



## SAFETY DATA SHEET

### Tarmac Hi-Flow Renovation

According to Regulation (EC) No 1907/2006, Annex II, as amended.

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

##### 1.1. Product identifier

**Product name** Tarmac Hi-Flow Renovation

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

**Identified uses** Floor leveller.

**Uses advised against** No specific uses advised against are identified.

##### 1.3. Details of the supplier of the safety data sheet

**Supplier** Tarmac Building Products Ltd  
i10 Interchange  
Railway Drive  
Wolverhampton  
WV1 1LH  
Telephone: 03444 63 64 65  
packedproducts@tarmacbp.co.uk

##### 1.4. Emergency telephone number

**Emergency telephone** 03444 63 00 46 (Office Hours)

#### SECTION 2: Hazards identification

##### 2.1. Classification of the substance or mixture

###### Classification (EC 1272/2008)

**Physical hazards** Not Classified

**Health hazards** Eye Irrit. 2 - H319 Skin Sens. 1 - H317

**Environmental hazards** Not Classified

##### 2.2. Label elements

###### Pictogram



**Signal word** Warning

**Hazard statements** H317 May cause an allergic skin reaction.  
H319 Causes serious eye irritation.

## Tarmac Hi-Flow Renovation

<b>Precautionary statements</b>	<p>P102 Keep out of reach of children.</p> <p>P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.</p> <p>P302+P352 IF ON SKIN: Wash with plenty of water.</p> <p>P333+P313 If skin irritation or rash occurs: Get medical advice/ attention.</p> <p>P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.</p> <p>P337+P313 If eye irritation persists: Get medical advice/ attention.</p> <p>P501 Dispose of contents/ container in accordance with national regulations.</p>
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**Contains** Cement, portland, chemicals

<b>Supplementary precautionary statements</b>	<p>P261 Avoid breathing dust.</p> <p>P264 Wash contaminated skin thoroughly after handling.</p> <p>P272 Contaminated work clothing should not be allowed out of the workplace.</p> <p>P362+P364 Take off contaminated clothing and wash it before reuse.</p>
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### 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>Calcium carbonate</b>	<b>25 - &lt;50%</b>
CAS number: 471-34-1                      EC number: 207-439-9 Substance with National workplace exposure limits.	
<b>Classification</b>	
Not Classified	
<b>Cement, alumina, chemicals</b>	<b>10 - &lt;25%</b>
CAS number: 65997-16-2                      EC number: 266-045-5	
<b>Classification</b>	
Eye Irrit. 2 - H319	
<b>Plaster of Paris</b>	<b>5 - &lt;10%</b>
CAS number: 26499-65-0	
<b>Classification</b>	
Not Classified	
<b>Cement, portland, chemicals</b>	<b>2.5 - &lt;5%</b>
CAS number: 65997-15-1                      EC number: 266-043-4	
<b>Classification</b>	
Skin Irrit. 2 - H315 Eye Dam. 1 - H318 Skin Sens. 1 - H317 STOT SE 3 - H335	

## Tarmac Hi-Flow Renovation

<b>Crystalline Silica</b>	<b>0.25 - &lt;0.5%</b>
CAS number: 1317-95-9	
<b>Classification</b> STOT RE 1 - H372	
<b>Calcium dihydroxide</b>	<b>0.025 - &lt;0.25%</b>
CAS number: 1305-62-0                      EC number: 215-137-3                      REACH registration number: 01-2119475151-45-XXXX	
<b>Classification</b> Skin Irrit. 2 - H315 Eye Dam. 1 - H318 STOT SE 3 - H335	
<b>Silicon dioxide</b>	<b>&lt;0.025%</b>
CAS number: 7631-86-9                      EC number: 231-545-4 Substance with National workplace exposure limits.	
<b>Classification</b> Not Classified	

The full text for all hazard statements is displayed in Section 16.

### SECTION 4: First aid measures

#### 4.1. Description of first aid measures

<b>General information</b>	Get medical attention if any discomfort continues. Show this Safety Data Sheet to the medical personnel.
<b>Inhalation</b>	Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Maintain an open airway. Loosen tight clothing such as collar, tie or belt. When breathing is difficult, properly trained personnel may assist affected person by administering oxygen. Get medical attention. Place unconscious person on their side in the recovery position and ensure breathing can take place.
<b>Ingestion</b>	Rinse mouth thoroughly with water. Give a few small glasses of water or milk to drink. Stop if the affected person feels sick as vomiting may be dangerous. Never give anything by mouth to an unconscious person. Place unconscious person on their side in the recovery position and ensure breathing can take place. Keep affected person under observation. Get medical attention.
<b>Skin contact</b>	Brush off loose particles from skin. It is important to remove the substance from the skin immediately. In the event of any sensitisation symptoms developing, ensure further exposure is avoided. Remove contamination with soap and water or recognised skin cleansing agent. Get medical attention if symptoms are severe or persist after washing.
<b>Eye contact</b>	Rinse immediately with plenty of water. Do not rub eye. Remove any contact lenses and open eyelids wide apart. Continue to rinse for at least 15 minutes and get medical attention.
<b>Protection of first aiders</b>	First aid personnel should wear appropriate protective equipment during any rescue.

