ROAD MAINTENANCE PTY LTD

A.C.N. 006 798 796

Specialists in crack sealing of road pavements

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Material Safety Data Sheet

MAXISEAL

Statement of Hazardous Nature

Not classified as hazardous according to the criteria of Worksafe Australia

(1) Company Identification

Company Details
Road Maintenance Pty Ltd
ACN: 006 798 796
14-16 Elliott Road, Dandenong, Victoria
Business Hours: +613-9794-6454
Emergency 24 hours: 0412 339 357

(2) HAZARD IDENTIFICATION

Product (Material) Name: Crumb Rubberised Bitumen for Crack-Sealing.
Recommended Uses: Repair of Roads.
UN Number: 3257 (Only when at a temperature above 100°C)
Dangerous Goods Class: 9
Packaging Group: 3
Hazchem: 2W (Only when at a temperature above 100°C)
Poisons Schedule: Not Applicable
Packaging Size: Sample and Bulk
Uses: Road Manufacture
Symbols: No Hazardous Symbols required
R-phrase(s): Not Classified
Health Hazards: Not a health hazard below 100°C. Contact with hot material can cause thermal burns which may result in skin damage. Hot product may cause eye burns.
Signs and Symptoms: Hydrogen Sulphide is a minor component of bitumen and it when the bitumen is above 100°C it may be released and has a broad range of effects dependent upon

the airborne concentration and length of exposure. 1ppm gives an odour of rotten eggs, 10ppm will result I respiratory irritation, 100ppm in coughing and headaches and 1,000 ppm in loss of consciousness. There is no evidence that hydrogen Sulphide accumulates in body tissue after exposure.
Safety Hazards: Not classified as flammable but will burn. Typically stored and handled hot. Do not allow contact of hot product with water as water will expand 1,000 times and may explosively boil over.
Environmental Hazards: Not classified as dangerous to the environment.
SUSMP Schedule: Not Scheduled

(3) Composition/Information on Ingredients

Preparation Description: A blend of crumb rubber and components derived from crude oil.

(4) First Aid Measures

General Information: Do Not Delay. Keep victim calm and obtain medical treatment immediately.
Inhalation: If there is inhalation of mists, fumes or vapour when the bitumen is above 100°C this may cause irritation t the nose or throat. Remove victim to fresh air. If rapid recovery does not occur, obtain medical attention. Casualties suffering ill effects as a result of exposure to hydrogen Sulphide should be removed to fresh air. Do not attempt to rescue the victim unless proper respiratory protection is worn. If the victim has difficulty breathing or tightness of the chest or dizziness (or vomiting or unresponsive) give 100% oxygen with rescue breathing or cardiopulmonary resuscitation (CPR) as required and transport to the nearest medical facility.

Skin Contact: If there is contact with hot product (generally above 100°C), cool the burn are by flushing with large amounts of water. Do not attempt to remove anything from the burn area and do not apply burn creams or ointments. Cove the burn area loosely with a sterile dressing, if available Transport to the nearest medical facility for additional treatment. It should be noted that this product contracts on cooling. Where a limb is encased, care should be taken to avoid the development of a tourniquet effect. In the event of this effect, the adhering product must be softened and/or split to prevent restriction of blood flow. All burns should receive medical attention.

Eye Contact: Hot product (usually above 100°C) – If there is contact with hot product, cool the burn area by flushing with large amounts of water for a period of at least 20 minutes. Do not attempt to remove anything from the burn area and do not apply burn creams or ointments. Cover the burn area loosely with a sterile dressing, if available. Transport to the nearest medical facility. All burns should receive medical attention.

Ingestion: Under normal conditions of use this is not a primary route of exposure.

Advice to Physician: Do not attempt to remove the product from the skin as it provides an air tight sterile covering. Which will eventually fall away with the scab as the burn heals. If removal is attempted, mineral oil (not mineral spirits) or a mineral oil based ointment may be applied to help soften the product. Hydrogen Sulphide – CNS asphyxiant. May cause rhinitis, bronchitis, and occasional pulmonary oedema after severe exposure. Consider Oxygen therapy. Consult a poison control centre for guidance.

(5) Fire Fighting

Clear the fire area of all non-emergency personnel.

Specific Hazards: Hazardous combustion product may include: A complex mixture of airborne

solid and liquid particles and gases. Carbon monoxide. Unidentified organic and inorganic compounds. Boil over of tanks and violent eruptions may occur in the presence of water. The use of water on hot product (which is usually stored at temperatures well above 100°C) is a potential problem.

Suitable Extinguishing media: Foam, water fog (as a last resort), dry chemical powder, carbon dioxide, sand or earth may be used on small fires only.

Unsuitable Extinguishing Media: Do Not use water.
Protective equipment for Firefighters: Proper protective equipment including breathing apparatus must be worn when approaching a fire in a confined space.

