

Material Safety Data Sheet
BITULASTIC CRUMB RUBBER MODIFIED
BITUMEN
Bitulastic 5 Part Crumb Rubber

Classified as non hazardous according to criteria of NOHSC.

Bituminous Products Pty Ltd
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Section 1: IDENTIFICATION OF THE MATERIAL AND SUPPLIER

PRODUCT NAME: Bitulastic 5 Part Crumb Rubber Modified Bitumen

OTHER NAME: 5 Part

MANUFACTURER'S PRODUCT CODE: 220-2530

UN No.: 3257 (When hot)

DANGEROUS GOODS CLASS: 9 (When hot)

PACKAGING GROUP: Not applicable

SUB RISK: None Allocated

HAZCHEM: 2Y

POISONS SCHEDULE: None

MAJOR USES: Spray seal grade polymer modified binder.

METHOD OF APPLICATION: Spray

Section 2: HAZARDS IDENTIFICATION

HAZARD CLASSIFICATION: Classified as non- hazardous according to criteria of NOHSC

These products are non hazardous in their solid state. The following applies only to using the products at elevated temperatures in their molten form.

Molten form:

RISK PHRASES:

R34	Causes burns.
R37	Irritating to respiratory system.
R41	Risk of serious eye damage.

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Molten form:**SAFETY PHRASES:**

S23	Do not breathe gas/fumes and vapour
S36/37/39	Wear suitable protective clothing, gloves and eye/face protection.

Section 3: COMPOSITION/INFORMATION ON INGREDIENTS

<u>CHEMICAL NAME</u>	<u>CAS NUMBER</u>	<u>PROPORTION</u>
BITUMEN	8052-42-4	80-<96 %
CRUMB RUBBER	11138-66-2	4-<20%

Section 4: First Aid Measures

FIRST AID:

SWALLOWED:	If swallowed give water. Do not induce vomiting.
SEEK MEDICAL AID.	
EYES:	Flush thoroughly with water for at least 15 minutes. IF IRRITATION PERSISTS, SEEK MEDICAL AID.
SKIN:	Wash skin thoroughly with soap and water. If burned by contact with hot material, molten material adhering to skin should be cooled as quickly as possible with water. DO NOT remove material from skin and see a physician for specialist treatment.
INHALATION:	Vapours are only emitted from hot bitumen. Remove from exposure. IF ADVERSE EFFECTS OCCUR SEEK MEDICAL AID.
FIRST AID FACILITIES:	First Aid kit to be located on site at all times.
ADVICE TO DOCTOR:	Treatment should be directed at the control of symptoms/conditions.

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Section 5: Fire Fighting Measures

FIRE AND EXPLOSION HAZARD:

This product is combustible and may ignite if overheated. Dense fumes are given off from burning material.

HAZCHEM CODE: 2Y

FIRE EXTINGUISHING MEDIA: Foam dry chemical, carbon dioxide and water fog
DO NOT USE WATER JET

SPECIAL FIRE FIGHTING PROCEDURES: Water will expand hot bitumen very rapidly as the water converts to steam.

UNUSUAL FIRE AND EXPLOSION HAZARDS: Not applicable

Section 6: Accidental Release Measures

Emergency Procedures: If contamination of sewers or waterways has occurred, advise local emergency services.

: It may be transported hot (bulk) in specially fitted bitumen tankers or sprayers, at manufactures minimum/maximum recommended temperatures.

Transport should be in accordance with the Australian Dangerous Goods Code for the transport of goods by road and rail.

SPILLS AND DISPOSAL

STEPS TO TAKE TO MINIMISE A SPILL OR LEAK

Do NOT allow the product to enter drains or watercourses.

Clean up crews should wear protective clothing i.e., PVC gloves, safety shoes, eye protection.

Stay upwind; remove any source of ignition.

For small and large spills - Allow to cool and solidify. Molten material should be contained with a sand dam.

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Section 7: Handling and Storage

Avoid skin contact. Wear appropriate gloves. Contact with hot product may cause burns.

Ensure good ventilation when using and avoid, as far as reasonably practicable, the inhalation and contact with vapours, mists or fumes which may be generated during use. If such vapour, mists or fumes are generated, their concentration in the workplace air should be controlled to the lowest reasonable practicable level. Good working practices, high standards of personal hygiene and plant cleanliness must be maintained at all times. Whilst using, do not eat, drink or smoke. Wash hands thoroughly after contact.