#### 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.
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## Tarmac Hi-Flow Renovation

<b>Inhalation</b>	A single exposure may cause the following adverse effects: Irritation of nose, throat and airway. Difficulty in breathing. Coughing.
<b>Ingestion</b>	May cause sensitisation or allergic reactions in sensitive individuals. May cause irritation.
<b>Skin contact</b>	May cause skin sensitisation or allergic reactions in sensitive individuals. Redness. Irritating to skin.
<b>Eye contact</b>	Causes serious eye irritation. Symptoms following overexposure may include the following: Pain. Profuse watering of the eyes. Redness.

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

**Notes for the doctor**                      Treat symptomatically. May cause sensitisation or allergic reactions in sensitive individuals.

## **SECTION 5: Firefighting measures**

### **5.1. Extinguishing media**

**Suitable extinguishing media**      The product is not flammable. Extinguish with alcohol-resistant foam, carbon dioxide, dry powder or water fog. Use fire-extinguishing media suitable for the surrounding fire.

**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**                              None known.

**Hazardous combustion products**      Thermal decomposition or combustion products may include the following substances: Harmful gases or vapours.

### **5.3. Advice for firefighters**

**Protective actions during firefighting**      Avoid breathing fire gases or vapours. Evacuate area. Keep upwind to avoid inhalation of gases, vapours, fumes and smoke. Ventilate closed spaces before entering them. Cool containers exposed to heat with water spray and remove them from the fire area if it can be done without risk. 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. If risk of water pollution occurs, notify appropriate authorities.

**Special protective equipment for firefighters**      Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing. Firefighter's clothing conforming to European standard EN469 (including helmets, protective boots and gloves) will provide a basic level of protection for chemical incidents.

## **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. No action shall be taken without appropriate training or involving any personal risk. Avoid inhalation of dust and vapours. Use suitable respiratory protection if ventilation is inadequate. Avoid contact with skin and eyes.

### **6.2. Environmental precautions**

**Environmental precautions**              Avoid discharge into drains or watercourses or onto the ground.

### **6.3. Methods and material for containment and cleaning up**

## Tarmac Hi-Flow Renovation

### Methods for cleaning up

Wear protective clothing as described in Section 8 of this safety data sheet. Clear up spills immediately and dispose of waste safely. Collect spillage with a shovel and broom, or similar and reuse, if possible. Collect and place in suitable waste disposal containers and seal securely. Flush contaminated area with plenty of water. Wash thoroughly after dealing with a spillage. Neutralise with acid. Caution. May generate heat. Following dilution and neutralisation, discharge to the sewer with plenty of water may be permitted. The requirements of the local water authority must be complied with if contaminated water is flushed directly to the sewer. For waste disposal, see Section 13.

### 6.4. Reference to other sections

**Reference to other sections** For personal protection, see Section 8. See Section 11 for additional information on health hazards. See Section 12 for additional information on ecological hazards. For waste disposal, see Section 13.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

#### Usage precautions

Keep out of the reach of children. Read and follow manufacturer's recommendations. Wear protective clothing as described in Section 8 of this safety data sheet. Keep away from food, drink and animal feeding stuffs. Keep container tightly sealed when not in use. Avoid handling which leads to dust formation. Do not handle until all safety precautions have been read and understood. Do not handle broken packages without protective equipment. Do not reuse empty containers.

#### Advice on general occupational hygiene

Wash promptly if skin becomes contaminated. Take off contaminated clothing. Wash contaminated clothing before reuse.

### 7.2. Conditions for safe storage, including any incompatibilities

#### Storage precautions

Store locked up. Store away from the following materials: Acids. Keep only in the original container. Keep container tightly closed, in a cool, well ventilated place. Keep containers upright. Protect containers from damage.

