

# SAFETY DATA SHEET



## 1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

### 1.1 Product identifier

**Product name** ASPHALTIC CONCRETE (AC), BITUMINOUS CONCRETE, ROADWAYS ASPHALT, WARM MIX ASPHALT (WMA), HOT MIX ASPHALT (HMA)

**Synonyms** ASPHALTIC CONCRETE (AC) • BITUMINOUS CONCRETE • HOT MIX ASPHALT (HMA) • ROADWAYS ASPHALT • WARM MIX ASPHALT (WMA)

### 1.2 Uses and uses advised against

**Uses** ROAD MAINTENANCE • ROAD MAKING MATERIALS

### 1.3 Details of the supplier of the product

**Supplier name** FIELD SERVICES GROUP - ASPHALT AND AGGREGATES BRANCH

**Address** 228 Curtin Avenue West, Eagle Farm, QLD, 4009, AUSTRALIA

**Telephone** (07) 3403 1044

**Fax** (07) 3403 1049

**Website** <http://www.brisbane.qld.gov.au>

### 1.4 Emergency telephone numbers

**Emergency** (07) 3403 8888

## 2. HAZARDS IDENTIFICATION

### 2.1 Classification of the substance or mixture

CLASSIFIED AS HAZARDOUS ACCORDING TO SAFE WORK AUSTRALIA CRITERIA

#### Physical Hazards

Not classified as a Physical Hazard

#### Health Hazards

Skin Corrosion/Irritation: Category 2

Serious Eye Damage / Eye Irritation: Category 2B

Specific Target Organ Toxicity (Single Exposure): Category 3 (Respiratory Irritation)

#### Environmental Hazards

Not classified as an Environmental Hazard

### 2.2 GHS Label elements

**Signal word** WARNING

**Pictograms**



#### Hazard statements

H315 Causes skin irritation.

H320 Causes eye irritation.

H335 May cause respiratory irritation.

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**Prevention statements**

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.  
P264 Wash thoroughly after handling.  
P271 Use only outdoors or in a well-ventilated area.  
P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.

**Response statements**

P302 + P352 IF ON SKIN: Wash with plenty of water.  
P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P312 Call a POISON CENTRE or doctor/physician if you feel unwell.  
P321 Specific treatment is advised - see first aid instructions.  
P332 + P337 + P313 If skin or eye irritation occurs: Get medical advice/ attention.  
P362 + P364 Take off contaminated clothing and wash it before reuse.

**Storage statements**

P403 Store in a well-ventilated place.

**Disposal statements**

P501 Dispose of contents/container in accordance with relevant regulations.

**2.3 Other hazards**

This product is usually applied at elevated temperatures (ranging from 135°C to 175°C) by paving machinery or by hand spreading using a shovel. Contact with the hot material is likely to result in burns. Once cured, the inert semisolid material is considered non-hazardous.

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**3. COMPOSITION/ INFORMATION ON INGREDIENTS**

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**3.1 Substances / Mixtures**

Ingredient	CAS Number	EC Number	Content
QUARTZ (CRYSTALLINE SILICA) (IE. SAND)	14808-60-7	238-878-4	5 to 12%
HORNFELS / GREENSTONE / AGGREGATES/ STONE / CRUSHER DUST / ROCK FLOUR	-	-	84 to 89%
BINDERS (RESIDUAL BITUMEN BINDER)	8052-42-4	232-490-9	3 to 6%
FILLER(S)	-	-	<2%

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**4. FIRST AID MEASURES**

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**4.1 Description of first aid measures**

**Eye** If contact with hot material occurs, flush gently with cold running water. Adhered material should only be removed under the medical direction. Seek immediate medical advice.

**Inhalation** If inhaled, remove from contaminated area. To protect rescuer, use a Type A (Organic vapour) respirator or an Air-line respirator (in poorly ventilated areas). Apply artificial respiration if not breathing.

**Skin** If contact with hot material occurs, drench area immediately with cold water, do not attempt to remove material adhered to the skin. Seek immediate medical attention.

**Ingestion** For advice, contact a Poisons Information Centre on 13 11 26 (Australia Wide) or a doctor (at once). If swallowed, do not induce vomiting. Ingestion is considered unlikely due to product form.

**First aid facilities** Eye wash facilities and safety shower are recommended.

**4.2 Most important symptoms and effects, both acute and delayed**

Avoid contact with hot material, as burns may result. Bitumens, occupational exposure to straight-run bitumens and their emissions during road paving, are classified as possibly carcinogenic to humans (IARC Group 2B).

