SAFETY DATA SHEET
Fosroc Galvafroid

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

1.1. Product identifier
Product name          Fosroc Galvafroid
Product number        1590020UK9, 1590022UK9, 1590042UK9, 1590080UK9, 1590120UK9

1.2. Relevant identified uses of the substance or mixture and uses advised against
Identified uses        Rust-preventing primer.

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       Flam. Liq. 3 - H226
Health hazards         Lact. - H362 Asp. Tox. 1 - H304
Environmental hazards  Aquatic Acute 1 - H400 Aquatic Chronic 1 - H410


Environmental          The product contains a substance which is toxic to aquatic organisms and which may cause long-term adverse effects in the aquatic environment.
Physicochemical        Vapours may form explosive mixtures with air.

2.2. Label elements
Pictogram

Signal word            Danger
Fosroc Galvafroid

Hazard statements

H226 Flammable liquid and vapour.
H304 May be fatal if swallowed and enters airways.
H362 May cause harm to breast-fed children.
H410 Very toxic to aquatic life with long lasting effects.

Precautionary statements

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P260 Do not breathe vapour/spray.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P403+P235 Store in a well-ventilated place. Keep cool.
P501 Dispose of contents/container in accordance with national regulations.

Contains

SOLVENT NAPHTHA, CHLORINATED PARAFFIN (C14-17)

Supplementary precautionary statements

P201 Obtain special instructions before use.
P233 Keep container tightly closed.
P240 Ground/bond container and receiving equipment.
P241 Use explosion-proof electrical equipment.
P242 Use only non-sparking tools.
P243 Take precautionary measures against static discharge.
P263 Avoid contact during pregnancy/while nursing.
P264 Wash contaminated skin thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P273 Avoid release to the environment.
P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/doctor.
P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P312 Call a POISON CENTER/doctor if you feel unwell.
P331 Do NOT induce vomiting.
P370+P378 In case of fire: Use foam, carbon dioxide, dry powder or water fog to extinguish.
P405 Store locked up.

2.3. Other hazards

This substance is not classified as PBT or vPvB according to current EU criteria.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

ZINC POWDER - ZINC DUST (STABILISED) 60-100%

<table>
<thead>
<tr>
<th>CAS number: 7440-66-6</th>
<th>EC number: 231-175-3</th>
</tr>
</thead>
<tbody>
<tr>
<td>M factor (Acute) = 1</td>
<td>M factor (Chronic) = 1</td>
</tr>
</tbody>
</table>

Classification (67/548/EEC or 1999/45/EC)

<table>
<thead>
<tr>
<th>Aquatic Acute 1 - H400</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aquatic Chronic 1 - H410</td>
</tr>
</tbody>
</table>

Classification

N;R50/53
Fosroc Galvafroid

**SOLVENT NAPTHHA**
- **CAS number:** 64742-95-6
- **EC number:** 265-199-0
- **REACH registration number:** 01-2119455851-35
- **Classification**
  - Flam. Liq. 3 - H226
  - STOT SE 3 - H335, H336
  - Asp. Tox. 1 - H304
  - Aquatic Chronic 2 - H411

**ZINC OXIDE**
- **CAS number:** 1314-13-2
- **EC number:** 215-222-5
- **M factor (Acute):** 1
- **M factor (Chronic):** 1
- **Classification**
  - Aquatic Acute 1 - H400
  - Aquatic Chronic 1 - H410

**CHLORINATED PARAFFIN (C14-17)**
- **CAS number:** 85535-85-9
- **EC number:** 287-477-0
- **REACH registration number:** 01-2119519269-33-xxxx
- **M factor (Chronic):** 100
- **Classification**
  - Lact. - H362
  - Aquatic Chronic 1 - H410

**CALCIUM OXIDE**
- **CAS number:** 1305-78-8
- **EC number:** 215-138-9
- **Classification**
  - Skin Irrit. 2 - H315
  - Eye Dam. 1 - H318
  - STOT SE 3 - H335

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**
Move affected person to fresh air at once. Get medical attention if any discomfort continues.

