

Safety Data Sheet

Issued Date: 10/2022

Issued by: Fulton Hogan Ltd.

Issued Code: ASNA22017

1. Material and Supply Company Identification

Product Identifier

Dense Graded Asphalt

Supplier

Fulton Hogan LTD

Address

15 Sir William Pickering Drive Christchurch
8545 New Zealand

Telephone/Fax Number

Tel: 03 357 1400

Fax: 03 357 1450

Emergency Phone Number

NZ: 0800 CHEMCALL

Recommended use of the chemical and restrictions on use

HOT MIX ASPHALT: Used for road construction and as waterproofing course in lining water storage vessels and beneath steel tanks laid. Hot-laid at around 150°C-180°C.

Specifically manufactured to various specifications for a range of differently sized aggregates and grades of bitumen. Ranges vary from 5mm to 40 mm.

DENSE GRADED ASPHALT: Produced and hand/machine laid at temperatures ranging from 150°C to 180°C.

Other Information

Other Name(s)	Product Code
ASPHALT	
DENSE GRADED ASPHALT	
HOT MIX ASPHALT	
DGA	
HMA	
MIX 10	
MIX 14	

2. Hazard Identification

GHS classification of the substance/mixture

Not classified as Hazardous according to the Hazardous Substances (Hazard Classification) Notice 2020, New Zealand.

Not classified as Dangerous Goods for transport according to the New Zealand Standard NZS 5433:2012 Transport of Dangerous Goods on Land.

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Signal Word (s)

No signal word.

Hazard Statement (s)

No hazard statements.

Pictogram (s)

No pictogram.

Precautionary Statement – Prevention

No prevention statements.

Precautionary Statement – Response

No response statements.

Precautionary Statement – Storage

No storage statements.

Precautionary Statement – Disposal

No disposal statements.

3. Chemical Composition

Ingredients

Name	CAS	Proportion
Local Aggregates		>92%
Bitumen	8052-42-4	<8%
Ingredients determined not to be hazardous, including water.		Balance

4. First Aid Measures

If poisoning occurs, contact a doctor or Poisons Information Centre (Phone New Zealand 0800 764 766).

Inhalation

Remove affected person from contaminated area if inhalation has occurred. Keep rested until recovered. Seek medical attention if symptoms develop and/or persist. In the case of the affected person having breathing issues, chest tightness, dizziness, vomiting or the person is unresponsive, give 100% oxygen or CPR by a trained person as required and transport to the closest medical facility.

Skin Contact

Ambient Temperature:

Immediately remove contaminated clothing. Thoroughly wash affected area with soap and water. Before reusing or discarding wash contaminated clothing. Seek medical

advice/attention if irritation or rash develops and/or persists.

Elevated Temperature:

Refer to Bitumen Burns Card. Flush area with cold water for at least 15 minutes to cool. Loosely wrap exposed burns with clean burns dressing that is non-stick. Do not try and attempt to clean burned area. Do not apply to burns any ointments or lotions. If material has adhered to skin, do not remove. Do not attempt to dress hot bitumen covered areas as there is a risk of the bitumen adhering to the dressing. Immediately seek medical attention.

Eye Contact

Ambient Temperature:

If substance is in eyes, flush the eyes continuously with running water holding eyelids apart. If easy and safe to do so, remove contact lenses. Continue flushing for

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several minutes until all contaminants are washed out completely. If symptoms develop and/or persist seek medical attention.

Elevated Temperature:

Refer to Bitumen Burns Card. Flush area with cold water for at least 15 minutes to cool. Do not try and attempt to clean burned area. Do not apply to burns any ointments or lotions. Do not attempt to dress hot bitumen covered areas as there is a risk of the bitumen adhering to the dressing. Immediately seek medical attention.

Ingestion

Thoroughly wash out mouth with water. Seek medical attention. Do not induce vomiting. If ingestion of heated product has occurred, drink cold water.

First Aid Facilities

Normal washroom facilities, shower, hose and eyewash.

Notes to Physician

Treat symptomatically. Avoid removing material from the skin as the bitumen will have fully adhered to skin and any attempt in product removal will result in skin removal. The hot bitumen forms a waterproof and sterile layer and hence should remain. Allow cooled product to remain, and in order to soften bitumen, cover with tulle dressing that contains a burn ointment or paraffin. In the case that hot bitumen has entirely covered a limb, bitumen needs to be softened and/or split. This is due to the cooled bitumen being able to cause a constricting effect and restrict blood flow. A meeting with a burn specialist is recommended.

5. Firefighting Measures

Suitable Extinguishing Media

Foam, water mist or water fog. Use of dry chemical powder, carbon dioxide, sand or earth can be used only for small fires.

Unsuitable Extinguishing Media

Do not use waterjet.

Combustion Product Hazards

If exposed to fire, this substance may emit irritating and/or toxic gases and fumes including nitrogen oxides, carbon monoxide and carbon dioxide.

Specific Substance Hazards

Product is combustible and will burn if exposed to fire. In the presence of water, there is a chance of violent eruptions or boil-over of tanks.

Temperature of Decomposition

Information not available.

