



MATERIAL SAFETY DATA SHEET

ROADWAYS PTY LTD

IMPORTANT NOTICE: This Material Safety Data Sheet (MSDS) is issued by Roadways Proprietary Limited, in accordance with NOHSC: 1005 (1994) Control of Workplace Hazardous Substances and the National Code of Practice NOHSC: 2011 (2003). As such, the information contained herein must not be altered, deleted or added to. Roadways Proprietary Limited will issue new MSDS when there is a change in product specifications and/or NOHSC regulations. Roadways Proprietary Limited will not accept any responsibility for any changes made to its MSDS in content by any other person or organisation.

1. IDENTIFICATION OF MATERIAL AND SUPPLIER

Product name: Asphalt

Company Name: Roadways Pty Ltd

Address: 28 Jackson Street, Glenorchy Tasmania 7010

Telephone: (03) 6271 3500

Fax: (03) 6272 9606

Trade names: Roadways Asphalt
Asphaltic Concrete
Bituminous Concrete

Recommended use: Asphalt is used for a variety of applications in construction and surfacing of pavements for vehicular and pedestrian traffic

2. HAZARDS IDENTIFICATION

Hazard Classification Not classified as hazardous according to NOHSC
NON-HAZARDOUS SUBSTANCE
Not classified as dangerous goods according to DG Code
NON-DANGEROUS GOODS

Risk Phrase(s) Not classified as hazardous according to NOHSC

Safety Phrase(s) S23 (2) Do not breathe vapour
S24/25 Avoid contact with skin and eyes

3. COMPOSITION/ INFORMATION ON INGREDIENTS

Chemical Entity:	CAS No:	Proportion (by weight)
Crushed stone, gravel		40-95%
Sand	14808-60-7	< 60%
Bitumen (petroleum asphalt)	8052-42-4	3-8%
Other ingredients may also be added:		
Lime	1305-78-3	< 8%
Portland cement	65997-15-1	< 8%
Diesel Fuel	68334-30-5	< 2%
Kerosene	8008-20-6	< 2%
Polymer	-	< 1%
Adhesion agents	-	< 0.1%
Metallic oxide pigments	-	< 3%
Mineral fibre	-	< 0.5%
Cellulose fibre	-	< 0.5%

- Crystalline silica (quartz) may be a constituent of the sand, crushed stone and gravel used in any particular asphalt mix.

4. FIRST AID MEASURES

Inhalation	If fumes from hot product are inhaled, remove affected person from contaminated area. Keep at rest until recovered. If symptoms persist seek medical attention. Hardened asphalt is not a health hazard, but repeated inhalation of dry dust from cutting or breaking asphalt may result in silicosis and an increased risk of lung cancer if the dust contains sufficiently high concentrations of atmospheric crystalline silica (quartz).
Ingestion	Do not induce vomiting. Wash out mouth thoroughly with water. If symptoms develop seek medical attention.
Skin	Wash affected area thoroughly with soap and water. If symptoms develop seek Medical attention. If product is hot: wash affected area thoroughly with soap and water. Remove contaminated clothing and wash before reuse or discard. If symptoms develop seek medical attention. If molten material adheres to skin, Do not attempt to remove. Cool with cold water, wrap loosely with bandage or Cloth and immediately seek burns specialist medical attention.
Eye watering.	The fumes, mists or vapours may be irritating to the eyes resulting in redness and If in eyes, hold eyelids apart and flush the eyes continuously with running Water. Continue flushing for several minutes until all contaminants are washed out completely. If symptoms develop and persist seek medical attention. If molten material adheres to eyes, cool with cold water, do not attempt to remove. Immediately seek burns specialist medical attention.
First Aid Facility	Eye wash and normal washroom facilities.
Advice to Doctor	Adherent asphalt do not remove immediately seek advice from burns specialist

5. FIRE FIGHTING MEASURES

Suitable Extinguishing Media	Use carbon dioxide, dry chemical, foam, water mist or water spray.
Hazards from Combustion Products	Under fire conditions this product may emit toxic and/or irritating fumes and gases including carbon monoxide and carbon dioxide
Specific Hazards	Combustible solid, but is unlikely to catch fire.
Fire Precautions	Fire fighters should wear Self-Contained Breathing Apparatus (SCBA) operated in positive pressure mode and full protective clothing to prevent exposure to vapours or fumes. Water spray may be used to cool down heat-exposed containers.