**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.

**Ingestion**
Do not induce vomiting. Never give anything by mouth to an unconscious person. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Give plenty of water to drink. Get medical attention immediately. Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing.
Fosroc Galvafroid

Skin contact
Remove contaminated clothing. Wash skin thoroughly with soap and water. Get medical attention promptly if symptoms occur after washing.

Eye contact
Remove any contact lenses and open eyelids wide apart. Rinse cautiously with water for several 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
Prolonged inhalation of high concentrations may damage respiratory system.

Ingestion
The product irritates mucous membranes and may cause abdominal discomfort if swallowed.

Skin contact
Product has a defatting effect on skin. May cause allergic contact eczema. Prolonged or repeated exposure may cause severe irritation.

Eye contact
May cause severe eye irritation.

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.

SECTION 5: Firefighting measures

5.1. Extinguishing media
Suitable extinguishing media
Extinguish with the following media: Dry chemicals, sand, dolomite etc.

5.2. Special hazards arising from the substance or mixture
Specific hazards
Dust may form explosive mixture with air. The product is flammable.

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

5.3. Advice for firefighters
Protective actions during firefighting
Avoid breathing fire gases or vapours. Cool containers exposed to flames with water until well after the fire is out. Control run-off water by containing and keeping it out of sewers and watercourses.

Special protective equipment for firefighters
Wear chemical protective suit.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures
Personal precautions
For personal protection, see Section 8.

6.2. Environmental precautions
Environmental precautions
Avoid the spillage or runoff entering drains, sewers or watercourses.

6.3. Methods and material for containment and cleaning up
Methods for cleaning up
Wear suitable protective equipment, including gloves, goggles/face shield, respirator, boots, clothing or apron, as appropriate. Absorb 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 waste disposal, see section 13.

SECTION 7: Handling and storage
Fosroc Galvafroid

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.

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.

<table>
<thead>
<tr>
<th>SECTION 8: Exposure Controls/personal protection</th>
</tr>
</thead>
<tbody>
<tr>
<td>8.1. Control parameters</td>
</tr>
</tbody>
</table>

**Occupational exposure limits**

**SOLVENT NAPHTHA**

Long-term exposure limit (8-hour TWA): WEL 19 ppm

**CALCIUM OXIDE**

Long-term exposure limit (8-hour TWA): WEL 2 mg/m³

WEL = Workplace Exposure Limit

**ZINC POWDER - ZINC DUST (STABILISED) (CAS: 7440-86-6)**

- **DNEL**
  - Workers - Inhalation; Long term systemic effects: 5 mg/m³
  - Workers - Dermal; Long term systemic effects: 83 mg/kg/day

- **PNEC**
  - Fresh water; 20.6 µg/l
  - Marine water; 6.1 µg/l

**SOLVENT NAPHTHA (CAS: 64742-95-6)**

- **DNEL**
  - Professional - Dermal; systemic effects: 25 mg/kg/day
  - Professional - Inhalation; systemic effects: 150 mg/m³
  - Consumer - Oral; systemic effects: 11 mg/kg/day
  - Consumer - Inhalation; systemic effects: 32 mg/m³
  - Consumer - Dermal; systemic effects: 11 mg/kg/day

- **PNEC**
  - Fresh water; 1000 mg/l
  - Marine water; 200 mg/l
  - STP; 80 mg/l

**CHLORINATED PARAFFIN (C14-17) (CAS: 85535-85-9)**

- **DNEL**
  - Industry - Inhalation; Long term systemic effects: 1.6 mg/m³
  - Industry - Dermal; Long term systemic effects: 47.9 mg/kg/day
  - Consumer - Oral; Long term systemic effects: 0.58 mg/kg/day
  - Consumer - Inhalation; Long term systemic effects: 2 mg/m³
  - Consumer - Dermal; Long term systemic effects: 28.75 mg/kg/day

