

SAFETY DATA SHEET



Revision date: 11-Aug-2022

Revision Number 1

1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product identifier

Product Name BITULASTIC CRUMB RUBBER BITUMEN

Product Code(s) 000000054311

Other means of identification

UN number 3257

Synonyms MANUFACTURER'S PRODUCT CODES: S45R; S3R (3% CR); S5R (5% CR); S7R (7% CR); S9R (9% CR); S10R (10% CR); A18R; 5 Part; 8 Part; 10 Part; 15 Part; 18 Part; 20 Part.
Bitulastic 5 Part Crumb Rubber; Bitulastic 10 Part Crumb Rubber; Bitulastic 15 Part Crumb Rubber; Bitulastic 18 Part Crumb Rubber; Bitulastic 20 Part Crumb Rubber.

Pure substance/mixture Mixture

Recommended use of the chemical and restrictions on use

Recommended use Polymer-modified bitumen binder.

Uses advised against No information available.

Supplier

Bituminous Products Pty Ltd
ABN No: 19 106 887 094
33 Violet Street
REVESBY NSW 2212

Business Phone: 02 9772 4433
Facsimile: 02 9792 1016

Emergency telephone number

Emergency telephone number **1 800 033 111 (ALL HOURS)**

Please ensure you refer to the limitations of this Safety Data Sheet as set out in the "Other Information" section at the end of this Data Sheet.

2. HAZARDS IDENTIFICATION

GHS Classification

Not classified as dangerous goods in accordance with the Australian Code for the Transport of Dangerous Goods by Road and Rail (ADG)

Classified as dangerous goods when transported at elevated temperatures in accordance with the Australian Code for the Transport of Dangerous Goods by Road and Rail (ADG).

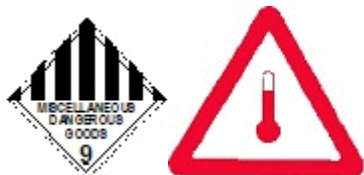
Not classified as a hazardous chemical in accordance with the criteria of Safe Work Australia - Globally Harmonized System (GHS)

Classified as a hazardous chemical at elevated temperatures in accordance with the criteria of Safe Work Australia - Globally Harmonized System (GHS).

Elevated temperature liquid at or above 100°C

SIGNAL WORD

When hot: Danger

Label elements**Hazard statements**

When hot:

H314 - Causes severe skin burns and eye damage

Precautionary Statements - Prevention

When hot:

Do not breathe fume, gas, mist, vapours, spray

Wash face, hands and any exposed skin thoroughly after handling

Wear protective gloves / protective clothing / eye protection / face protection

Precautionary Statements - Response

When hot:

Specific treatment (see First aid on this SDS)

When hot:

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

Immediately call a POISON CENTER or doctor/physician

When hot:

IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower

Wash contaminated clothing before reuse

Immediately call a POISON CENTER or doctor/physician

When hot:

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing

Immediately call a POISON CENTER or doctor/physician

Precautionary Statements - Storage

When hot:

Store locked up

Precautionary Statements - Disposal

Dispose of contents/container in accordance with local, regional, national, and international regulations as applicable

Other hazards which do not result in classification**General Hazards**

Poisons Schedule (SUSMP)

None allocated

3. COMPOSITION/INFORMATION ON INGREDIENTS**Mixture**

Chemical name	CAS No.	Weight-%
Asphalt (Bitumen)	8052-42-4	80-<95
Crumb rubber	-	5-<20

Other non-hazardous components	-	<10
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4. FIRST AID MEASURES

Description of first aid measures

General advice	For advice, contact a Poisons Information Centre (e.g. phone Australia 13 11 26; New Zealand 0800 764 766) or a doctor.
Inhalation	Remove to fresh air. If breathing is difficult, (trained personnel should) give oxygen. If breathing has stopped, give artificial respiration. Get medical attention immediately.
Eye contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention if symptoms occur. Contact with molten materials requires immediate medical assistance.
Skin contact	Contact with product at elevated temperatures can result in thermal burns. DO NOT ATTEMPT TO REMOVE BITUMEN FROM SKIN. Rinse immediately with plenty of water and seek medical advice.
Ingestion	Clean mouth with water. Drink 1 or 2 glasses of water. Do NOT induce vomiting. Get medical attention if symptoms occur.
Self-protection of the first aider	Remove all sources of ignition. Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Use personal protective equipment as required. See section 8 for more information.

