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**SECTION 1: IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING**

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**1.1. Product identifier**

Substance Name: Asphalt – Deferred Set  
Includes; PathMaster, RepairMaster SMA, Cold Lay  
Macadam, Pre-Coated Chippings

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

Uses: Refer to relevant Technical Data Sheet  
Uses advised against: Refer to relevant Technical Data Sheet

**1.3. Company identification**

Name: **Smartseal UK Ltd**  
Unit 3, 65-67  
Cutlers Road  
South Woodham Ferrers

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Address: Essex  
CM3 5WA

Telephone number: +44 (0) 1268 722500  
E-mail: [contactus@smartseal.co.uk](mailto:contactus@smartseal.co.uk)

**1.4. Emergency telephone**

UK/European Emergency N°: **999/112**  
Smartseal UK Ltd  
(during office hours): **+44 (0)1268 722500**  
(office hours: 08:30 – 17:30)

## SECTION 2: HAZARDS IDENTIFICATION

### 2.1 Classification of the substance or mixture:

Under the REACH regulations Article 31 it is the responsibility of the producer of a substance/mixture to provide a safety data sheet if it is considered dangerous. These products are not classified as dangerous. It is still necessary to comply with COSHH requirements, which this Safety Data sheet aims to achieve. See Section 2.3 for further hazard details.

#### 2.1.1 Classification according to Regulation (EC) 1272/2008:

Not classified

#### 2.1.2 Classification according to Directive 1999/45/EEC:

Not classified

### 2.2 Label elements

#### 2.2.1 Labelling according to Regulation (EC) 1272/2008:

Not required– not classified as hazardous

#### 2.2.2 Labelling according to Directive 1999/45/EEC:

Not required– not classified as hazardous

However, consideration of the following risk & safety phrases is also recommended: Risk Phrases:

**R34** - May cause burns.

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**R36/37** - Irritating to eyes and respiratory system. Safety Phrases:

**S2** – Keep out of reach of children

**S36/ 37/ 39** - Wear suitable protective clothing, gloves and eye / face protection.

**S51** - Use in well ventilated areas.

### 2.3 Other hazards

Deferred set asphalt contains flux oil, which may be present in quantities of up to approximately 2%. Flux oil in liquid state carries a risk of aspiration, which can lead to rapid and possibly fatal lung damage, and has the hazard classification:

Xn R-65 Harmful: may cause lung damage if swallowed'

GHS08 Health Hazard H304: May be fatal if swallowed and enters airways

Once the flux oil is mixed with bitumen and aggregate, it is not expected to be likely to enter the lungs, so the finished product 'Deferred Set Asphalt is not classified as dangerous.

The following additional hazards should also be considered:

- Deferred set asphalt is produced at elevated temperatures (up to a typical maximum of 120°C). Hot materials may burn the skin.

- Fumes from Asphalt are unlikely to be hazardous when laid in open air situations, but there may be a risk to health by continuous inhalation of high vapour concentrations which might arise in poorly ventilated, confined or semi-confined spaces.

- Dusts containing Respirable Crystalline Silica (quartz) present a greater hazard. Long-term exposure to respirable dust can lead to respiratory system damage and disease. Respirable crystalline silica has been associated with the lung disease silicosis.

- The quartz content of the product will vary, and is related to the type of aggregate used in the production of the asphalt. Advice on the quartz content and other chemical information is available from the supplying unit.

## SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

### 3.2 Mixtures:

Deferred set asphalt is a mixture of aggregate and fluxed bitumen or bitumen emulsions. Bitumen is a hydrocarbon derived from the distillation of petroleum crude oil, but may be synthetic or modified by the use of polymers and other chemicals. Flux oil added to the bitumen is usually petroleum based, and will typically be in the range of 0.7 to 1.8% of the finished product. Water based emulsions will usually be <10% of the finished product. Other additives may be used to modify the characteristics of the finished product. Aggregates used in asphalt may be naturally occurring (eg limestone, gritstone, granite, sand etc), artificial (eg slag aggregates) or recycled (eg road plainings, inert construction and demolition waste, glass etc).