- **PNEC**
  - Fresh water; 1000 mg/l
  - Marine water; 200 mg/l
  - STP; 80 mg/l

**CALCIUM OXIDE (CAS: 1305-78-8)**
Fosroc Galvafroid

DNEL
Workers - Inhalation; Long term local effects: 1 mg/m³
Workers - Inhalation; Short term local effects: 4 mg/m³

PNEC
- Fresh water; 0.37 mg/l
- Marine water; 0.24 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
Wear tight-fitting, chemical splash goggles or face shield.

Hand protection
Use protective gloves. It is recommended that gloves are made of the following material: Nitrile rubber. It should be noted that liquid may penetrate the gloves. Frequent changes are recommended.

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

Hygiene measures
Use engineering controls to reduce air contamination to permissible exposure level.

Respiratory protection
If ventilation is inadequate, suitable respiratory protection must be worn. Wear a respirator fitted with the following cartridge: Gas filter, type A2.

SECTION 9: Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

Appearance
Liquid.

Colour
Grey.

Odour
Aromatic.

pH
Not applicable.

Initial boiling point and range
155 - 181°C @ 1 atm

Flash point
41°C

Evaporation rate
0.2 (ethanol = 1)

Vapour pressure
0.25 kPa @ 20°C

Relative density
2.6 @ 25°C

Solubility (ies)
Insoluble in water.
Fosroc Galvafroid

Auto-ignition temperature
>450°C

Viscosity
6 P @ 25°C

9.2. Other information
Volatile organic compound
This product contains a maximum VOC content of 495 g/litre.

SECTION 10: Stability and reactivity

10.1. Reactivity
Reactivity
The following materials may react with the product: Acids. Alkalis. Oxidising materials.

10.2. Chemical stability
Stability
Stable at normal ambient temperatures.

10.3. Possibility of hazardous reactions
Possibility of hazardous reactions
Hazardous reactions will not occur under normal transport or storage conditions.

10.4. Conditions to avoid
Conditions to avoid
Avoid contact with the following materials: Acids. Oxidising agents.

10.5. Incompatible materials
Materials to avoid
Acids Bases Oxidizing materials

10.6. Hazardous decomposition products
Hazardous decomposition products

SECTION 11: Toxicological information

11.1. Information on toxicological effects
Inhalation
May cause respiratory system irritation. Vapours in high concentrations are anaesthetic. Symptoms following overexposure may include the following: Headache. Fatigue. Dizziness. Central nervous system depression.

Ingestion
Pneumonia may be the result if vomited material containing solvents reaches the lungs.

Skin contact
Prolonged and frequent contact may cause redness and irritation.

Eye contact
Irritating to eyes.

Acute and chronic health hazards
Inhalation Prolonged inhalation of high concentrations may damage respiratory system. SKIN CONTACT. Product has a defatting effect on skin. May cause allergic contact eczema. Prolonged or repeated exposure may cause severe irritation. EYE CONTACT. May cause severe eye irritation. INGESTION. The product irritates mucous membranes and may cause abdominal discomfort if swallowed.

Target organs
Skin Eyes Respiratory system, lungs

Toxicological information on ingredients.

**SOLVENT NAPHTHA**

**Acute toxicity - oral**

| Acute toxicity oral (LD₅₀ mg/kg) | 3,592.0 |

7/13
Fosroc Galvafroid

Species Rat

Acute toxicity - dermal
Acute toxicity dermal (LD₅₀ mg/kg) 3,160.0

Species Rabbit

Acute toxicity - inhalation
Acute toxicity inhalation (LC₅₀ vapours mg/l) 6.2

Species Rat

ATE inhalation (vapours mg/l) 6.2

Skin corrosion/irritation
Animal data Based on available data the classification criteria are not met.