Most important symptoms and effects, both acute and delayed

Symptoms	Contact with hot material can cause thermal burns. May cause blindness. Inhalation of high vapor concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting.
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Indication of any immediate medical attention and special treatment needed

Note to physicians	Treat symptomatically. Molten product should only be removed by a burns specialist.
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5. FIRE FIGHTING MEASURES

Suitable Extinguishing Media

Suitable Extinguishing Media	Dry chemical, CO ₂ , water spray or regular foam.
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Unsuitable extinguishing media	No information available.
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Specific hazards arising from the chemical

Specific hazards arising from the chemical	Elevated temperature liquid is combustible.
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Hazardous combustion products	Carbon monoxide. Carbon dioxide (CO ₂). Sulfur compounds.
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Special protective actions for fire-fighters

Special protective equipment for fire-fighters	Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.
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Hazchem code	2Y
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6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions Evacuate personnel to safe areas. Avoid contact with skin, eyes, and clothing. Ensure adequate ventilation. Keep people away from and upwind of spill/leak. Do not touch or walk through spilled material. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Pay attention to flashback. Take precautionary measures against static discharges. Use personal protective equipment as required. Wash thoroughly after handling. See section 8 for more information.

Other information Ventilate the area.

For emergency responders Use personal protection recommended in Section 8.

Environmental precautions

Environmental precautions Prevent further leakage or spillage if safe to do so. Prevent product from entering drains. Refer to protective measures listed in Sections 7 and 8.

Methods and material for containment and cleaning up

Methods for containment Stop leak if you can do it without risk. Remove ignition sources. Provide adequate ventilation. Do not touch or walk through spilled material. Dike far ahead of spill; use dry sand to contain the flow of material. Keep out of drains, sewers, ditches and waterways.

Methods for cleaning up For the molten material: Contain - prevent run off into drains and waterways. Allow material to solidify. Collect in properly labelled containers for disposal. Use personal protective equipment as required.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling Avoid contact with skin and eyes. Avoid breathing vapors or mists. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use grounding and bonding connection when transferring this material to prevent static discharge, fire or explosion. Use spark-proof tools and explosion-proof equipment. Use personal protection equipment. Ensure adequate ventilation.

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.

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.

General hygiene considerations Regular cleaning of equipment, work area and clothing is recommended. Wash hands

before breaks and immediately after handling the product. Do not eat, drink or smoke when using this product.

Conditions for safe storage, including any incompatibilities

Storage Conditions

Keep in a dry, cool and well-ventilated place. Keep away from heat, sparks, flame and other sources of ignition (i.e., pilot lights, electric motors and static electricity). Protect from moisture. 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 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.

Incompatible materials

Oxidizing agents.

Poisons Schedule (SUSMP)

None allocated

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Limits

No value assigned for this specific material by Safe Work Australia. However, Workplace Exposure Standard(s) for constituent(s) and decomposition product(s):

Bitumen fumes: 8hr TWA = 5 mg/m³

Hydrogen sulfide: 8hr TWA = 14 mg/m³ (10 ppm), 15 min STEL 21 mg/m³ (15 ppm)

As published by Safe Work Australia Workplace Exposure Standards for Airborne Contaminants.

TWA - The time-weighted average airborne concentration of a particular substance when calculated over an eight-hour working day, for a five-day working week.

STEL (Short Term Exposure Limit) - the airborne concentration of a particular substance calculated as a time-weighted average over 15 minutes, which should not be exceeded at any time during a normal eight hour work day. According to current knowledge this concentration should neither impair the health of, nor cause undue discomfort to, nearly all workers.

These Workplace Exposure Standards are guides to be used in the control of occupational health hazards. All atmospheric contamination should be kept to as low a level as is workable. These workplace exposure standards should not be used as fine dividing lines between safe and dangerous concentrations of chemicals. They are not a measure of relative toxicity.

Appropriate engineering controls

Engineering controls

Ensure that eyewash stations and safety showers are close to the workstation location.

Apply technical measures to comply with the occupational exposure limits. Ensure adequate ventilation, especially in confined areas.

If in the handling and application of this material, safe exposure levels could be exceeded, the use of engineering controls such as local exhaust ventilation must be considered and the results documented. If achieving safe exposure levels does not require engineering controls, then a detailed and documented risk assessment using the relevant Personal Protective Equipment (PPE) (refer to PPE section below) as a basis must be carried out to determine the minimum PPE requirements.

