

Asphalt Materials

Material Safety Datasheet: DQ10 Issue 01/09



Glendinning

It is important that you or those working for you familiarise themselves with the information supplied on this Datasheet before handling, using or disposing of the product.

Identification of Substance & Company

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Product: Macadam (Asphalt Concrete)

Document: DQ10 Issue 01/09

Physical and Chemical Characteristics

Asphalt materials are a mixture of graded aggregates and a bitumen binder. The bitumen is an unreactive high-flash-point hydrocarbon derived from the distillation of crude oil and will form 3-7% of the asphalt material by mass. The bitumen binder may be modified by fluxing oil. Asphalt material is mobile when hot and cools to form a durable solid. The pH is neutral or mildly acidic. Some asphalt material mixes may contain recycled materials as an aggregate constituent; unknown compounds could be incorporated within the mixture.

Hazards

The main hazards presented by bituminous paving materials depend on the temperature and the penetration of bitumen binder of the material.

- Hot materials may burn the skin.
- Fumes or vapours may be released from hot asphalt materials and are unlikely to be hazardous in the open air, but may be harmful if inhaled in confined spaces. Condensed vapours may contaminate skin or clothing.
- Bitumen and fluxing oils may cause chemical burns and following frequent or prolonged contact may give rise to dermatitis, skin lesions or skin cancer in extreme cases.
- Colour pigmentation may release polycyclic aromatic hydrocarbons; some may cause skin cancer and are classed as category three carcinogens.

Emergency Action – First Aid

All bitumen burns should receive prompt medical attention as a standard measure.

Eye Contact

1. A splash of hot bitumen in the eye should be cooled by irrigating with cold running water for at least FIVE minutes and then medical attention should be sought.

Skin Contact

1. The affected area should immediately be plunged into cold running water until thoroughly cold.
2. No attempt should be made to remove adhering bitumen from the skin unless the site of contact is causing breathing difficulty. Bitumen will provide a sterile covering until healing occurs and it will then detach itself. Medical attention should be sought in all cases.
3. Bitumen encircling a limb or digit may cause a tourniquet and such cases should receive medical attention without delay.

Inhalation

1. If irritation occurs move the affected person into fresh air. If breathing problems persist seek medical attention urgently.

Ingestion

1. Highly unlikely in normal circumstances.

Precautions

The following precautions should always be taken:

- Avoid skin contact with hot asphalt materials.
- A high standard of personal hygiene should be adopted – wash hands thoroughly before going to the lavatory, eating meals and smoking. The skin should be thoroughly cleansed after work.
- Contaminated clothing must not be worn and contaminated rags should never be placed in pockets.
- Avoid the inhalation of fumes as far as is practicable.
- When regularly handling bituminous products, periodic inspections of the skin should be made and any lumps or sores on arms, face or scrotum should be referred for medical attention as early diagnosis ensures that any treatment is effective.

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Protective Clothing

Protective clothing should be worn, particularly on the arms, hands, legs and feet eg long sleeved clothing and gloves with full length trousers and impervious boots.

Eye/face protection should be worn where the possibility of splashing exists.

Transportation and Waste Disposal

The carriage of asphalt materials is not subject to hazardous substance conveyance regulations and vehicle labelling is not required.

Unused hardened asphalt materials are inert but should be disposed of in accordance with local authority requirements. Keep out of the reach of children.

Storage

Some mixes of asphalt materials are supplied as deferred-set mixes having extended working lives during which the precautions given above should be continued. During storage, access to the products by unauthorised persons should be prevented.

Guidance

- EH40 – For detailed guidance on workplace exposure levels to constituent substances reference should be made to EH40 (HSE Guidance Note)

Notes

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