Serious eye damage/irritation
Serious eye damage/irritation Based on available data the classification criteria are not met.

Respiratory sensitisation
Respiratory sensitisation Not sensitising.

Skin sensitisation
Skin sensitisation Based on available data the classification criteria are not met.

Germ cell mutagenicity
Genotoxicity - in vitro Based on available data the classification criteria are not met.

Carcinogenicity
Carcinogenicity There is no evidence that the product can cause cancer.

Reproductive toxicity
Reproductive toxicity - development Based on available data the classification criteria are not met.

Specific target organ toxicity - single exposure
STOT - single exposure Not determined.

Target organs Respiratory system, lungs

Specific target organ toxicity - repeated exposure
STOT - repeated exposure Not classified as a specific target organ toxicant after repeated exposure.

Aspiration hazard
Aspiration hazard May be fatal if swallowed and enters airways.

ZINC OXIDE

Acute toxicity - oral
Fosroc Galvafroid

Acute toxicity oral (LD₅₀ mg/kg)  7,950.0
Species  Mouse

Acute toxicity - dermal
Acute toxicity dermal (LD₅₀ mg/kg)  2,000.0
Species  Rat

CHLORINATED PARAFFIN (C14-17)

Acute toxicity - oral
Notes (oral LD₅₀)  LD₅₀ >2000 mg/kg, Oral, Rat

SECTION 12: Ecological Information

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

12.1. Toxicity
Ecological information on ingredients.

ZINC POWDER - ZINC DUST (STABILISED)

Acute aquatic toxicity
LE(C)₅₀  0.1 < L(E)C50 ≤ 1
M factor (Acute)  1

Chronic aquatic toxicity
M factor (Chronic)  1

SOLVENT NAPHTHA

Acute toxicity - fish  LL₅₀, 96 hours, 96 hours: 9.2 mg/l, Onchorhynchus mykiss (Rainbow trout)
Acute toxicity - aquatic invertebrates  EL₅₀, 48 hours, 48 hours: 3.2 mg/l, Daphnia magna
Acute toxicity - aquatic plants  NOELR, 72 hours, 72 hours: 1 mg/l, Selenastrum capricornutum
Estimated value.

ZINC OXIDE

Acute aquatic toxicity
LE(C)₅₀  0.1 < L(E)C50 ≤ 1
M factor (Acute)  1

Acute toxicity - fish  , 96 hours, 96 hours: 2246 mg/l, Pimephales promelas (Fat-head Minnow)
Acute toxicity - aquatic invertebrates  EC₅₀, 48 hours: >1000 mg/l, Daphnia magna

Chronic aquatic toxicity
Fosroc Galvafroid

<table>
<thead>
<tr>
<th>M factor (Chronic)</th>
<th>1</th>
</tr>
</thead>
</table>

**CHLORINATED PARAFFIN (C14-17)**

<table>
<thead>
<tr>
<th>Acute toxicity - fish</th>
<th>LC₅₀, 96 hours: &gt;5000 mg/l, Fish</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute toxicity - aquatic invertebrates</td>
<td>EC₅₀, 48 hours: 0.006 mg/l, Daphnia magna</td>
</tr>
</tbody>
</table>

**Chronic aquatic toxicity**

<table>
<thead>
<tr>
<th>M factor (Chronic)</th>
<th>100</th>
</tr>
</thead>
</table>

**REACTION PRODUCT WITH FATTY ACID AND AMINOETHYLPIPERAZINE**

<table>
<thead>
<tr>
<th>Acute toxicity - fish</th>
<th>LC₅₀, 96 hours: &lt;1 mg/l, Fish</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute toxicity - aquatic invertebrates</td>
<td>EC₅₀, 48 hours: &lt;1 mg/l, Daphnia magna</td>
</tr>
</tbody>
</table>

### 12.2. Persistence and degradability

**Persistence and degradability**

The product is not expected to be biodegradable.