6. ACCIDENTAL RELEASE MEASURES

Emergency Procedures	<p>Increase ventilation, evacuate all unprotected personnel. Wear sufficient respiratory protection and full protective clothing to prevent exposure. Sweep up material avoiding dust generation or, if applicable, dampen spilled material with water to avoid airborne dust, and then transfer material to a suitable container.</p> <p>Wash surfaces well with soap and water. Seal all wastes in labelled plastic containers for subsequent recycling or disposal. Dispose of waste according to the applicable local and national regulations.</p> <p>If contamination of sewers or waterways occurs inform the local water authorities and EPA in accordance with local regulations.</p>
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7 SAFE HANDLING and STORAGE

Spillage	<p>only personnel wearing respiratory protection and full protective clothing to prevent exposure are to clean up spillage, move all other person/s away from site. Use suitable plant or equipment to clean site, ensure not to generate disturbance or dust. If applicable dampen spilled material with water.</p> <p>transfer material to a suitable container. Wash surfaces well with soap and water. Seal all wastes in labelled plastic containers for subsequent recycling or disposal. Dispose of waste according to the applicable local and national regulations. If contamination of sewers or waterways occurs inform the local water authorities and EPA in accordance with local regulations.</p>
Storage	<p>Store in a cool, dry, well-ventilated area, out of direct sunlight and moisture. Store in labelled, corrosion-resistant containers. Keep containers tightly closed. Store away from bases, water and other incompatible materials. Have appropriate fire extinguishers available in and near the storage area.</p>



Handling Hotmix Use only in a well-ventilated area. Keep containers sealed when not in use. Prevent the build-up of mists or vapours in the work atmosphere. Avoid inhalation of vapours and mists, and skin or eye contact. Use protective equipment when handling hot materials. Maintain high standards of personal hygiene i.e. Washing hands prior to eating, drinking, smoking or using toilet facilities.

8 EXPOSURE CONTROLS/ PERSONAL PROTECTION

National Exposure Standards	No exposure value assigned for this specific material by the National Standard Occupational Health and Safety Commission (NOHSC), Australia. However, the available exposure limits for ingredient(s) are listed below: Substance TWA (mg/m ³) Bitumen fumes 5 TWA (Time Weighted Average): The average airborne concentration of a particular substance when calculated over a normal eight-hour working day, for a five-day week.
Engineering Controls	Provide sufficient ventilation to keep airborne levels below the exposure limits. Where dusts or mists are generated, particularly in enclosed areas, and natural ventilation is inadequate; a local exhaust ventilation system is required
Respiratory Protection	If engineering controls are not effective in controlling airborne exposure then wears an approved organic vapour respirator conforming with Australian Standards AS/NZS 1715 and AS/NZS 1716 when exposed to fume. If working where dust is generated wear appropriate respiratory protection approved for Silica dust exposures (AS/NZS 1715 and 1716).
Eye Protection	Safety glasses with side shields or chemical goggles should be worn; if material is handled hot a thermal protective face shield should be worn. Eye/face protection may vary according to individual circumstances. Eye Protection devices should conform with AS/NZS 1337 – Eye Protectors for Industrial Application.
Hand/Body Protection	Wear gloves of impervious material, such as leather. Final choice of appropriate gloves will vary according to individual circumstances i.e. methods of handling or according to risk assessments undertaken. Reference should be made to AS/NZS 2161.1: Occupational protective gloves - Selection, use and maintenance. Suitable protective workwear, e.g. long sleeve shirt, trousers or overalls fastened properly is recommended. For hot material, heat resistant coveralls can be used. Industrial clothing should conform to the specifications detailed in AS/NZS 2919: Industrial clothing.

9. PHYSICAL DESCRIPTION and CHEMICAL PROPERTIES

Appearance: Generally black semi-solid material which sets hard on cooling and compaction.
May be coloured with oxide pigments.

Odour: Slight asphaltic odour when hot. Some additives may create odour peculiar to that additive. The odour increases with increase in temperature of application.