Vapours can build up in the headspace of tanks. These can cause flammability/explosion hazards, even at temperatures below the normal flash point. Tank headspaces should always be regarded as potentially flammable and care should be taken to avoid static electricity discharge and all ignition sources during filling, sampling etc from storage tanks. Ensure equipment used is properly earthed or bonded. Will present a flammability hazard if heated above the flash point but bulk liquids at normal storage temperatures present a low fire hazard. Product should not be overheated in storage because of the risk of fire. Do NOT pressurise, cut, heat or weld empty containers as they may contain hazardous residues. Store as per the requirements of AS1940- The Storage and Handling of Flammable and Combustible Liquids.

Toxic quantities of hydrogen sulphide (H₂S) may be present in storage and rundown tanks, marine vessel compartments, sump pits or other confined spaces which contain or have contained this material. When opening valves, hatched or dome covers, stand upwind, keep face as far from the opening as possible and avoid breathing any gases or vapours. When exposure concentrations are unknown, respiratory protection must be used. These devices should not be relied on for life-threatening concentrations. As an indicator of H₂S concentration, the rotten eggs odour is unreliable because it may be masked by other odours. In addition, H₂S fatigues the sense of smell rapidly. Therefore DO NOT ATTEMPT RESCUE WITHOUT WEARING APPROVED SUPPLIED-AIR respiratory equipment.

Do not overheat in storage. Store away from moisture and sources of ignition. Prohibit water contacting hot bitumen because of the danger of boil-over. Particular care should be taken to ensure that bulk storage tanks are watertight

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and that any steam heating coils are regularly checked for leaks.

The storage temperature in bulk storage should not fluctuate above and below 100°C as this increases the risk of water condensation leading to boil-over. Care must always be exercised when heating bitumen.

Highly toxic hydrogen sulphide gas may be emitted from hot product and accumulate in enclosed spaces or tanks. Extreme care must therefore be taken during venting of tanks and enclosed spaces which have, at any time, contained hot product. Under no circumstances should entry be made into small enclosures without taking full precautions. Confined spaces contaminated with hydrogen sulphide must always be considered as constituting potentially life-threatening environments.

Pyrophoric (self-heating) deposits, which may cause fire or explosion, may be formed in storage. Avoid exposure of tank vapour space to fresh air, and maintain stable storage temperatures.

Regular inspection for such deposits will indicate when tank cleaning is necessary.

Section 8: Exposure Controls, Personal Protection

National Exposure Standards: There is no Australian Workplace Standard for these products.

Engineering Controls: Provide adequate ventilation. If using indoors, keep windows and doors open during use. Keep containers closed when not in use.

EXPOSURE STANDARDS

Bitumen work safe exposure standards for bitumen fumes TWA = 5mg/m³

ENGINEERING CONTROLS

- Process modification to eliminate substance - Not Applicable
- Segregation of processes from personnel and/or distance - Not Applicable
- Vessel Containment Controls - Not Applicable
- Enclosure of sources of substances to the maximum extent possible- Not Applicable
- Mechanical handling to reduce human contact with substance - The use of forklifts to load/unload drums and/or pallets should be used whenever possible.

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- f) Is a Local Exhaust Ventilation System required? Not required.
- g) Dilution Ventilation - In open areas mechanical ventilation is not normally required. In enclosed areas, provide sufficient dilution exhaust ventilation to minimise exposure limits and flammable vapour concentrations.

PERSONAL PROTECTION: Respiratory protection - Avoid breathing of vapours or mists. Where ventilation is inadequate and vapours or mists are generated the use of an approved respirator with organic vapour/particulate filter complying with AS/NZS 1715 and AS/NZS 1716 is recommended. Final choice of appropriate breathing protection is dependant upon actual airborne concentrations and the type of breathing protection required will vary according to individual Glove type - Leather or thermal gloves should be used when handling material under high temperature.

Eye protection - use close fitting chemical safety goggles, otherwise use safety glasses fitted with side shields. If splashing is possible use a face shield over safety glasses as added protection.

Clothing protection - wear industrial-type work clothing and safety footwear and leather apron and heat resistant long gloves when handling material under high temperature.

Section 9: Physical and Chemical Properties

PHYSICAL DESCRIPTION/PROPERTIES

APPEARANCE: Black - solid at ambient temperature.