**Ecological information on ingredients.**

**SOLVENT NAPHTHA**

<table>
<thead>
<tr>
<th>Biodegradation</th>
<th>water - Degradation (%) 78: 28 days</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>The substance is readily biodegradable.</td>
</tr>
</tbody>
</table>

**REACTION PRODUCT WITH FATTY ACID AND AMINOETHYLPIPERAZINE**

**Persistence and degradability**

The product is not readily biodegradable.

### 12.3. Bioaccumulative potential

**Bioaccumulative potential**

No data available on bioaccumulation.

**Ecological information on ingredients.**

**CHLORINATED PARAFFIN (C14-17)**

<table>
<thead>
<tr>
<th>Bioaccumulative potential</th>
<th>BCF: &lt; 2000 L/kg,</th>
</tr>
</thead>
</table>

**REACTION PRODUCT WITH FATTY ACID AND AMINOETHYLPIPERAZINE**

<table>
<thead>
<tr>
<th>Partition coefficient</th>
<th>log Pow: -1.48</th>
</tr>
</thead>
</table>

### 12.4. Mobility in soil

**Mobility**

The product contains substances which are insoluble in water and which sediment in water systems. The product contains volatile substances which may spread in the atmosphere.

### 12.5. Results of PBT and vPvB assessment

**Results of PBT and vPvB assessment**

This substance is not classified as PBT or vPvB according to current EU criteria.

**Ecological information on ingredients.**
Fosroc Galvafroid

SOLVENT NAPHTHA

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

CHLORINATED PARAFFIN (C14-17)

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
When used and disposed of as intended no adverse environmental effects are foreseen

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) 1263
UN No. (IMDG) 1263
UN No. (ICAO) 1263
UN No. (ADN) 1263

14.2. UN proper shipping name
Proper shipping name (ADR/RID) PAINT RELATED MATERIAL (ZINC POWDER - ZINC DUST (STABILISED))
Proper shipping name (IMDG) PAINT RELATED MATERIAL (ZINC POWDER - ZINC DUST (STABILISED))
Proper shipping name (ICAO) PAINT RELATED MATERIAL (ZINC POWDER - ZINC DUST (STABILISED))
Proper shipping name (ADN) PAINT RELATED MATERIAL (ZINC POWDER - ZINC DUST (STABILISED))

14.3. Transport hazard class(es)

ADR/RID class 3
ADR/RID classification code F1
ADR/RID label 3
IMDG class 3
ICAO class/division 3
ADN class 3

Transport labels
Fosroc Galvafroid

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-E, S-E
ADR transport category 3
Emergency Action Code •3Y
Hazard Identification Number (ADR/RID) 30
Tunnel restriction code (D/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 Control of Substances Hazardous to Health Regulations 2002 (as amended).
Guidance Workplace Exposure Limits EH40.

15.2. Chemical safety assessment

No chemical safety assessment has been carried out.

SECTION 16: Other information

Revision comments NOTE: Lines within the margin indicate significant changes from the previous revision.
Revision date 05/08/2015
Revision 6b
Fosroc Galvafroid

Risk phrases in full
R10 Flammable.
R20 Harmful by inhalation.
R20/21 Harmful by inhalation and in contact with skin.
R36/37/38 Irritating to eyes, respiratory system and skin.
R37 Irritating to respiratory system.
R38 Irritating to skin.
R41 Risk of serious damage to eyes.
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.
R65 Harmful: may cause lung damage if swallowed.
R66 Repeated exposure may cause skin dryness or cracking.
R67 Vapours may cause drowsiness and dizziness.

Hazard statements in full
H226 Flammable liquid and vapour.
H304 May be fatal if swallowed and enters airways.
H335 May cause respiratory irritation.
H336 May cause drowsiness or dizziness.
H362 May cause harm to breast-fed children.
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.

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.