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**4.3 Immediate medical attention and special treatment needed**

Burns caused by bitumen require special medical treatment. Consultation with a burns specialist experienced in bitumen burns is advisable in the first instance.

Refer to the Australian Asphalt Pavement Association (AAPA) bitumen burns card for further information (<http://www.aapa.asn.au>).

Bitumen burns: If hot bitumen contacts the skin, flush immediately with water and make no attempt to remove it. Use wet, cold towels if face, neck, shoulder or back etc are burnt. Cool burn areas for 30 minutes and seek immediate medical attention. Where bitumen completely circles a limb, it may have a tourniquet effect and should be split longitudinally as it cools. If eye burns result flush with water for 15 minutes, pad and seek immediate medical attention.

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**5. FIRE FIGHTING MEASURES**

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**5.1 Extinguishing media**

In case of fire, use water fog, foam, dry chemical or carbon dioxide extinguisher or spray. Do not use water jets.

**5.2 Special hazards arising from the substance or mixture**

Combustible. May evolve toxic gases (carbon/ sulphur/ nitrogen oxides, hydrogen sulphide, hydrocarbons) when heated to decomposition.

**5.3 Advice for firefighters**

Evacuate area and contact emergency services. Toxic gases may be evolved in a fire situation. Remain upwind and notify those downwind of hazard. Wear full protective equipment including Self Contained Breathing Apparatus (SCBA) when combating fire. Use waterfog to cool intact containers and nearby storage areas.

**5.4 Hazchem code**

2Y  
2 Fine Water Spray.  
Y Risk of violent reaction or explosion. Wear full fire kit and breathing apparatus. Contain spill and run-off.

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**6. ACCIDENTAL RELEASE MEASURES**

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**6.1 Personal precautions, protective equipment and emergency procedures**

Wear Personal Protective Equipment (PPE) as detailed in section 8 of the SDS. Clear area of all unprotected personnel. Ventilate area where possible. Allow material to cool. Contact emergency services where appropriate.

**6.2 Environmental precautions**

Contain material and prevent product from entering drains and waterways. Collect and seal in properly labelled containers for disposal. If contamination of sewers or waterways has occurred, contact local emergency services.

**6.3 Methods of cleaning up**

Contain spillage, then cover / absorb spill with non-combustible absorbent material (vermiculite, sand, or similar), collect and place in suitable containers for disposal. Eliminate all sources of ignition.

**6.4 Reference to other sections**

See Sections 8 and 13 for exposure controls and disposal.

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**7. HANDLING AND STORAGE**

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**7.1 Precautions for safe handling**

Before use carefully read the product label. Use of safe work practices are recommended to avoid eye or skin contact and inhalation. Observe good personal hygiene, including washing hands before eating. Prohibit eating, drinking and smoking in contaminated areas.

**7.2 Conditions for safe storage, including any incompatibilities**

Store in a well ventilated area removed from ignition sources, oxidising agents and foodstuffs. Keep storage vessels closed when not in use. Take precautionary measures against electrostatic discharges.

**7.3 Specific end uses**

No information provided.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

### 8.1 Control parameters

#### Exposure standards

Ingredient	Reference	TWA		STEL	
		ppm	mg/m <sup>3</sup>	ppm	mg/m <sup>3</sup>
Bitumen fume	SWA [AUS]	--	5	--	--
Quartz (respirable dust)	SWA [AUS]	--	0.05	--	--
Quartz (respirable dust)	WorkSafe VIC	--	0.02	--	--

### Biological limits

No biological limit values have been entered for this product.

### 8.2 Exposure controls

**Engineering controls** Avoid inhalation by working upwind where possible. Use in well ventilated areas. Maintain vapour /fume levels below the recommended exposure standard.

### PPE

Personal protective equipment (PPE) should meet recommended national standards. Check with PPE suppliers.

**Eye / Face** Wear splash-proof goggles. If heating, wear a faceshield.

**Hands** Wear neoprene gloves. If heating, wear leather or insulated gloves.

**Body** Wear coveralls. If spraying, wear rubber boots and impervious coveralls.

**Respiratory** Where an inhalation risk exists, wear a Type A-Class P1 (Organic gases/vapours and Particulate) respirator.