(6) Accidental Release Measures

Avoid contact with spilled or released material. For guidance on selection of personal protective equipment see chapter 8 of this MSDS. See chapter 13 for information on disposal.

Protective Measures: Avoid contact of hot product (above 100°C) with skin, eyes and clothing. Hot product should be handled so there is no risk of burns. Use compressed air or air respiratory equipment in confined spaces.

Clean Up Methods: Small Spillage – Allow the hot product to cool and solidify, this may be assisted by covering with sand. Shovel into a suitable clearly marked container for disposal or reclamation in accordance with local regulations.

Large Spillage – Prevent the spillage from spreading by making a barrier
with sand, earth or other containment material. The addition of earth or fine sand directly to the spill will usually prevent is from moving.

Additional Advice: Local authorities should be advised if significant spillages cannot be contained.

(7) Handling and Storage

General Precautions: Avoid contact with hot liquid to prevent burns.

Handling: For quality, health and safety reasons do not exceed a storage and handling temperature of 210°C. Clean, dry and heat resistant hoses should be used. Do not use steam to empty pipelines and hoses. Use compressed air to blow product from the system or apply a vacuum to suck product from the system. Do Not use solvents to clear obstructions of pipelines.

Storage: Keep dry and do not store above 210°C, keep container of hot liquid (only applies when above 100°C) in a well- ventilated place. Prevent all contact with water when product is above 100°C. In case of long term storage, deposits may develop on walls and roofs of storage tanks. These deposits (Iron Sulphides) may be pyrophoric and self-ignite. Hydrogen Sulphide may accumulate in tanks during long term storage at high temperatures. For this reason, tank vapour spaces should be regarded as hazardous. Storage temperatures should be kept at least 30°C below the flashpoint and should never exceed 210°C.
Recommended Materials: For containers or container linings use stainless steel.

Unsuitable Materials: For containers avoid the use of PVC, polyethylene, or high density polyethylene.

Discharge from Bitumen tanks: Tanks may be heated by hot oil, steam, electricity or flame

tubes. When pumping product from a storage or road tanker take care to avoid the risk of fire or explosion as a result of exposing hot heater tubes. The tubes should be covered by a minimum of 150 mm of hot product unless the heat has been switched off for a period of sufficient cooling. A check should be made to ensure that the receiving tank has sufficient ullage space to accommodate the load.

(8) Exposure Controls/ Personal Protection

Occupational Exposure limits

Material	Source	Type	PPM	Mg/m3	Notation
Hydrogen Sulphide	ACGIH	TWA	1ppm		
	ACGIH	STEL	5ppm		
	AU OEL	TWA	10ppm		
Asphalt Fumes	AU OEL	TWA (Inhalable fraction)		0.5 mg/m3	
	AU OEL	TWA (Fume)		5.0 mg/m3	

Additional Information: Product has a very low volatility at temperatures less than 100°C and there is no fume formation. Avoid vapours from heated materials.

Exposure Limits: The level of protection and types of controls necessary will vary depending upon potential exposure conditions. Select controls based upon risk assessment of local circumstances. Use eyewashes and showers for emergency use.

Personal Protective Equipment: Personal protective equipment (PPE) for product used at temperatures above 100°C should meet recommended national standards. At Road Maintenance we recommend steel capped boots, high temperature resistant high vis overalls (long sleeved and long legged) buttoned to the top, temperature resistant gloves that reach up to the elbow, safety glasses and full face mask as a minimum requirement.

Respiratory Protection: No respiratory protection is required under normal conditions of use. Use self-contained breathing apparatus where hydrogen Sulphide fumes may accumulate.

Hand Protection: For hot product wear suitable temperature resistant gloves that reach up to the elbow.

Eye Protection: For hot product under normal operations wear safety glasses and a full safety face visor.

Protective clothing: For normal operations with hot material wear heat resistant coveralls (with cuffs over gloves and legs over boots) and heavy duty steel capped boots. The use of a neck apron is highly recommended.

Environmental exposure Controls: Minimum release to the environment. An environmental assessment must be made to ensure compliance with local environmental legislation.

(9) Physical and Chemical properties

Appearance: Black and hot when liquid, black and solid when cold.
Boiling point: > 400°C
Vapour pressure: <1 mm Hg at 180°C
Flashpoint: >240°C
Solubility in Water: Insoluble

Volatiles: Nil
Melting point: 105°C
Density at 25°C: 1.04 g/cm^3
Dynamic Viscosity: 3.0 Pa.s at 180°C. Product is a solid at 25°C.
Decomposition temperature: data not available.

