

<p>Aggregate Industries H&S dept Hulland Ward, Ashbourne, Derbyshire DE6 3ET</p>	<p>Safety Data Sheet Issue Date: January 2008</p>
<p>1. IDENTIFICATION OF THE SUBSTANCE</p>	<p>2. COMPOSITION / INFORMATION ON INGREDIENTS</p>
<p>Bituminous Road Materials</p> <p><u>Product description</u></p> <p>Bituminous road materials comprise of coated macadam, asphalts and other proprietary products that can be supplied hot or cold for surfacing, resurfacing and top dressing of public and private roads.</p>	<p>Bituminous road material is a mixture of:</p> <ul style="list-style-type: none"> ▪ Aggregate ▪ Sand ▪ Filler ▪ Bitumen ▪ Additives. <p>Aggregate, sand and filler are inert minerals. Bitumen is a high molecular hydrocarbon derived from crude oil distillation, which bonds the other ingredients into a homogenous stable material.</p> <p>Fluxing oil, of petroleum origin, paper fibres, latex, pigment, none inert fillers i.e. ash and other additives may be included in proprietary products.</p> <p>Note: Although this sheet covers new bituminous road materials, recycled products may also be utilised for some applications and in which case unknown compounds may be incorporated within the mix during the recovery process.</p>
<p>3. HAZARDS IDENTIFICATION</p>	<p>4. FIRST AID MEASURES</p>
<p>Hot bitumen burns.</p> <p>In confined or semi-confined spaces prolonged inhalation of high vapour concentrations could be a risk to health. Inhalation of bituminous material fume during work in the open air is unlikely to be of sufficient concentration to provide a health risk.</p> <p>Bitumen and fluxing oils may cause chemical burns and, following prolonged skin exposure, warts. If personal cleanliness is ignored this may lead to more serious skin conditions.</p> <p>If the product is colour pigmented, it may contain polycyclic aromatic hydrocarbons. Although bound in the product, some may cause skin cancer and are, therefore, classified as category 3 carcinogens.</p>	<p><u>General</u></p> <p>Where injury arises from contact with hot bituminous material rest, keep warm and obtain medical attention.</p> <p><u>Inhalation</u></p> <p>Remove immediately into the fresh air, rest, keep warm and obtain medical attention.</p> <p><u>Skin</u></p> <p>Wash with cold water and remove with a vegetable oil under medical supervision. Do not remove cloths that are adhering to the skin.</p> <p><u>Eyes</u></p> <p>Irrigate with cold water for 10 minutes and obtain medical attention.</p> <p><u>Ingestion</u></p> <p>Give water to drink, but do not induce vomiting, and obtain medical attention.</p>

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<p>5. FIRE FIGHTING MEASURES</p>	<p>6. ACCIDENTAL RELEASE MEASURES</p>
<p><u>Suitable extinguishing media</u></p> <p>Dry powder and foam.</p> <p><u>Unsuitable extinguishing media</u></p> <p>CO₂ and water - water jets must not be used, water fog can be used to cool exposed surfaces but only by personnel trained in fire fighting.</p> <p><u>Special exposure hazards in fire</u></p> <p>Hydrocarbon fumes may be released.</p> <p><u>Special protective equipment for fire-fighters</u></p> <p>Full protective clothing including suitable respirator or breathing apparatus.</p>	<p><u>Personal precautions</u></p> <p>Wear overalls and gloves.</p> <p><u>Environmental measures</u></p> <p>Entry into watercourses should be avoided. Near water systems, materials should be stored in a dry area free from the risk of chemical contamination or fire.</p> <p><u>Method of cleaning</u></p> <p>Spillages of hot material onto roads and other surfaces should be cleared promptly before setting using appropriate mechanical methods.</p> <p>Bitumen may be removed from road making tools and machinery using a proprietary tar and bitumen remover, normally a hydrocarbon solvent. However, this method is not suitable for removable of bitumen from already macadamed surfaces. Reference should also be made to the supplier's safety data sheet prior to use to ensure adequate health, safety and environmental protection measures are employed.</p>
<p>7. HANDLING AND STORAGE</p>	<p>8. EXPOSURE CONTROLS/PERSONAL PROTECTION</p>
<p><u>Handling</u></p> <p>The product should be handled in a manner so as to minimise contact with the skin and eyes and to avoid prolonged inhalation of the fume.</p> <p><u>Storage</u></p> <p>Hot material is normally used upon receipt. Cold mixed or extended life materials should be stored in a secure, clean, dry area free from the risk of chemical contamination.</p>	<p><u>Workplace Exposure Limits</u></p> <ul style="list-style-type: none"> ▪ Bitumen fume (listed as asphalt, petroleum fume): <ul style="list-style-type: none"> ➢ Long-term exposure limit (8-hour TWA reference period) 5 mg/m³ ➢ Short term exposure limit 15-minute reference period) 10 mg/m³ <p>Note: The above WELs are as published in EH40 2005</p> <p><u>Prevention measures</u></p> <p>Ensure good ventilation of all areas in which bituminous products are stored and used.</p> <p><u>Respiratory protection</u></p> <p>Respirators should be worn if fumes are likely to be present in significant quantities.</p> <p><u>Protection of skin and eyes</u></p> <p>Impervious gloves and overalls should be worn and eye protection is recommended.</p>
<p>9. PHYSICAL & CHEMICAL PROPERTIES</p>	

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<p><u>Appearance</u></p> <p>Black, coated roadstone</p> <p><u>Other chemical properties</u></p> <p>See Composition/Information on Ingredients above</p>	
10. STABILITY AND REACTIVITY	11. TOXICOLOGICAL INFORMATION
<p><u>Conditions to avoid</u></p> <p>Temperatures above 230 °C</p> <p><u>Materials to avoid</u></p> <p>May react with strongly oxidising materials</p> <p><u>Hazardous decomposition products</u></p> <p>Toxic fumes and dark smoke will be produced in a fire situation.</p>	<p><u>Description of toxicological properties</u></p> <p>Toxicity following a single exposure (orally, dermally or by inhalation) to bituminous products is of a low order. When bituminous products contain polycyclic aromatic hydrocarbons they are classified as category 3 carcinogens. With the use of good occupational and hygiene practices any risk will be minimal.</p>
12. ECOLOGICAL INFORMATION	13. DISPOSAL CONSIDERATIONS
<p><u>Environmental assessment</u></p> <p>Where used and disposed of as intended (see Accidental Release Measures) no adverse environmental effects are foreseen.</p>	<p><u>Handling of any residues/waste products</u></p> <p>Waste bituminous road materials may be recycled where appropriate facilities exist. However, if they are to be disposed of to landfill, reference should be made to the relevant waste management legislation including the requirements of the Hazardous Waste Regulations 2005 and the associated Waste Acceptance Criteria.</p>
14. TRANSPORT INFORMATION	15. REGULATORY INFORMATION
<p><u>Special carriage precautions</u></p> <p>Not applicable, however, it is recommended that loads are kept secured and covered prior to use</p>	<p>Under the requirements of the Chemicals (Hazard Information and Packaging for Supply) Regulations 2002 (CHIP 3) the Danger Classification for bituminous products is:</p> <ul style="list-style-type: none"> ▪ Irritant (+hazard symbol) <p>In addition the following risk and safety phrases are applicable:</p> <ul style="list-style-type: none"> ▪ R38: Irritating to skin ▪ R41: Risk of serious damage to eyes. ▪ R43: May cause sensitisation by skin contact. ▪ S24: Avoid contact with skin.