

Asphalt

Material Safety Data Sheet (MSDS)



1. IDENTIFICATION OF SUBSTANCE/PREPARATION AND COMPANY/UNDERTAKING

Substance name: Asphalt

This Safety Datasheet is not applicable to Deferred-Set Asphalt and Coloured Asphalt, which are covered by separate Safety Datasheets.

For further details of the specification refer to the relevant Technical Data Sheet.

2. HAZARD IDENTIFICATION

NOT classified as dangerous in accordance with Directive 67/548/EEC or EC 1272/2008.

The main hazards presented by Asphalt relate to the temperature of the material. The following hazards may apply:

- 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.
- Asphalt is not a dusty material, but respirable dust may be released by cutting, drilling or planing hardened asphalt. If inhaled in excessive quantities over a prolonged period or extended period, respirable dust can constitute a long term health hazard.

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.

*Any references to respirable silica only apply if hardened asphalt is cut, drilled, milled or planed.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Asphalts are mixtures of aggregates and bitumen. 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. Bitumen content is typically <10%. Other materials such as cellulose fibres, latex and other additives may be added to the product.

Aggregates used in asphalt may be naturally occurring (eg.limestone, gritstone, granite, sand etc), artificial (e.g. slag aggregates) or recycled (e.g. road planings, inert .construction and demolition waste, glass etc).

Hazardous ingredients:

Substance name	EC No	%	DSD Classification	CLP Classification
Crystalline Silica*	238-878-4	Variable	Xn; R48/20	H372; STOT RE1

4. FIRST AID MEASURES

Inhalation:

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.

Skin Contact:

Burns caused by contact with hot material should be cooled by 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.

Eye Contact:

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.

Ingestion:

Remove to fresh air. If person is conscious, rinse out mouth and give water to drink. Seek medical advice.

5. FIRE FIGHTING MEASURES

Suitable Extinguishing Media:

Dry powder, foam.

Unsuitable Extinguishing Media:

Do not use water. CO2 is also not suitable.

Special Exposure Hazards in Fire:

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

Special Protective Equipment for Fire Fighters:

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

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions:

Wear overalls, heat resistant safety boots and heat resistant, impervious gloves. Wear suitable respiratory protection in poorly ventilated or enclosed areas. Keep away from ignition sources. See Section 8 for guidance on personal protective equipment. See Section 7 for guidance on handling the product.

Environmental Precautions:

Prevent asphalt from entering watercourses, ditches and drains.

Methods for Cleaning:

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.

7. HANDLING AND STORAGE

Handling:

Skin contact with the product should be avoided. Inhalation of fumes should be avoided as far as is reasonably practicable.

If the formation of vapours is a risk, then additional ventilation should be provided. Handle away from sources of ignition and heat. Do not smoke, eat or drink during use.

Storage:

No special requirements. Asphalt is normally used upon receipt.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Take Measures to Prevent:

(a) Inhalation of vapours/fumes.

(b) Inhalation of excessive quantities of dust during cutting, drilling, planing or surface treatment of hardened asphalt.

Exposure Control Limits / Source

Asphalt Fumes	W.E.L.	5mg/m ³	8 Hrs	T.W.A.
Asphalt Fumes	W.E.L.	10mg/m ³	15 Min	T.W.A.
Total Dust	W.E.L.	10mg/m ³	8 Hrs	T.W.A.
Respirable Dust	W.E.L.	4mg/m ³	8 Hrs	T.W.A.
Respirable Quartz (Crystalline Silica SiO ₂)	W.E.L.	0.1mg/m ³	8 Hrs	T.W.A.

W.E.L. = Workplace Exposure Limit

T.W.A. = Time Weighted Average

Refer to EH40 for further information on workplace exposure limits.

Control Measures:

Dust caused by cutting or planing hardened asphalt should be controlled by containment, suppression and extraction/ filtration where possible.

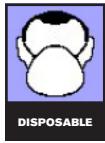
Asphalt should only be laid in well ventilated areas.

Inhalation:

Use only in well-ventilated areas.

Eyes, Skin & Hands:

Wear suitable protective clothing, gloves and eye/face protection.



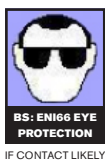
Respiratory Protection:

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.