Individual protection measures, such as personal protective equipment

The selection of PPE is dependent on a detailed risk assessment. The risk assessment should consider the work situation, the physical form of the chemical, the handling methods, and environmental factors.

OVERALLS, SAFETY SHOES, SAFETY GLASSES, GLOVES, RESPIRATOR.



Eye/face protection

Glasses. If splashes are likely to occur: Face protection shield.

Skin and body protection

Wear suitable protective clothing. Overalls. Antistatic boots.

Hand protection

Heat-resistant gauntlet gloves.

Respiratory protection

If determined by a risk assessment an inhalation risk exists, wear an organic vapour/particulate respirator or an air supplied mask meeting the requirements of AS/NZS 1715 and AS/NZS 1716.

Environmental exposure controls

No information available.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state	Solid at ambient temperatures. Liquid at elevated temperatures above 100°C.
Appearance	No information available.
Color	Black
Odor	Characteristic Bitumen
Odor threshold	No information available.

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	No data available	None known
pH (as aqueous solution)	No data available	None known
Melting point / freezing point	>90°C	None known
Boiling point / boiling range	No data available	None known
Flash point	>250°C	CC (closed cup)
Evaporation rate	No data available	None known
Flammability (solid, gas)	No data available	None known
Flammability Limit in Air		None known
Upper flammability or explosive limits	No data available	
Lower flammability or explosive limits	No data available	
Vapor pressure	No data available	None known

Vapor density	No data available	None known
Relative density	1.05-1.06 @25°C	None known
Water solubility	Insoluble in water	None known
Solubility(ies)	No data available	None known
Partition coefficient	No data available	None known
Autoignition temperature	250°C	None known
Decomposition temperature	No data available	None known
Kinematic viscosity	No data available	None known
Dynamic viscosity	No data available	None known

Other information**10. STABILITY AND REACTIVITY**Reactivity

Reactivity Reacts with strong oxidising agents.

Chemical stability

Stability Stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

Explosion data

Sensitivity to mechanical impact None.

Sensitivity to static discharge None.

Possibility of hazardous reactions

Possibility of hazardous reactions None under normal processing.

Conditions to avoid

Conditions to avoid Ignition sources. To avoid thermal decomposition, do not overheat. Moisture.

Incompatible materials

Incompatible materials Oxidizing agents.

Hazardous decomposition products

Hazardous decomposition products Carbon monoxide. Carbon dioxide (CO₂). Sulfur compounds.

11. TOXICOLOGICAL INFORMATIONAcute toxicityInformation on likely routes of exposure

Product Information No adverse health effects expected if the chemical is handled in accordance with this Safety Data Sheet and the chemical label. Symptoms or effects that may arise if the chemical is mishandled and overexposure occurs are:

Inhalation Inhalation of vapours may cause headaches and/or dizziness. Overexposure to vapour may result in respiratory tract irritation.

This product can release hydrogen sulfide (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.

Eye contact May cause irritation. Contact with product at elevated temperatures can result in thermal burns.

Skin contact May cause irritation. Hot liquid can cause severe burns.

Ingestion Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhoea. Contact with hot material can cause thermal burns.

Symptoms Contact with hot material can cause thermal burns. Blindness. Inhalation of high vapor concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting.

Numerical measures of toxicity - Product Information

Refer to component information below.

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Asphalt (Bitumen)	> 5000 mg/kg (Rat)	> 2000 mg/kg (Rabbit)	> 94.4 mg/m ³ (Rat) 4.5 h

See section 16 for terms and abbreviations

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation No information available.

Serious eye damage/eye irritation No information available.

Respiratory or skin sensitization No information available.

Germ cell mutagenicity No information available.

Carcinogenicity No information available.

Reproductive toxicity No information available.

STOT - single exposure No information available.

STOT - repeated exposure No information available.

Aspiration hazard No information available.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Ecotoxicity Keep out of waterways.

Persistence and degradability**Persistence and degradability** No information available.**Bioaccumulative potential****Bioaccumulation** No information available.**Component Information**

Chemical name	Partition coefficient
Asphalt (Bitumen)	6

Mobility**Mobility in soil****Mobility** No information available.**Other adverse effects****13. DISPOSAL CONSIDERATIONS****Waste treatment methods****Waste from residues/unused products** Should not be released into the environment. Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.**Contaminated packaging** Empty containers pose a potential fire and explosion hazard. Do not cut, puncture or weld containers.**14. TRANSPORT INFORMATION****ADG**

Not classified as Dangerous Goods by the criteria of the Australian Dangerous Goods Code (ADG Code) for transport by Road and Rail; NON-DANGEROUS GOODS.