#### Storage class

Acid-reactive 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

Long-term exposure limit (8-hour TWA): WEL 10 mg/m<sup>3</sup> inhalable dust  
 Long-term exposure limit (8-hour TWA): WEL 4 mg/m<sup>3</sup> respirable dust

#### Calcium carbonate

Long-term exposure limit (8-hour TWA): WEL 10 mg/m<sup>3</sup> inhalable dust  
 Long-term exposure limit (8-hour TWA): WEL 4 mg/m<sup>3</sup> respirable dust

#### Plaster of Paris

Long-term exposure limit (8-hour TWA): WEL 10 mg/m<sup>3</sup> inhalable dust  
 Long-term exposure limit (8-hour TWA): WEL 4 mg/m<sup>3</sup> respirable dust

#### Cement, portland, chemicals

Long-term exposure limit (8-hour TWA): WEL 10 mg/m<sup>3</sup> inhalable dust  
 Long-term exposure limit (8-hour TWA): WEL 4 mg/m<sup>3</sup> respirable dust

#### Crystalline Silica

## Tarmac Hi-Flow Renovation

Long-term exposure limit (8-hour TWA): WEL 0.1 mg/m<sup>3</sup> respirable dust

### Calcium dihydroxide

Long-term exposure limit (8-hour TWA): WEL 5 mg/m<sup>3</sup>

### Silicon dioxide

Long-term exposure limit (8-hour TWA): WEL 6 mg/m<sup>3</sup> inhalable dust

Long-term exposure limit (8-hour TWA): WEL 2.4 mg/m<sup>3</sup> respirable dust

WEL = Workplace Exposure Limit

### Lithium carbonate (CAS: 554-13-2)

<b>DNEL</b>	Workers - Inhalation; Long term systemic effects: 10 mg/m <sup>3</sup>
	Workers - Inhalation; Short term systemic effects: 30 mg/m <sup>3</sup>
	Workers - Dermal; Long term systemic effects: 64.3 mg/kg/day
	Workers - Dermal; Short term systemic effects: 100 mg/kg/day
	General population - Inhalation; Long term systemic effects: 9.64 mg/m <sup>3</sup>
	General population - Inhalation; Short term systemic effects: 28.92 mg/m <sup>3</sup>
	General population - Dermal; Long term systemic effects: 64.3 mg/kg/day
	General population - Dermal; Short term systemic effects: 50 mg/kg/day
	General population - Oral; Long term systemic effects: 6.43 mg/kg/day
General population - Oral; Short term systemic effects: 19.23 mg/kg/day	
<b>PNEC</b>	- Fresh water; 9 mg/l
	- Marine water; 0.9 mg/l
	- Intermittent release; 0.3 mg/l
	- STP; 122.2 mg/l
	- Sediment (Freshwater); 35.2 mg/kg
	- Sediment (Marinewater); 3.52 mg/kg
	- Soil; 1.76 mg/kg

### (+)-Tartaric acid (CAS: 87-69-4)

<b>DNEL</b>	Workers - Inhalation; Long term systemic effects: 5.2 mg/m <sup>3</sup>
	Workers - Dermal; Long term systemic effects: 2.9 mg/kg/day
	General population - Inhalation; Long term systemic effects: 1.3 mg/m <sup>3</sup>
	General population - Dermal; Long term systemic effects: 1.5 mg/kg/day
General population - Oral; Long term systemic effects: 8.1 mg/kg/day	
<b>PNEC</b>	- Fresh water; 0.312 mg/l
	- Marine water; 0.312 mg/l
	- Intermittent release; 0.514 mg/l
	- STP; 10 mg/l
	- Sediment (Freshwater); 1.141 mg/kg/day
	- Sediment (Marinewater); 1.141 mg/kg/day
	- Soil; 0.045 mg/kg/day

## 8.2. Exposure controls

### Protective equipment



Appropriate engineering controls

Provide adequate ventilation.

## Tarmac Hi-Flow Renovation

<b>Eye/face protection</b>	Avoid contact with eyes. Large Spillages: Eyewear complying with an approved standard should be worn if a risk assessment indicates eye contact is possible.
<b>Hand protection</b>	Wear protective gloves. 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. To protect hands from chemicals, gloves should comply with European Standard EN374. Considering the data specified by the glove manufacturer, check during use that the gloves are retaining their protective properties and change them as soon as any deterioration is detected. Frequent changes are recommended.
<b>Other skin and body protection</b>	May cause skin sensitisation or allergic reactions in sensitive individuals. Wear appropriate clothing to prevent repeated or prolonged skin contact.
<b>Hygiene measures</b>	Wash hands thoroughly after handling. Do not eat, drink or smoke when using this product. Wash contaminated clothing before reuse.
<b>Respiratory protection</b>	No specific recommendations. Provide adequate ventilation. Large Spillages: If ventilation is inadequate, suitable respiratory protection must be worn.
<b>Environmental exposure controls</b>	Keep container tightly sealed when not in use. Avoid release to the environment.