## 9. PHYSICAL AND CHEMICAL PROPERTIES

### 9.1 Information on basic physical and chemical properties

Appearance	BLACK SOLID
Odour	CHARACTERISTIC BITUMEN ODOUR
Flammability	COMBUSTIBLE
Flash point	NOT AVAILABLE
Boiling point	NOT AVAILABLE
Melting point	NOT AVAILABLE
Evaporation rate	NOT AVAILABLE
pH	NOT AVAILABLE
Vapour density	NOT AVAILABLE
Relative density	1.6 to 2.6
Solubility (water)	INSOLUBLE
Vapour pressure	NOT AVAILABLE
Upper explosion limit	NOT AVAILABLE
Lower explosion limit	NOT AVAILABLE
Partition coefficient	NOT AVAILABLE
Autoignition temperature	NOT AVAILABLE
Decomposition temperature	260°C (Approximately)
Viscosity	NOT AVAILABLE
Explosive properties	NOT AVAILABLE
Oxidising properties	NOT AVAILABLE
Odour threshold	NOT AVAILABLE

## **10. STABILITY AND REACTIVITY**

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### **10.1 Reactivity**

Carefully review all information provided in sections 10.2 to 10.6.

### **10.2 Chemical stability**

Stable under recommended conditions of storage.

### **10.3 Possibility of hazardous reactions**

Polymerization is not expected to occur.

### **10.4 Conditions to avoid**

Avoid heat, sparks, open flames and other ignition sources.

### **10.5 Incompatible materials**

Incompatible with oxidising agents (e.g. hypochlorites) and acids (e.g. nitric acid).

### **10.6 Hazardous decomposition products**

May evolve toxic gases (carbon/ sulphur/ nitrogen oxides, hydrogen sulphide, hydrocarbons) when heated to decomposition.

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## **11. TOXICOLOGICAL INFORMATION**

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### **11.1 Information on toxicological effects**

<b>Acute toxicity</b>	No known toxicity data is available for this product. Based on available data, the classification criteria are not met. Inhalation may cause headache, nausea and respiratory tract irritation. Once cured, the inert solid material is considered non hazardous.
<b>Skin</b>	Contact with hot material may cause skin burns. Exposure to asphalt fumes may cause dermatitis and photosensitisation. Once cured, the inert semi solid material is considered non hazardous.
<b>Eye</b>	Contact with hot material may cause eye burns. Exposure to asphalt fumes may cause irritation, redness or pain. Once cured, the inert semi solid material is unlikely to penetrate the eye and considered non hazardous.
<b>Sensitisation</b>	Not classified as causing skin or respiratory sensitisation.
<b>Mutagenicity</b>	Insufficient data available to classify as a mutagen.
<b>Carcinogenicity</b>	Bitumens, occupational exposure to straight-run bitumens and their emissions during road paving, are classified as possibly carcinogenic to humans (IARC Group 2B).
<b>Reproductive</b>	Insufficient data available to classify as a reproductive toxin.
<b>STOT - single exposure</b>	Not classified as causing organ damage from single exposure. However, inhalation of bitumen fumes may cause headache, nausea and respiratory tract irritation. This material may release trace quantities of hydrogen sulphide within storage facilities.
<b>STOT - repeated exposure</b>	Not classified as causing organ damage from repeated exposure.
<b>Aspiration</b>	Not expected to present an aspiration hazard.

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## **12. ECOLOGICAL INFORMATION**

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### **12.1 Toxicity**

The bulk of the bitumen dispersed in asphalt is fairly inert when set, and should not present an environmental hazard under normal conditions. There is currently insufficient data to classify the ecotoxicity of this product. Generally considered non-hazardous to the environment however avoid excessive spillage or storm run-off into waterways and drains.

### **12.2 Persistence and degradability**

Asphalts are non-volatile materials that will sink in water and form a solid layer on the surface of the ground. Biodegradation is likely to be slow.

### **12.3 Bioaccumulative potential**

This product is not expected to bioaccumulate through food chains in the environment.

### **12.4 Mobility in soil**

Emulsifies in water; Spillages are unlikely to penetrate the soil.

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**12.5 Other adverse effects**

Avoid contamination of drains and waterways.

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**13. DISPOSAL CONSIDERATIONS**

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**13.1 Waste treatment methods**

**Waste disposal** For small amounts dispose of to an approved landfill site. Contact the manufacturer for additional information if larger amounts are involved. Prevent contamination of drains and waterways as aquatic life may be threatened and environmental damage may result.