Melting Point	Not available
Boiling Point	Not available
Solubility in Water	Not soluble
Specific Gravity	2-3 kg/L
pH Value	Not applicable
Vapour Pressure	Not available
Vapour Density (Air=1)	Not available
Flash Point	>200°C
Flammability	Combustible solid
Auto-Ignition Temperature	Not available
Flammable Limits - Lower	Not applicable
Flammable Limits - Upper	Not applicable

10. STABILITY AND REACTIVITY

Chemical Stability	Stable under normal conditions of storage and handling.
Conditions to Avoid	Heat and other sources of ignition.
Incompatible Materials	Strong oxidizing agents
Hazardous	Under fire conditions this product may emit toxic and/or irritating fumes and gases including carbon monoxide and carbon dioxide.
Hazardous Reaction	Will react with strong oxidizing agents.
Hazardous Polymerization	Will not occur.

11. TOXICOLOGICAL INFORMATION

Toxicology Information	No toxicity data available for this material. The available toxicity data for the ingredients are as follows: Toxicity data for Bitumen:
Inhalation	LD50 (Oral, Rat): >5000 mg/kg Inhalation of product dusts or mists may cause irritation of the nose, throat and respiratory system
Ingestion	Ingestion of this product may irritate the gastric tract causing nausea and vomiting.
Skin	May be irritating to skin. The symptoms may include redness, itching and swelling.
Eye	May be irritating to eyes. The symptoms may include redness, itching and tearing.
Chronic Effects	<p>NOHSC SAFE WORK AUSTRALIA</p> <p>High levels of Quartz (crystalline silica) Atmospheric crystalline silica can bio-accumulate in the lungs and cause disease of the respiratory system eg; silicosis, Chronic silicosis may be of the simple type where single nodules are present in the lung or it may progress to massive fibrosis. Workers with advanced massive fibrosis may be expected to have a largely restrictive functional abnormality.</p> <p>Exposure to crystalline silica can also lead to other respiratory diseases such as chronic obstructive airway disease and bronchitis. These diseases can occur both in workers with and without silicosis.</p> <p>Renal disease and scleroderma have been described in case-reports where workers were exposed to high levels of crystalline silica.</p> <p>Exposure Standard 0.1 mg/m³.</p>

12 ECOLOGICAL INFORMATION

Eco toxicity	No ecological data are available for this material.
Persistence / Degradability	Not available
Mobility	Not soluble in water.
Environmental Protection	Prevent this material entering waterways, drains and sewers.

13. DISPOSAL CONSIDERATIONS

Disposal	The disposal of the spilled or waste material must be done in accordance With applicable local and national regulations.
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14. TRANSPORT INFORMATION

Transport Not classified as Dangerous Goods according to the Australian Code for the Transport of Dangerous Goods by Road and Rail.

15. REGULATORY INFORMATION

Regulatory Not classified as Hazardous according to criteria of National Occupational Health & Safety Commission (NOHSC), Australia.
Not classified as a Scheduled Poison according to the Standard for the Uniform Scheduling of Drugs and Poisons (SUSDP).
Poisons Schedule Not Schedule

16 OTHER INFORMATION

Prepared by Roadways Pty Ltd on 6th April 2011 in accordance with the National Code of Practice for the Preparation of Material Safety Data Sheets

WARNING

WORK SAFELY WITH ASPHALT AND SPRAY SEAL WHEN ROAD PROFILING

Why you should take care:

- When asphalt products are cut, drilled, sawed, routed, shaved, munched, broken up or ground, silica dust may be released. Breathing silica dust over time may lead to lung diseases including bronchitis, silicosis and lung cancer.
- Asphalt fumes may irritate eyes, skin, nose, throat and lungs.

Protect yourself against breathing fumes and dust and against burns.

- Wear protective clothing, gloves (AS 2161) and eye protection (AS/NZS 1337)
- Working with hot asphalt - also wear an organic vapour respirator (AS/NZS 1715/1716)
- Cutting, grinding etc. hardened asphalt – also wear a P2 dust mask (As/NZS 1715/1716)

First Aid

- Eyes and Skin – wash with plenty of water
- Dust or fumes breathed in – move straight to fresh air.

Clean up every day

- Wash your work clothes often – it's best not to put them in the same wash with other clothes.
- When working in an enclosed area wet and sweep or dry vacuum all dust, collect solid waste and put all in a covered container – wear all protective gear.
- Follow local authority requirements for getting rid of waste.