### SECTION 9: Physical and Chemical Properties

#### 9.1. Information on basic physical and chemical properties

<b>Appearance</b>	Sand. Cement. Powder.
<b>Odour</b>	Slight.
<b>Odour threshold</b>	Not determined.
<b>pH</b>	≥ 11.5
<b>Melting point</b>	~ 1250°C
<b>Initial boiling point and range</b>	Not determined.
<b>Flash point</b>	Not determined.
<b>Evaporation rate</b>	Not determined.
<b>Evaporation factor</b>	Not determined.
<b>Flammability (solid, gas)</b>	Not determined.
<b>Upper/lower flammability or explosive limits</b>	Not determined.
<b>Vapour pressure</b>	Not determined.
<b>Vapour density</b>	Not determined.
<b>Relative density</b>	~ 3.0
<b>Bulk density</b>	Not determined.
<b>Partition coefficient</b>	Not determined.
<b>Auto-ignition temperature</b>	Not determined.
<b>Decomposition Temperature</b>	Not determined.
<b>Viscosity</b>	Not determined.
<b>Explosive properties</b>	Not considered to be explosive.

## Tarmac Hi-Flow Renovation

**Oxidising properties**                      The mixture itself has not been tested but none of the ingredient substances meet the criteria for classification as oxidising.

### 9.2. Other information

**Other information**                      No information required.

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

**Reactivity**                                      There are no known reactivity hazards associated with this product.

### 10.2. Chemical stability

**Stability**                                      Stable at normal ambient temperatures and when used as recommended. Stable under the prescribed storage conditions.

### 10.3. Possibility of hazardous reactions

**Possibility of hazardous reactions**                      No potentially hazardous reactions known.

### 10.4. Conditions to avoid

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

### 10.5. Incompatible materials

**Materials to avoid**                      Acid anhydrides. Acids. Phenols, cresols.

### 10.6. Hazardous decomposition products

**Hazardous decomposition products**                      Does not decompose when used and stored as recommended. Thermal decomposition or combustion products may include the following substances: Harmful gases or vapours.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

#### Acute toxicity - oral

**Notes (oral LD<sub>50</sub>)**                      Based on available data the classification criteria are not met.

#### Acute toxicity - dermal

**Notes (dermal LD<sub>50</sub>)**                      Based on available data the classification criteria are not met.

#### Acute toxicity - inhalation

**Notes (inhalation LC<sub>50</sub>)**                      Based on available data the classification criteria are not met.

#### Skin corrosion/irritation

**Animal data**                                      Based on available data the classification criteria are not met.

#### Serious eye damage/irritation

**Serious eye damage/irritation**                      Eye Irrit. 2 - H319 Causes serious eye irritation.

#### Respiratory sensitisation

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

#### Skin sensitisation

**Skin sensitisation**                      May cause skin sensitisation or allergic reactions in sensitive individuals.

#### Germ cell mutagenicity

**Genotoxicity - in vitro**                      Based on available data the classification criteria are not met.

#### Carcinogenicity



## Tarmac Hi-Flow Renovation

<b>Carcinogenicity</b>	Based on available data the classification criteria are not met.
<b>IARC carcinogenicity</b>	Contains a substance which may be potentially carcinogenic. IARC Group 3 Not classifiable as to its carcinogenicity to humans.
<b><u>Reproductive toxicity</u></b>	
<b>Reproductive toxicity - fertility</b>	Based on available data the classification criteria are not met.
<b>Reproductive toxicity - development</b>	Based on available data the classification criteria are not met.
<b><u>Specific target organ toxicity - single exposure</u></b>	
<b>STOT - single exposure</b>	Based on available data the classification criteria are not met.
<b><u>Specific target organ toxicity - repeated exposure</u></b>	
<b>STOT - repeated exposure</b>	Not classified as a specific target organ toxicant after repeated exposure.
<b><u>Aspiration hazard</u></b>	
<b>Aspiration hazard</b>	Not relevant. Solid.
<b><u>General information</u></b>	
<b>General information</b>	Dust may irritate the eyes and the respiratory system. The severity of the symptoms described will vary dependent on the concentration and the length of exposure.
<b>Inhalation</b>	A single exposure may cause the following adverse effects: Irritation of nose, throat and airway. Difficulty in breathing. Coughing.
<b>Ingestion</b>	May cause sensitisation or allergic reactions in sensitive individuals. May cause irritation.
<b>Skin contact</b>	May cause skin sensitisation or allergic reactions in sensitive individuals. Redness. Irritating to skin.
<b>Eye contact</b>	Causes serious eye irritation. Symptoms following overexposure may include the following: Pain. Profuse watering of the eyes. Redness.
<b>Route of entry</b>	Ingestion Inhalation Skin and/or eye contact
<b>Target organs</b>	Respiratory system, lungs
<b>Medical considerations</b>	Skin disorders and allergies.