Classified as Dangerous Goods at elevated temperatures by the criteria of the Australian Dangerous Goods Code (ADG Code) for Transport by Road and Rail; DANGEROUS GOODS.

UN number	3257
Proper shipping name	ELEVATED TEMPERATURE LIQUID, N.O.S. (CONTAINS ASPHALT)
Hazard class	9
Packing group	III
Hazchem code	2Y

IATA

Not classified as Dangerous Goods by the criteria of the International Air Transport Association (IATA) Dangerous Goods Regulations for transport by air; NON-DANGEROUS GOODS.

Classified as Dangerous Goods at elevated temperatures by the criteria of the International Air Transport Association (IATA) Dangerous Goods Regulations for transport by air; DANGEROUS GOODS.

IMDG

Not classified as Dangerous Goods by the criteria of the International Maritime Dangerous Goods Code (IMDG Code) for transport by sea; NON-DANGEROUS GOODS.

Classified as Dangerous Goods at elevated temperatures by the criteria of the International Maritime Dangerous Goods Code

(IMDG Code) for transport by sea; DANGEROUS GOODS.

15. REGULATORY INFORMATION

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

National regulations

Australia

Not classified as dangerous goods in accordance with the Australian Code for the Transport of Dangerous Goods by Road and Rail (ADG)

Classified as dangerous goods when transported at elevated temperatures in accordance with the Australian Code for the Transport of Dangerous Goods by Road and Rail (ADG).

Not classified as a hazardous chemical in accordance with the criteria of Safe Work Australia - Globally Harmonized System (GHS)

Classified as a hazardous chemical at elevated temperatures in accordance with the criteria of Safe Work Australia - Globally Harmonized System (GHS).

See section 8 for national exposure control parameters

Poisons Schedule (SUSMP) None allocated

International Inventories

AIIIC

All the constituents of this material are listed on the Australian Inventory of Industrial Chemicals or are exempt.

Legend:

AIIIC AIIIC- Australian Inventory of Industrial Chemicals

International Regulations

The Montreal Protocol on Substances that Deplete the Ozone Layer Not applicable

The Stockholm Convention on Persistent Organic Pollutants Not applicable

The Rotterdam Convention Not applicable

16. OTHER INFORMATION

Supplier Safety Data Sheet 02/ 2018

Reason(s) For Issue: First Issue Primary SDS

Issuing Date: 11-Aug-2022

This Safety Data Sheet has been prepared by Ixom Operations Pty Ltd (Toxicology and SDS Services).

Revision Note:

The symbol (*) in the margin of this SDS indicates that this line has been revised.

Key or legend to abbreviations and acronyms used in the safety data sheet

Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value	*	Skin designation
C	Carcinogen		

Key literature references and sources for data used to compile the SDS

EPA (Environmental Protection Agency)
 Acute Exposure Guideline Level(s) (AEGL(s))
 U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act
 U.S. Environmental Protection Agency High Production Volume Chemicals
 Food Research Journal
 Hazardous Substance Database
 International Uniform Chemical Information Database (IUCLID)
 Japan GHS Classification
 Australian Industrial Chemicals Introduction Scheme (AICIS)
 NIOSH (National Institute for Occupational Safety and Health)
 National Library of Medicine's ChemID Plus (NLM CIP)
 National Library of Medicine's PubMed database (NLM PUBMED)
 National Toxicology Program (NTP)
 New Zealand's Chemical Classification and Information Database (CCID)
 Organization for Economic Co-operation and Development Environment, Health, and Safety Publications
 Organization for Economic Co-operation and Development High Production Volume Chemicals Program
 Organization for Economic Co-operation and Development Screening Information Data Set
 RTECS (Registry of Toxic Effects of Chemical Substances)
 World Health Organization

Disclaimer

This Safety Data Sheet has been compiled in accordance with GHS Guidance for the preparation of Safety Data Sheets and COP Preparation of SDS for Hazardous Chemicals Safe Work Australia. 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 suppliers and 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 or 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 with the appropriate Federal, State, and Local Government regulations.

End of Safety Data Sheet