PACK SIZE(S): Bulk

BOILING POINT (°C): >400°C

MELTING POINT (°C): Not applicable

VAPOUR PRESSURE (KILOPASCALS): < 1mm Hg at 180°C

SPECIFIC GRAVITY @ 25°C: 1.02

SOLUBILITY IN WATER (% BY WT.): Insoluble

FLASH POINT (°C)-METHOD: >260° C

FLAMMABILITY LIMITS IN AIR (% VOLUME):	LOWER	UPPER
	Not applicable	Not applicable

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Section 10: Stability and Reactivity

SHOCK SENSITIVITY: Not Applicable
OXIDISING PROPERTIES: Not applicable
AUTOIGNITION TEMPERATURE: Not Applicable
EVAPORATION RATE (BUTYLACETATE=1): Not applicable
VAPOR DENSITY (AIR=1) = Not applicable
pH: Not applicable
% VOLATILE ORGANIC COMPOUNDS: Not applicable
BULK DENSITY: Not applicable

CORROSIVENESS: Not applicable
REACTIVITY: Stable
ODOUR THRESHOLD: Not applicable
SOLUBILITY in ORGANIC SOLVENTS: Soluble

Section 11: Toxicological Information

HEALTH EFFECTS

The greatest hazard is the possibility of skin burns as these products are used at temperatures of 180°C to 195°C.

This product can release H₂S. The primary hazard of H₂S is inhalation overexposure. Odour is an unreliable indicator of concentration as olfactory fatigue occurs rapidly. Inhalation of H₂S at airborne levels of approximately 50-70 ppm may result in irritation of the eyes and respiratory tract mucosa. Overexposure to higher concentrations may produce signs and symptoms of headache, dizziness, nausea, vomiting, coughing and a sensation of dryness and pain of the nose, throat and chest. An atmosphere containing 1000-2000 ppm H₂S may be immediately hazardous to life. Prolonged or frequently repeated exposure to H₂S may result in chronic health effects characterised by local irritation of the eyes, respiratory tract and skin. Small amounts of H₂S can be absorbed through the skin, but absorption is too slow to result in poisoning. Inhalation of vapours may irritate the throat.

ACUTE

SWALLOWED: If swallowed, vapours may irritate the throat

EYES: Direct eye contact may cause irritation.

SKIN: Contact with skin may cause irritation.

INHALATION: Mists and vapours generated may cause irritation of the upper respiratory tract. Inhalation of high concentration may lead to headache,

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dizziness, nausea, vomiting, drowsiness or narcosis.

This product may release Hydrogen Sulphide (H₂S) gas. H₂S concentrations above permissible exposure levels that may cause headache, dizziness, nausea, vomiting, and diarrhoea. At concentrations above 300ppm, respiratory paralysis can occur, leading to unconsciousness and death.

Ingestion: May cause irritation of the gastrointestinal tract. Symptoms may include abdominal discomfort, nausea, vomiting and diarrhoea. Molten product will cause extensive burns and severe pain.

CHRONIC: Prolonged contact with skin may cause dermatitis

Section 12: Ecological Information

Do not release into sewers or waterways

Section 13: Disposal Considerations

WASTE DISPOSAL METHOD

Wherever possible, reprocess or recycle any reclaimed material to reduce waste. The material may be disposed of in conformity with the requirements of the Regulatory Authorities.

Section 14: Transport Information

Road and Rail Transport:

ADG U.N. Number: 3257 (when hot)

ADG Proper Shipping Name: Elevated temperature liquid, N.O.S

ADG DG Class: 9

ADG Hazchem Code: 2Y

ADG Packing Group: III

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Section 15: Regulatory Information

Classification: Not classified as hazardous substance.

Poisons Schedule: N/A

Packaging & Labelling: III

Section 16: Other Information

Contact Person: General Manager, Bituminous Products Pty Ltd
02 9772 4433
After hours 0414 499 402

This Material Safety Data Sheet has been compiled in accordance with the Worksafe Australia National Code of Practice for the preparation of Material Safety Data Sheets {NOHSC: 2011 (2003)}.

Where applicable specific chemical composition details are provided to allow the product to be classified according to UN Number, HAZCHEM coding etc.

The information contained herein is based on the data available to BITUMINOUS PRODUCTS PTY LTD from both our technical sources and from recognized published references and is believed to be both accurate and reliable.

BITUMINOUS PRODUCTS PTY LTD has made no effort to censor nor to conceal deleterious aspects of this product. Since we cannot anticipate or control the many different conditions under which this information and our products may be used, each user should review these recommendations in the specific context of the intended application and confirm whether they are appropriate.

Due care should be taken to make sure that the use or disposal of the product is in compliance to the appropriate Federal, State, and Local Government regulations.

END OF MSD