### Toxicological information on ingredients.

#### Calcium carbonate

##### Acute toxicity - oral

**Notes (oral LD<sub>50</sub>)** > 2000 mg/kg, Rat REACH dossier information.

##### Acute toxicity - dermal

**Notes (dermal LD<sub>50</sub>)** > 2000 mg/kg, Rat REACH dossier information.

##### Skin corrosion/irritation

**Animal data** Dose: 0.5 g, 4 hours, Rabbit Erythema/eschar score: No erythema (0). Oedema score: No oedema (0). REACH dossier information. Not irritating.

##### Serious eye damage/irritation

**Serious eye damage/irritation** Dose: 0.1 ml (61 mg), 72 hours, Rabbit REACH dossier information. Not irritating.

##### Skin sensitisation

## Tarmac Hi-Flow Renovation

<b>Skin sensitisation</b>	Local Lymph Node Assay (LLNA) - Mouse: Not sensitising. REACH dossier information.
<b><u>Germ cell mutagenicity</u></b>	
<b>Genotoxicity - in vitro</b>	Chromosome aberration: Negative. REACH dossier information.
<b><u>Reproductive toxicity</u></b>	
<b>Reproductive toxicity - fertility</b>	Screening - NOEL 1000 mg/kg/day, Oral, Rat P REACH dossier information. No evidence of reproductive toxicity in animal studies.
<b>Reproductive toxicity - development</b>	Developmental toxicity: - NOAEC: > 1.25 %, Oral, Rat REACH dossier information.

### Cement, alumina, chemicals

<b><u>Acute toxicity - oral</u></b>	
<b>Notes (oral LD<sub>50</sub>)</b>	LD <sub>50</sub> >2000 mg/kg, Oral, Rat REACH dossier information. Based on available data the classification criteria are not met.
<b><u>Acute toxicity - dermal</u></b>	
<b>Notes (dermal LD<sub>50</sub>)</b>	LD <sub>50</sub> >2000 mg/kg, Dermal, Rat REACH dossier information. Based on available data the classification criteria are not met.
<b><u>Acute toxicity - inhalation</u></b>	
<b>Notes (inhalation LC<sub>50</sub>)</b>	LC <sub>50</sub> 7.6 mg/l, Inhalation, Rat REACH dossier information. Based on available data the classification criteria are not met.
<b><u>Skin corrosion/irritation</u></b>	
<b>Animal data</b>	Dose: 0.5 g, 4 hours, Rabbit Primary dermal irritation index: 0 REACH dossier information. Based on available data the classification criteria are not met.
<b><u>Serious eye damage/irritation</u></b>	
<b>Serious eye damage/irritation</b>	Dose: 62 mg, 24 hours, Rabbit REACH dossier information. Causes serious eye irritation.
<b><u>Skin sensitisation</u></b>	
<b>Skin sensitisation</b>	Guinea pig maximization test (GPMT) - Guinea pig: Not sensitising. REACH dossier information. Based on available data the classification criteria are not met.
<b><u>Germ cell mutagenicity</u></b>	
<b>Genotoxicity - in vitro</b>	Chromosome aberration: Negative. REACH dossier information. Based on available data the classification criteria are not met.
<b>Genotoxicity - in vivo</b>	Chromosome aberration: Negative. REACH dossier information. Based on available data the classification criteria are not met.
<b><u>Reproductive toxicity</u></b>	
<b>Reproductive toxicity - development</b>	Embryotoxicity:, Teratogenicity: - NOAEL: 266 mg/kg/day, Oral, Rat REACH dossier information. Based on available data the classification criteria are not met.
<b><u>Aspiration hazard</u></b>	
<b>Aspiration hazard</b>	Not relevant. Solid.