<b>SECTION 4: FIRST AID MEASURES</b>
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### 4.1 Description of first aid measures:

#### 4.1.1 Routes of exposure;

<b>Inhalation</b>	Immediately remove to fresh air. If breathing difficulties are experienced, seek medical attention. If breathing has stopped, commence artificial resuscitation and seek medical attention immediately.
<b>Eye contact</b>	If material is hot, apply the same measures as 'skin contact' above. If the material is cold, immediately and thoroughly irrigate with eye wash solution or clean water. If symptoms develop or persist, seek medical attention.
<b>Skin contact</b>	immediately flushing with large amounts of cold water. Do not attempt to remove anything from the burn area unless required to allow breathing. Seek medical attention. Bitumen may be removed under medical supervision. If skin contact if made without burns, remove soiled clothing and wash skin with soap and water.
<b>Ingestion</b>	Do not induce vomiting to avoid the risk of material entering the respiratory tract (aspiration). Get immediate medical attention.
<b>Aspiration</b>	If the product is believed to have entered the lungs (eg as a result of vomiting), take the person to hospital immediately for medical treatment.

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

Long term exposure to dust above the exposure limits can lead to the development of lung disease. Dust may slightly irritate the respiratory tract.

**Environment:** Under normal use, this product is not hazardous to the environment.

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

**needed;** When contacting further medical advise. Show container, label or this SDS sheet.

## SECTION 5: FIRE-FIGHTING MEASURES

### 5.1 Extinguishing media:

5.1.2 Suitable extinguishing media; Dry powder, foam.

5.1.3 Unsuitable extinguishing media; Do not use water or CO2

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

Hydrocarbon fumes may be released, along with other hazardous combustion products including smoke.

### 5.3 Advice for fire fighters:

Proper protective equipment including suitable respirators or breathing apparatus must be worn.

## SECTION 6: ACCIDENTAL RELEASE MEASURES

### 6.1. Personal precautions, protective equipment and emergency procedures:

6.1.1. For Non-emergency personnel;

Wear suitable protective equipment (see section 8).

6.1.2 For emergency responders;

Wear overalls, heat resistant safety boots and heat resistant, impervious gloves. Wear suitable respiratory protection in poorly ventilated or enclosed spaces.

### 6.2 Environmental precautions:

Do not wash product down sewage and drainage systems or into bodies of water (e.g. streams).

### 6.3 Methods and material for containment and cleaning up:

Scrape up using suitable mechanical methods. Bitumen may be removed from tools and machinery with a proprietary bitumen remover, but ensure you refer to the suppliers safety data sheet before using.

### 6.4 Reference to other sections:

For more information on exposure controls/personal protection or disposal considerations, please check section 8 and 13 and the Appendix of this safety data sheet.

## SECTION 7: HANDLING AND STORAGE

### 7.1 Precautions for safe handling:

7.1.1 Protective Measures;

Skin contact with the product should be avoided. Avoid breathing in vapours or fumes. If the formation of vapours is a risk, then additional ventilation should be provided. Handle away from sources of ignition and heat.

7.1.2 Advice on general occupational hygiene;

General occupational hygiene measures are required to ensure safe handling of the product. These measures involve good personal and housekeeping practices. Wash hands after use if contaminated. Avoid wearing contaminated clothing. Do not handle or store near food and beverages or smoking material.

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

Keep away from heat. Use only hydrocarbon resistant containers. Asphalt is normally used upon receipt. Refer to the relevant Technical Data Sheet for the specific product. Product should be kept covered. Flammable materials, and containers that do or may become pressurised should be kept away from hot asphalt to avoid the risk of fire and explosion.

### 7.3 Specific end use(s):

No additional information for the specific end users.

## SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

### 8.1 Control parameters:

#### Exposure Control Limits / Source

Asphalt Fumes - W.E.L. 5mg/m<sup>3</sup> 8 Hrs T.W.A. 10mg/m<sup>3</sup> 15 Min.