**Legislation** Dispose of in accordance with relevant local legislation.

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**14. TRANSPORT INFORMATION**

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CLASSIFIED AS A DANGEROUS GOOD BY THE CRITERIA OF THE ADG CODE



	LAND TRANSPORT (ADG)	SEA TRANSPORT (IMDG / IMO)	AIR TRANSPORT (IATA / ICAO)
<b>14.1 UN Number</b>	3257	3257	3257
<b>14.2 Proper Shipping Name</b>	ELEVATED TEMPERATURE LIQUID, N.O.S., at or above 100 C and below its flash point (including molten metals, molten salts, etc.)	ELEVATED TEMPERATURE LIQUID, N.O.S., at or above 100 C and below its flash point (including molten metals, molten salts, etc.)	ELEVATED TEMPERATURE LIQUID, N.O.S., at or above 100 C and below its flash point (including molten metals, molten salts, etc.)
<b>14.3 Transport hazard class</b>	9	9	9
<b>14.4 Packing Group</b>	III	III	III

**14.5 Environmental hazards**

Not a Marine Pollutant.

**14.6 Special precautions for user**

**Hazchem code** 2Y

**EmS** F-A, S-P

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**15. REGULATORY INFORMATION**

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

**Poison schedule** A poison schedule number has not been allocated to this product using the criteria in the Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP).

**Classifications** Safe Work Australia criteria is based on the Globally Harmonised System (GHS) of Classification and Labelling of Chemicals (GHS Revision 7).

**Inventory listings** **AUSTRALIA: AIIC (Australian Inventory of Industrial Chemicals)**  
All components are listed on AIIC, or are exempt.

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**16. OTHER INFORMATION**

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**Additional information** PERSONAL PROTECTIVE EQUIPMENT GUIDELINES:  
The recommendation for protective equipment contained within this report is provided as a guide only. Factors such as form of product, method of application, working environment, quantity used, product concentration and the availability of engineering controls should be considered before final selection of personal protective equipment is made.

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**HEALTH EFFECTS FROM EXPOSURE:**

It should be noted that the effects from exposure to this product will depend on several factors including: form of product; frequency and duration of use; quantity used; effectiveness of control measures; protective equipment used and method of application. Given that it is impractical to prepare a report which would encompass all possible scenarios, it is anticipated that users will assess the risks and apply control methods where appropriate.

**Abbreviations**

ACGIH	American Conference of Governmental Industrial Hygienists
CAS #	Chemical Abstract Service number - used to uniquely identify chemical compounds
CNS	Central Nervous System
EC No.	EC No - European Community Number
EMS	Emergency Schedules (Emergency Procedures for Ships Carrying Dangerous Goods)
GHS	Globally Harmonized System
GTEPG	Group Text Emergency Procedure Guide
IARC	International Agency for Research on Cancer
LC50	Lethal Concentration, 50% / Median Lethal Concentration
LD50	Lethal Dose, 50% / Median Lethal Dose
mg/m <sup>3</sup>	Milligrams per Cubic Metre
OEL	Occupational Exposure Limit
pH	relates to hydrogen ion concentration using a scale of 0 (high acidic) to 14 (highly alkaline).
ppm	Parts Per Million
STEL	Short-Term Exposure Limit
STOT-RE	Specific target organ toxicity (repeated exposure)
STOT-SE	Specific target organ toxicity (single exposure)
SUSMP	Standard for the Uniform Scheduling of Medicines and Poisons
SWA	Safe Work Australia
TLV	Threshold Limit Value
TWA	Time Weighted Average

**Report status**

This document has been compiled by RMT on behalf of the manufacturer, importer or supplier of the product and serves as their Safety Data Sheet ('SDS').

It is based on information concerning the product which has been provided to RMT by the manufacturer, importer or supplier or obtained from third party sources and is believed to represent the current state of knowledge as to the appropriate safety and handling precautions for the product at the time of issue. Further clarification regarding any aspect of the product should be obtained directly from the manufacturer, importer or supplier.

While RMT has taken all due care to include accurate and up-to-date information in this SDS, it does not provide any warranty as to accuracy or completeness. As far as lawfully possible, RMT accepts no liability for any loss, injury or damage (including consequential loss) which may be suffered or incurred by any person as a consequence of their reliance on the information contained in this SDS.

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