### Plaster of Paris

<b>Toxicological effects</b>	Not regarded as a health hazard under current legislation.
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## Tarmac Hi-Flow Renovation

### Cement, portland, chemicals

#### Skin corrosion/irritation

**Animal data** Skin Irrit. 2 - H315 Causes skin irritation.

#### Serious eye damage/irritation

**Serious eye damage/irritation** Eye Dam. 1 - H318 Causes serious eye damage.

#### Skin sensitisation

**Skin sensitisation** Skin Sens. 1 - H317 May cause an allergic skin reaction.

#### Specific target organ toxicity - single exposure

**STOT - single exposure** STOT SE 3 - H335 May cause respiratory irritation.

### Crystalline Silica

#### Specific target organ toxicity - repeated exposure

**STOT - repeated exposure** STOT RE 1 - H372 Causes damage to organs through prolonged or repeated exposure if inhaled.

### Calcium dihydroxide

#### Acute toxicity - oral

**Notes (oral LD<sub>50</sub>)** LD<sub>50</sub> : >2000 mg/kg, Oral, Rat REACH dossier information.

#### Acute toxicity - dermal

**Acute toxicity dermal (LD<sub>50</sub> mg/kg)** 2,500.0

**Species** Rabbit

**Notes (dermal LD<sub>50</sub>)** REACH dossier information.

**ATE dermal (mg/kg)** 2,500.0

#### Skin corrosion/irritation

**Animal data** Dose: 0.5 g, 4 hours, Rabbit Erythema/eschar score: Well defined erythema (2). Oedema score: Very slight oedema - barely perceptible (1). REACH dossier information. Irritating.

#### Serious eye damage/irritation

**Serious eye damage/irritation** Causes serious eye damage.

#### Germ cell mutagenicity

**Genotoxicity - in vitro** Chromosome aberration: Negative. REACH dossier information.

#### Carcinogenicity

**Carcinogenicity** NOAEL 21500 mg/kg/day, Oral, Rat REACH dossier information. Read across data. No evidence of carcinogenicity in animal studies.

#### Reproductive toxicity

**Reproductive toxicity - development** Developmental toxicity: - NOAEL: ≥ 440 mg/kg/day, Oral, Mouse REACH dossier information. Read across data. No evidence of reproductive toxicity in animal studies.

## Tarmac Hi-Flow Renovation

### Specific target organ toxicity - single exposure

**STOT - single exposure** STOT SE 3 - H335 May cause respiratory irritation.

**Target organs** Respiratory system, lungs

### Silicon dioxide

**Toxicological effects** Not regarded as a health hazard under current legislation.

### Acute toxicity - oral

**Notes (oral LD<sub>50</sub>)** > 5000 mg/kg, Rat REACH dossier information. Based on available data the classification criteria are not met.

### Acute toxicity - dermal

**Notes (dermal LD<sub>50</sub>)** > 2000 mg/kg, Rabbit, REACH dossier information. Based on available data the classification criteria are not met.

### Acute toxicity - inhalation

**Notes (inhalation LC<sub>50</sub>)** No information available.

### Skin corrosion/irritation

**Animal data** Dose: 0.5 g, 4 hours, Rabbit Primary dermal irritation index: 0 REACH dossier information. Not irritating.

### Serious eye damage/irritation

**Serious eye damage/irritation** Dose: 100 mg, 24 hours, Rabbit REACH dossier information. Not irritating.

### Respiratory sensitisation

**Respiratory sensitisation** No information available.

### Skin sensitisation

**Skin sensitisation** No information available.

### Germ cell mutagenicity

**Genotoxicity - in vitro** Chromosome aberration: Negative. REACH dossier information. Based on available data the classification criteria are not met.

**Genotoxicity - in vivo** Gene mutation: Negative. REACH dossier information. Based on available data the classification criteria are not met.

### Carcinogenicity

**Carcinogenicity** NOAEL 5 %, Oral, Rat REACH dossier information.

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

### Reproductive toxicity

**Reproductive toxicity - development** Maternal toxicity: - NOAEL: 1350 mg/kg/day, Oral, Rat REACH dossier information. Based on available data the classification criteria are not met.

### Specific target organ toxicity - single exposure

**STOT - single exposure** Not classified as a specific target organ toxicant after a single exposure.

### Specific target organ toxicity - repeated exposure

**STOT - repeated exposure** NOEL < 4500 mg/kg/day, Oral, Rat REACH dossier information. Not classified as a specific target organ toxicant after repeated exposure.

## Tarmac Hi-Flow Renovation

### Aspiration hazard

**Aspiration hazard** Not relevant.

## SECTION 12: Ecological Information

**Ecotoxicity** The product may affect the acidity (pH) of water which may have hazardous effects on aquatic organisms.

### 12.1. Toxicity

**Toxicity** Based on available data the classification criteria are not met.

### Ecological information on ingredients.

#### Calcium carbonate

**Toxicity** Aquatic toxicity is unlikely to occur. Based on available data the classification criteria are not met.

**Acute toxicity - fish** LC<sub>50</sub>, 96 hours: > 100 %, Onchorhynchus mykiss (Rainbow trout)  
NOEC, 96 hours: > 100 %, Onchorhynchus mykiss (Rainbow trout)  
REACH dossier information.