T.W.A Oil Mist (flux oil) W.E.L 5mg/m<sup>3</sup> 8 hrs T.W.A

Total Dust W.E.L - 10mg/m<sup>3</sup> - 8 Hrs

T.W.A. Respirable Dust W.E.L - 4mg/m<sup>3</sup> 8 Hrs

T.W.A Respirable Quartz W.E.L - 0.1mg/m<sup>3</sup> 8 Hrs

T.W.A (Crystalline Silica SiO<sub>2</sub>)

W.E.L. = Workplace Exposure Limit

T.W.A. = Time Weighted Average

## 8.2 Exposure controls:

8.2.1 Appropriate engineering controls;




### Control Measures

Dust caused by cutting or planing hardened asphalt should be controlled by containment, suppression and extraction/ filtration where possible. Deferred set asphalt should only be laid in well ventilated areas.

### Respiratory Protection

Always ensure adequate ventilation and avoid breathing vapour/fumes. Suitable respiratory protection should be used if required to ensure exposure is below the Workplace Exposure Levels given at the start of this section.

### 8.2.2: Individual protection measures, such as personal protective equipment:

8.2.2.1: Eye/face protection		Wear approved glasses or goggles according to EN 166 with anti-mist for eye protection when conditions dusty and risk of product entering the eyes.
8.2.2.2: Skin protection		Overalls and/or long-sleeved jackets and full length trousers should be worn to protect skin from burns. Clean overalls as necessary to prevent product permeating to clothing or skin underneath. Heat resistant safety boots should be worn. The use of skin barrier cream is also recommended.
8.2.3.3: Respiratory protection		When a person is potentially exposed to dust levels above exposure limits, an appropriate respirator must be used dependant on expected dust levels. If the formation of vapours is a risk, then additional ventilation should be provided.
8.2.2.4: Thermal Hazards		The substance does not represent a thermal hazard, thus special consideration is not required.
8.2.3: Environmental Exposure Control		Not relevant unless large volume of product enter the watercourse.

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

### 9.1.1 Information on basic physical and chemical properties:

Appearance:	Pigmented or natural aggregate coloured, granular solid
Odour:	Strong, characteristic
Odour threshold:	N/a
pH:	N/a
Melting point:	N/a
Boiling point:	Not determined
Flash point:	Above 130 oC
Evaporation rate:	N/a
Flammability:	Lower -1%, upper –
Explosive limits:	Non determined
Vapour pressure:	N/a
Vapour density:	Not determined
Relative density:	2.0 (typical)
Solubility in water:	Some components sparingly soluble
Partition coefficient:	N/a
Auto ignition temperature:	Above 230
Decomposition temperature:	N/a
Viscosity:	N/a
Oxidising properties:	Not determined

## SECTION 10: STABILITY AND REACTIVITY

### 10.1 Reactivity:

Stable product under recommended storage and handling conditions.

### 10.2 Chemical Stability:

Stable product under recommended storage and handling conditions.

### 10.3 Possibility of hazardous reactions:

Stable product under recommended storage and handling conditions.

### 10.4 Conditions to avoid:

Sources of ignition and temperatures above 130°C.

### 10.5 Incompatible Materials:

Strong oxidising agents, e.g. chlorates which may be used in agriculture.

### 10.6 Hazardous Decomposition Products:

The substances arising from the thermal decomposition of the bitumen binder and flux oil used in deferred set asphalt will largely depend on the particular conditions but may contain the following: Hydrogen Sulphide, Carbon Dioxide, Carbon Monoxide, Water, Particulate Matter (including soot), Sulphur Oxides, Polycyclic, Aromatic Hydrocarbons, Unburnt Hydrocarbons, Nitrogen Oxides, Aldehydes, Vanadium Pentoxide.

## SECTION 11. TOXICOLOGICAL INFORMATION

### Information on likely routes of exposure:

Contact with skin, eyes, ingestion and inhalation.

### Symptoms relating to the physical, chemical and toxicological characteristics: Inhalation:

Inhalation of respirable dust from aggregate contained in asphalt whilst cutting or planing hardened

asphalt can lead to respiratory system damage and disease. Inhalation of fumes over a prolonged period may cause irritation of the respiratory system. Bitumen used in deferred set asphalt may release small amounts of hydrogen sulphide gas. With good general ventilation, this is not likely to cause any problems, but in poorly ventilated enclosed spaces, concentrations may build up to hazardous levels.

### Skin Contact:

Prolonged skin contact may cause dermatitis and malignant warts. Contact with hot asphalt may cause burns.

### Eye Contact:

Product entering the eyes may cause irritation. Contact with hot asphalt may cause burns.

