. Will not polymerise.

### 10.4. Conditions to avoid

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

### 10.5. Incompatible materials

**Materials to avoid** Strong oxidising agents. Strong reducing agents. Strong alkalis.

### 10.6. Hazardous decomposition products

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**Hazardous decomposition products** Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapours. Oxides of nitrogen. Ammonia or amines.

### SECTION 11: Toxicological information

#### 11.1. Information on toxicological effects

##### Acute toxicity - oral

ATE oral (mg/kg) 1,099.8

##### Acute toxicity - dermal

ATE dermal (mg/kg) 1,100.0

##### Acute toxicity - inhalation

ATE inhalation (dusts/mists mg/l) 8.34

##### Skin corrosion/irritation

Animal data Slightly irritating.

##### Serious eye damage/irritation

Serious eye damage/irritation Risk of serious damage to eyes.

##### Skin sensitisation

Skin sensitisation May cause an allergic skin reaction.

##### Specific target organ toxicity - repeated exposure

STOT - repeated exposure May cause damage to organs through prolonged or repeated exposure.

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

**Ingestion** Harmful if swallowed. May cause burns in mucous membranes, throat, oesophagus and stomach.

**Skin contact** May cause an allergic skin reaction. Causes mild skin irritation. May be absorbed through the skin. This is unlikely to occur but symptoms similar to those of ingestion may develop.

**Eye contact** Causes serious eye damage. May cause permanent damage if eye is not immediately irrigated.

**Route of exposure** Inhalation Ingestion. Skin and/or eye contact

**Target organs** Kidneys

#### Toxicological information on ingredients.

##### BENZYL ALCOHOL

##### Acute toxicity - oral

Acute toxicity oral (LD<sub>50</sub> mg/kg) 1,620.0

Species Rat

ATE oral (mg/kg) 1,620.0

##### Acute toxicity - dermal

Acute toxicity dermal (LD<sub>50</sub> mg/kg) 2,000.0

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|   |  |
|---|--|
| <b>Species</b>  | Rabbit   |
| <b>ATE dermal (mg/kg)</b>   | 2,001.0  |
| <b><u>Acute toxicity - inhalation</u></b>                         |  |
| <b>Acute toxicity inhalation (LC<sub>50</sub> dust/mist mg/l)</b> | 4.178  |
| <b>Species</b>  | Rat  |
| <b>ATE inhalation (dusts/mists mg/l)</b>                          | 4.178  |
| <b><u>Skin sensitisation</u></b>                                  |  |
| <b>Skin sensitisation</b>   | Not sensitising.   |
| <b><u>Carcinogenicity</u></b>                                     |  |
| <b>Carcinogenicity</b>  | NOAEL 200 mg/kg/day, Oral, Mouse There is no evidence that the product can cause cancer. |
| <b><u>Specific target organ toxicity - repeated exposure</u></b>  |  |
| <b>STOT - repeated exposure</b>                                   | NOAEL 400 mg/kg, Oral, Rat   |

**SECTION 12: Ecological information**

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

**12.1. Toxicity**

**Toxicity** Ecotoxic to fish/daphnia/algae

**Ecological information on ingredients.****BENZYL ALCOHOL****Acute aquatic toxicity**

**Acute toxicity - fish** LC<sub>50</sub>, 96 hours: 460 mg/l, Pimephales promelas (Fat-head Minnow)

**Acute toxicity - aquatic invertebrates** EC<sub>50</sub>, 48 hours: 230 mg/l, Daphnia magna

**Acute toxicity - aquatic plants** EC<sub>50</sub>, 72 hours: 770 mg/l, Pseudokirchneriella subcapitata

**12.2. Persistence and degradability**

**Persistence and degradability** There are no data on the degradability of this product.

**Ecological information on ingredients.****BENZYL ALCOHOL**

**Persistence and degradability** The product is readily biodegradable.

**12.3. Bioaccumulative potential**

**Bioaccumulative potential** Bioaccumulation is unlikely.

**Partition coefficient** Not available.

**Ecological information on ingredients.**



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## BENZYL ALCOHOL

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

**Partition coefficient** log Kow: 1.10

### 12.4. Mobility in soil

### 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** Not relevant.

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

**General information** Waste is classified as hazardous waste. When handling waste, the safety precautions applying to handling of the product should be considered. Do not puncture or incinerate, even when empty.

**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) | 2289 |
| UN No. (IMDG)    | 2289 |
| UN No. (ICAO)    | 2289 |
| UN No. (ADN)     | 2289 |

### 14.2. UN proper shipping name

|                                |                   |
|--------------------------------|-------------------|
| Proper shipping name (ADR/RID) | ISOPHORONEDIAMINE |
| Proper shipping name (IMDG)    | ISOPHORONEDIAMINE |
| Proper shipping name (ICAO)    | ISOPHORONEDIAMINE |
| Proper shipping name (ADN)     | ISOPHORONEDIAMINE |

### 14.3. Transport hazard class(es)

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

## NITOCOTE EN901 HARDENER

### 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

Environmentally hazardous substance/marine pollutant

No.

#### 14.6. Special precautions for user

|  |          |
|--|----------|
| EmS                                    | F-A, S-B |
| ADR transport category                 | 3        |
| Emergency Action Code                  | 2X       |
| Hazard Identification Number (ADR/RID) | 80       |
| 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

|                             |  |
|-----------------------------|--|
| <b>National regulations</b> | Control of Substances Hazardous to Health Regulations 2002 (as amended).   |
| <b>EU legislation</b>       | 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).<br>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).<br>Commission Regulation (EU) No 2015/830 of 28 May 2015. |
| <b>Guidance</b>             | Workplace Exposure Limits EH40.<br>Approved Classification and Labelling Guide (Sixth edition) L131.   |

#### 15.2. Chemical safety assessment

No chemical safety assessment has been carried out.

#### Inventories

##### **EU - EINECS/ELINCS**

All the ingredients are listed or exempt.

## NITOCOTE EN901 HARDENER

### SECTION 16: Other information

|   |   |
|---|---|
| <b>Abbreviations and acronyms used in the safety data sheet</b> | ATE: Acute Toxicity Estimate.<br>DNEL: Derived No Effect Level.<br>Kow: Octanol-water partition coefficient.<br>NOAEL: No Observed Adverse Effect Level.<br>PBT: Persistent, Bioaccumulative and Toxic substance.<br>PNEC: Predicted No Effect Concentration.<br>vPvB: Very Persistent and Very Bioaccumulative.                |
| <b>General information</b>                                      | For professional users only. The user must be instructed in the proper work procedure and be familiar with the contents of these instructions.  |
| <b>Revision comments</b>  | Revised formulation.  |
| <b>Revision date</b>  | 16/08/2019  |
| <b>Revision</b>   | 5   |
| <b>Supersedes date</b>  | 25/05/2017  |
| <b>SDS number</b>   | 12068   |
| <b>Hazard statements in full</b>                                | H302 Harmful if swallowed.<br>H312 Harmful in contact with skin.<br>H314 Causes severe skin burns and eye damage.<br>H317 May cause an allergic skin reaction.<br>H318 Causes serious eye damage.<br>H319 Causes serious eye irritation.<br>H332 Harmful if inhaled.<br>H412 Harmful 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.