**Acute toxicity - aquatic invertebrates** EC<sub>50</sub>, 48 hours: > 100 %, Daphnia magna  
NOEC, 48 hours: 100 %, Daphnia magna  
REACH dossier information.

**Acute toxicity - aquatic plants** EC<sub>10</sub>, 72 hours: > 14 mg/l, Desmodesmus subspicatus  
EC<sub>20</sub>, 72 hours: > 14 mg/l, Desmodesmus subspicatus  
EC<sub>50</sub>, 72 hours: > 14 mg/l, Desmodesmus subspicatus  
NOEC, 72 hours: 14 mg/l, Desmodesmus subspicatus  
REACH dossier information.

**Acute toxicity - microorganisms** EC<sub>50</sub>, 3 hours: > 1000 mg/l, Activated sludge  
NOEC, 3 hours: 1000 mg/l, Activated sludge  
REACH dossier information.

#### Cement, alumina, chemicals

**Toxicity** Based on available data the classification criteria are not met.

**Acute toxicity - fish** LC<sub>50</sub>, 96 hours: >100 mg/l, Brachydanio rerio (Zebra Fish)

**Acute toxicity - aquatic invertebrates** EC<sub>50</sub>, 48 hours: 5.4 mg/l, Daphnia magna

**Acute toxicity - aquatic plants** EC<sub>50</sub>, 72 hours: 3.6 mg/l, Selenastrum capricornutum

**Acute toxicity - microorganisms** EC<sub>50</sub>, 3 hours: >1000 mg/l, Activated sludge

#### Plaster of Paris

**Toxicity** No negative effects on the aquatic environment are known.

#### Cement, portland, chemicals

## Tarmac Hi-Flow Renovation

**Toxicity** Not regarded as dangerous for the environment. However, large or frequent spills may have hazardous effects on the environment.

### Crystalline Silica

**Toxicity** No negative effects on the aquatic environment are known.

### Calcium dihydroxide

**Acute toxicity - fish** LC<sub>50</sub>, 96 hours: 457 mg/l, *Gasterosteus aculeatus* (Three-spined stickleback)  
REACH dossier information.

**Acute toxicity - aquatic invertebrates** LC<sub>50</sub>, 96 hours: 158 mg/l, *Crangon septemspinosa*  
REACH dossier information.

**Acute toxicity - aquatic plants** EC<sub>10</sub>, 72 hours: 79.22 mg/l, *Pseudokirchneriella subcapitata*  
EC<sub>20</sub>, 72 hours: 106.02 mg/l, *Pseudokirchneriella subcapitata*  
EC<sub>50</sub>, 72 hours: 184.57 mg/l, *Pseudokirchneriella subcapitata*  
LOEC, 72 hours: 80 mg/l, *Pseudokirchneriella subcapitata*  
NOEC, 72 hours: 48 mg/l, *Pseudokirchneriella subcapitata*  
REACH dossier information.

**Acute toxicity - microorganisms** EC<sub>20</sub>, 3 hours: 229.2 mg/l, Activated sludge  
EC<sub>50</sub>, 3 hours: 300.4 mg/l, Activated sludge  
REACH dossier information.

**Acute toxicity - terrestrial** NOEC, 4 weeks: 2000 mg/kg, *Eisenia Fetida* (Earthworm)  
REACH dossier information.

**Chronic toxicity - aquatic invertebrates** LC<sub>50</sub>, 14 days: 53.1 mg/l, *Crangon septemspinosa*  
NOEC, 14 days: 32 mg/l, *Crangon septemspinosa*  
REACH dossier information.

**Toxicity to soil** NOEC, 96 days: 4000 mg/kg, Soil  
EC<sub>50</sub>, 28 days: > 12000 mg/kg, Soil  
REACH dossier information.

**Toxicity to terrestrial plants** EC<sub>50</sub>, 21 days: 5640 mg/kg, *Allium porrum*  
REACH dossier information.

### Silicon dioxide

**Toxicity** Aquatic toxicity is unlikely to occur. Based on available data the classification criteria are not met.

**Acute toxicity - fish** LL<sub>0</sub>, 96 hours: 10000 mg/l, *Brachydanio rerio* (Zebra Fish)  
REACH dossier information.

**Acute toxicity - aquatic invertebrates** EL<sub>50</sub>, 24 hours: > 1000 mg/l, *Daphnia magna*  
REACH dossier information.