### Ingestion:

Ingestion is very unlikely, but if swallowed accidentally, flux oil in the product may enter the lungs and lead to rapid and serious lung damage through pulmonary lesions. Seek medical attention immediately. Medical survey for at least 48 hours.

### Delayed and immediate effects as well as chronic effects from short and long-term

## SECTION 12: ECOLOGICAL INFORMATION

**12.1 Toxicity:**

Flux oil - Acute toxicity. LC50 96 hours fish > 100 mg/l.

When used and disposed of as intended, no environmental effects are foreseen, and asphalt should not pose an ecological hazard.

**12.2 Persistence and Degradability:**

Resistant to degradation and will persist in the environment.

**12.3 Bioaccumulative potential:**

, Biodegradability. OECD test. 28 days 61 % Bioaccumulable.

**12.4 Mobility in Soils:**

Not relevant as this product is an inorganic material. After hardening, it presents no toxicity risks.

**12.5 Results of PBT and vPvB assessment:**

Not determined

**12.6 Other adverse effects:**

## **SECTION 13: DISPOSAL CONSIDERATIONS**

### **13.1 Waste treatment methods:**

Asphalt made with bitumen is classed as 'inert' but should be disposed of in accordance with local and national legal requirements. Hardened asphalt can be readily recycled.

## **SECTION 14: TRANSPORT INFORMATION**

These products are not classified as hazardous for transport. No special precautions are needed apart from those mentioned under Section 8.

Product should be kept covered. Flammable materials, and containers that do or may become pressurised should be kept away from hot asphalt to avoid the risk of fire and explosion.

14.1 UN number – not relevant

14.2 UN proper shipping name – not relevant

14.3 Transport hazard class(es) – not relevant

14.4 Packing group – not relevant

14.5 Environmental hazards - not relevant

14.6 Special precautions for user - not relevant

## **SECTION 15: Regulatory information**

### **15.1 Safety, health and environmental regulations/legislation specific for the substance:**

Workplace Exposure Limits – HSE Guidance note EH40.

Control of Substances Hazardous to Health latest Regulations.

Classification: **Not classified as dangerous.** However, consideration of the following risk & safety phrases is also recommended:

Risk Phrases:

**R34** - May cause burns.

**R36/37** - Irritating to eyes and respiratory system. Safety Phrases:

**S2** – Keep out of reach of children

**S36/ 37/ 39** - Wear suitable protective clothing, gloves and eye / face protection.

**S51** - Use in well ventilated areas.

### **15.2 Chemical Safety Assessment:**

## **SECTION 16: OTHER INFORMATION**

### **16.1 Hazard Statements:**

N/a

### **16.2 Precautionary Statements:**

N/a

### **16.3 Risk Phrases:**

See above

### **16.4 Safety Phrases:**

See above

### **16.5 Abbreviations:**

STEL: short-term exposure

limit. TWA: time weighted



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**16.6 Key Literature References:**

Suppliers; Safety Data  
Sheets. In-house data files.  
HSE Guidance Note EH40.  
Supplier's safety data  
sheets. PPE Regulations.  
COSHH Regulations.  
Environmental Protection

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Act.

**16.7 Revision:**

Version Number:1

Date Prepared:12/04/2013

Supersedes; N/a

Nature of Revision - This version produced in reference to Annex II of the REACH Regulation (EC)

1907/2006 as amended by Regulation 453/2010.

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Disclaimer

These products are not classified as dangerous. It is still necessary to comply with COSHH requirements, which this Safety Data sheet aims to achieve and generally follows REACH Regulation (EC 1907/2006; article 31 and Annex II), as amended by Regulation 453/2010. Its contents are intended as a guide to the appropriate precautionary handling of the material. It is the responsibility of recipients of this SDS to ensure that the information contained therein is properly read and understood by all people who may use, handle, dispose or in any way come in contact with the product. Information and instructions provided in this SDS are based on the current state of scientific and technical knowledge at the date of issue indicated. It should not be construed as any guarantee of technical performance, suitability for particular applications, and does not establish a legally valid contractual relationship. This version of the SDS supersedes all previous versions

**APPENDIX: Exposure Scenarios:** N/a

End of the safety data  
sheet