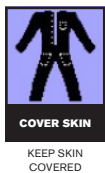
Hand Protection:

Impermeable, heat resistant gloves should be worn.



Eye Protection:

Goggles should be worn if there is a risk of product entering the eyes (including dust).



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 bitumen permeating to clothing or skin underneath. Heat resistant safety boots should be worn to protect feet. The use of skin barrier cream is also recommended. Hands should be washed thoroughly before handling or eating food or drink.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Black, granular solid
Odour	Strong, characteristic
pH	Neutral
Boiling Point / Range	Not applicable
Melting Point / Range	90 - 100°C
Flash Point	Above 200°C
Auto Flammability	Above 230°C
Flammability	Not determined
Explosive Properties	Not determined
Oxidising Properties	Not determined
Vapour Pressure:	Not applicable
Relative Density:	Above 2.0
Water Solubility:	Insoluble
Fat Solubility:	Not determined

10. STABILITY AND REACTIVITY

Conditions to Avoid:

Sources of ignition and temperatures above 200°C.

Materials to Avoid:

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

Hazardous Decomposition Products:

The substances arising from the thermal decomposition of the bitumen binder in asphalt will largely depend on the particular conditions but may contain the following:

Hydrogen Sulphide, Carbon Dioxide, Carbon Monoxide, Water, Particulate Matter, Sulphur Oxides, Polycyclic Aromatic Hydrocarbons, Unburnt Hydrocarbons, Nitrogen Oxides, Vanadium Pentoxide.

11. TOXICOLOGICAL INFORMATION

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 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:

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

Eye Contact:

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

Ingestion:

Ingestion is very unlikely. Seek medical attention.

12. ECOLOGICAL INFORMATION

Environmental Assessment:

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

Mobility:

Low mobility. Will sink in water and form a solid layer on the surface of the ground.

Persistence and Degradability:

Resistant to degradation and will persist in the environment.

Ecotoxicity:

Not expected to be toxic to aquatic organisms.

13. DISPOSAL CONSIDERATION

Safe Handling of Residues / Waste Product:

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

14. TRANSPORT INFORMATION

Special Carriage Requirements:

Not classified as dangerous for transport. 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.

15. REGULATORY INFORMATION

Classification:

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

67/548/EEC

Risk Phrases:

R34 - May cause burns.

R36/37 - Irritating to eyes and respiratory system.

Safety Phrases:

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

S51 - Use in well ventilated areas.

EC1272/2008

Hazard Statements:

H317 – May cause skin irritation

H335 – May cause respiratory irritation

H372 – Causes damage to organs through prolonged or repeated exposure (relates possible lung damage if exposed to respirable silica* that may be released if hardened asphalt is cut, drilled, milled or planed.)

Precautionary Statements:

P261 – Avoid breathing dust/fume/vapours.

P271 – Use only outdoors or in a well ventilated area.

P281 – Use personal protective equipment as required (see Section 8)

16. OTHER INFORMATION

Training Advice:

Wear and use of PPE.

Recommended Uses and Applications:

Industrial and construction applications.

Further Information:

Contact Product Technical Support at using the details given in Section 1.

HSE Guidance Note

EH40/2007 PPE

Regulations 1992

COSHH Regulations

2002 Environmental

Protection Act 1990

HSE Crystalline Silica EH59

Dangerous Substances Directive (DSD) 67/548/EEC

Classification, Labelling and Packaging Regulations (CLP) EC1272/2008

Further copies of this Safety Data Sheet may be obtained from Hanson UK

Prepared in accordance with Annex II of the REACH Regulation (EC) 1907/2006

17. DISCLAIMER

The information in this Safety Data Sheet was believed to be correct at the time of issue. It does not, however, give assurances of product properties and establishes no contract legal rights.

If you have purchased this product for supply to a third party for use at work, it is your duty to take all necessary steps to ensure that any person handling or using the product is provided with the information in this sheet.

If you are an employer, it is your duty to tell your employees and others who may be affected of any hazards described in this sheet and any of the precautions which should be taken.

This Safety Data Sheet does not constitute the user's own assessment of workplace risk, and it is the user's sole responsibility to take all necessary safety precautions when using this product.

The product is to be used exclusively for the applications named in the technical leaflet or in the processing instructions. The receiver of our product is singularly responsible for adhering to existing laws and regulations.

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