## 12.2. Persistence and degradability

**Persistence and degradability** The degradability of the product is not known.

## Ecological information on ingredients.

### Calcium carbonate

## Tarmac Hi-Flow Renovation

**Persistence and degradability** The product contains only inorganic substances which are not biodegradable.

### Cement, alumina, chemicals

**Persistence and degradability** The product contains inorganic substances which are not biodegradable.

### Plaster of Paris

**Persistence and degradability** The product contains inorganic substances which are not biodegradable.

### Crystalline Silica

**Persistence and degradability** The product contains only inorganic substances which are not biodegradable.

### Silicon dioxide

**Persistence and degradability** Substance is inorganic.

### 12.3. Bioaccumulative potential

**Bioaccumulative potential** No data available on bioaccumulation.

**Partition coefficient** Not determined.

### Ecological information on ingredients.

### Calcium carbonate

**Bioaccumulative potential** No data available on bioaccumulation.

### Cement, alumina, chemicals

**Bioaccumulative potential** No data available on bioaccumulation.

**Partition coefficient** Technically not feasible.

### Plaster of Paris

**Bioaccumulative potential** No data available on bioaccumulation.

### Crystalline Silica

**Bioaccumulative potential** No data available on bioaccumulation.

### Calcium dihydroxide

**Bioaccumulative potential** The product is not bioaccumulating.

### Silicon dioxide

**Bioaccumulative potential** No data available on bioaccumulation.

### 12.4. Mobility in soil

## Tarmac Hi-Flow Renovation

**Mobility** No data available.

### Ecological information on ingredients.

#### Calcium carbonate

**Mobility** The product is soluble in water.

#### Cement, alumina, chemicals

**Mobility** The product is soluble in water.

#### Plaster of Paris

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

#### Cement, portland, chemicals

**Mobility** No information available.

#### Crystalline Silica

**Mobility** No data available.

#### Calcium dihydroxide

**Mobility** The product is soluble in water.

**Surface tension** 72 mN/m @ 20°C REACH dossier information.

#### Silicon dioxide

**Mobility** Slightly soluble in water.

### 12.5. Results of PBT and vPvB assessment

#### Ecological information on ingredients.

#### Calcium carbonate

**Results of PBT and vPvB assessment** Substance is inorganic. Not relevant.

#### Cement, alumina, chemicals

**Results of PBT and vPvB assessment** Not relevant. Substance is inorganic.

#### Plaster of Paris

**Results of PBT and vPvB assessment** Not relevant. Substance is inorganic.

#### Crystalline Silica

**Results of PBT and vPvB assessment** Substance is inorganic. Not relevant.



## Tarmac Hi-Flow Renovation

### Calcium dihydroxide

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

### Silicon dioxide

**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** The generation of waste should be minimised or avoided wherever possible. Reuse or recycle products wherever possible. This material and its container must be disposed of in a safe way. When handling waste, the safety precautions applying to handling of the product should be considered. Care should be taken when handling emptied containers that have not been thoroughly cleaned or rinsed out. Empty containers or liners may retain some product residues and hence be potentially hazardous.

**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

**General** The product is not covered by international regulations on the transport of dangerous goods (IMDG, IATA, ADR/RID).

#### 14.1. UN number

Not applicable.

#### 14.2. UN proper shipping name

Not applicable.

#### 14.3. Transport hazard class(es)

No transport warning sign required.

#### 14.4. Packing group

Not applicable.

#### 14.5. Environmental hazards

**Environmentally hazardous substance/marine pollutant**  
No.

#### 14.6. Special precautions for user

Not applicable.

#### 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

## Tarmac Hi-Flow Renovation

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

<b>National regulations</b>	EH40/2005 Workplace exposure limits.
<b>EU legislation</b>	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).
<b>Restrictions (Title VIII Regulation 1907/2006)</b>	Entry number: 47

### 15.2. Chemical safety assessment

No chemical safety assessment has been carried out.

### SECTION 16: Other information

<b>Classification procedures according to Regulation (EC) 1272/2008</b>	Eye Irrit. 2 - H319, Skin Sens. 1 - H317: Calculation method.
<b>Training advice</b>	Read and follow manufacturer's recommendations.
<b>Revision comments</b>	Revised formulation.
<b>Revision date</b>	24/08/2016
<b>Revision</b>	4
<b>Supersedes date</b>	01/04/2014
<b>SDS number</b>	4832
<b>Hazard statements in full</b>	H315 Causes skin irritation. H317 May cause an allergic skin reaction. H318 Causes serious eye damage. H319 Causes serious eye irritation. H335 May cause respiratory irritation. H372 Causes damage to organs through prolonged or repeated exposure if inhaled.

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.