(10) Stability and Reactivity

Stability: Product is stable under normal conditions of use.
Conditions to avoid: Heating above 210°C will cause slow degradation and evolution of flammable vapours. Never mix hot product with water.
Materials to avoid: Do not allow molten material to contact water as this can cause violent eruptions, splatter to material or ignite flammable material.
Hazardous Decomposition Products when above 100°C: Hydrogen Sulphide

(11) Toxicological Information

Basis for Assessment: Information given is based on product testing and/or similar products.
Acute Oral Toxicity: Low Toxicity; LD50 >5,000 mg/m3.
Acute Dermal Toxicity: Low dermal toxicity; LD50 >2,000 mg/m3 Rabbit.
Acute Inhalation Toxicity: Low inhalation Toxicity, but avoid vapours from hot product.
Skin Irritation: Contact with hot material (above 100C) will cause thermal burns. Contact with solid material is non-irritating.
Eye Irritation: Hot product may cause severe eye burns or blindness. Cold solid product will be almost non-irritating.
Respiratory Irritation: Inhalation of vapours from hot product may cause irritation to the respiratory system.
Sensitisation: Not a skin sensitiser.
Repeated Dose toxicity: Not a repeated dose hazard.
Mutagenicity: Is not a mutagenic hazard.
Carcinogenicity: Is not a carcinogen. Bitumens contain low concentrations of poly aromatic hydrocarbons (PAC's). At temperatures below 100°C these PAC's are not considered to be bio available.
Reproductive and Development Toxicity: Not expected to impair fertility. Not expected to be a developmental toxicant.

(12) Ecological Information

Ecotoxicological data has not been determined specifically for this product. Information given is based on knowledge of the components and the ecotoxicology of similar products.
Acute Toxicity: Insoluble in water. Non-toxic to aquatic organisms; LL/EL/IL50>10mg/L.
Mobility: Adsorbs to soils and has low mobility. In water it will either float or sink showing little tendency to disperse.
Persistence/degradability: Expected to be not readily biodegradable.
Bioaccumulation: Has the potential to bio-accumulate.
Other: Not expected to have ozone depleting potential or global warming potential.

(13) Disposal Considerations

Material Disposal: Recover or recycle if possible. It is the responsibility of the waste generator

to determine the toxicity and physical properties of the material generated to determine the proper waste classification and disposal methods in compliance with regulations. Do not dispose into the environment or into drains or into water courses.

Container Disposal: Dispose in accordance with prevailing regulations, preferably to a recognised collector or contractor. The competence of the collector or contractor should be established beforehand.

Local Legislation: Disposal should be in accordance with applicable regional, national and local laws and regulations.

(14) Transport Information

ADG

UN number: 3257 (BUT ONLY WHEN ABOVE 100°C).
Proper Shipping Name: Elevated temperature Liquid, N.O.S (Bitumen) but only when transported above 100°C.
Class: 9
Packing Group: 3
Hazchem Code: 2W (ONLY WHEN ABOVE 100°C)

IMDG

Identification Number: 3257 (BUT ONLY WHEN ABOVE 100°C).
Proper Shipping Name: Elevated temperature Liquid, N.O.S (Bitumen) but only when transported above 100°C.
Technical Name: Bitumen
Class/Division: 9
Packing Group: 3
Marine Pollutant: No
Additional Information: IATA – Forbidden for transport on passenger and cargo aircraft at temperatures above 100°C. This product is safe for transport at temperatures below 100°C. Not dangerous for conveyance under UN, IMO, ADR/RID, IATA codes if transported at temperatures below 100°C. Marpol annex 1 rules apply for bulk shipments by sea.

(15) Regulatory Information

The regulatory information is not intended to be comprehensive. Other regulations may apply to this material.

SUSMP Schedule: Not scheduled

Chemical Inventory Status

EINECS: All components listed or polymer exempt.
TSCA: All components listed.
JEX (JP): All components listed.
DSL: All components listed.
AICS: All components listed.
INV (CN): All components listed.
PICCS (PH): All components listed or polymer exempt.

Other Information: National code of practice for the preparation of Material Safety Datasheets

(NOHSC: 2011). List of designated hazardous substances (NOHC: 10005). Adopted criteria for classifying hazardous substances (NOHSC: 1008). Adopted national exposure standards for atmospheric contaminants in the Occupational Environment (NOHSC: 1003). Australian Dangerous Goods Code. Standard for the uniform scheduling of medicines and poisons.

(16) Other Information

R-phrase(s): Not classified.

MSDS Version number: 1.0

MSDS Effective Date: 29 May 2015.

MSDS Regulations, Uses and restrictions: This product must not be used in applications other than those recommended in section-1, without first seeking the advice of the supplier.

MSDS Distribution: The information in this document should be made available to all who may handle the product.

Disclaimer: *This information is based on the current knowledge and is intended to describe the product for the purposes of health, safety and environment requirements only. It should not therefore be construed as guaranteeing any specific property of the product.*