Firefighting Further Advice

Self-Contained Breathing Apparatus (SCBA) are recommended for fire fighters to wear. This must be operated in positive pressure mode. Full protective clothing should be worn to prevent exposure to fumes or vapours. In order to cool down heat-exposed containers, water spray may be used. Fight fire from safe location and distance. Prevent this product from entering drains, sewers or watercourses.

6. Accidental Release Measures

Emergency Procedures

To prevent skin, eye or respiratory exposure, wear the correct clothing and Personal Protective Equipment (PPE). If safe to do so, stop the source of the leak. Contain spillage, if safe to do so, by placings an inert non-combustible, absorbent material (e.g. sand, earth or vermiculite). Do not try and dilute product, only contain. If possible, increase ventilation of premises. Clear area by evacuating all unprotected personnel. To recycle or dispose of product, place in to well-suited labelled containers.

Dispose of waste according to the local and regional regulations. Inform the local waste and water management authorities according to local regulations if there is unprevented contamination of waterways or sewers.

7. Handling and Storage

Precautions for Safe Handling

Avoid eye or skin contact as well as inhalation of mists, fumes and vapours. Ensure premises has appropriate ventilation. When containers are not in use, keep sealed. Avoid building up mists or vapours present in the work atmosphere. Wash hands before eating, smoking, drinking or using toilet facilities in order to maintain high standards of personal hygiene. Use compressed air (not steam) or a vacuum to remove product from pipelines and hoses.

Conditions for Safe Storage.

Store out of direct sunlight in dry, cool and well-ventilated areas that are not near any oxidising materials, strong corrosive acids, clothing, food and sources of ignition. Store in appropriately suited labelled containers. Keep containers closed tightly and upright to prevent leakage. Keep containers protected against physical damage and away from incompatible materials. Regularly check containers in case of deficiencies such as leaks or damage. Store containers in conditions that are in accordance to local and national regulations. Protect material from freezing.

Other Important Information

Bitumen may contain traces of hydrogen sulphide (H₂S). Therefore, toxic levels can be present in containers or spaces that contain/contained bitumen. When opening hatches, valves or dome covers, it is important to stand upwind and keep face as far as possible from the openings. Avoid inhaling any fumes or vapours. Respiratory protection must be used in circumstances when level of exposure is not known. Do not depend on this equipment during concentrations that are life threatening. Attempting to detect hydrogen sulphide levels through its rotten eggs odour is inefficient as it can be masked by odours of other chemicals. H₂S is also able to rapidly fatigue the sense of smell. Hence, approved supplied air respiratory equipment must be worn when attempting to rescue.

Other Information

For containers or container linings, it is recommended to use stainless steel. Avoid using PVC, polyethylene or high density polyethylene.

8. Exposure Controls/Protection

Occupational Exposure Limit Values

There are no available exposure standards for this material. There are, however, TWA exposure standards for components present in this material.

Name	CAS	TWA	STEL	Ceiling
Asphalt (petroleum) fumes	8052-42-4	5 mg m ⁻³		

Ceiling: A concentration that should not be exceeded at any time during any part of a working day.

Short-Term Exposure Limit (STEL): The 15 minute time weighted average exposure standard.

Time Weighted Average (TWA): The average airborne concentration of a substance calculated over an eight-hour working day.

These exposure levels should be kept as low as possible.

Source: Workplace Exposure Standards and Biological Exposure Indices, 2020.

Biological Limit Values

No biological limit values have been allocated.

Appropriate Engineering Controls

This substance has been classified as non-hazardous and requires vapours to be taken away from worker's breathing zone using a local exhaust ventilation system that is flame proof. Appropriate respiratory protection should be worn if the engineering controls are not

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effective in keeping the vapour concentrations below TWA exposure standards.

Respiratory Protection

An approved respirator with replaceable mist/vapour filters must be worn if the engineering controls are not effective in keeping vapour concentrations below TWA exposure standards. For more information regarding the requirements of respiratory protection, refer to suitable regulations. In order to undergo in appropriate changes for particular circumstances the standards AS/NZS 1716 (2012), Respiratory Protective Devices; and AS/NZS 1715 (2009), Selection, Use and Maintenance of Respiratory Protective Devices, should be made reference to.

Eye and Face Protection

Safety goggles, full-face shield or safety glasses with side shields should be used when appropriate. The choice of a suitable eye and/or face protection will vary depending on certain circumstances. Eye protection should be chosen in accordance to relevant regulations. These should conform to Australian/New Zealand

Standard AS/NZS 1337 2 & 6 (2012) - Eye Protectors for Industrial Applications.

Hand Protection

Gloves of resilient material should be worn. Choosing suitable gloves vary in accordance to specific circumstances. This can be dependent on different methods of handling or in accordance to the risk assessments that have been taken. Hand protection chosen depending on occupation should conform to AS/NZS 2161.1 (2016): Occupational protective gloves - Selection, use and maintenance.

Footwear

Safety footwear must be worn. The choice of this will be in accordance to individual circumstances.

Body Protection

It is recommended that workers wear the appropriate protective work wear, for example cotton overalls that are buttoned at the wrist and neck. Where large quantities of material are handled, a chemical resistant apron is advised.

9. Physical and Chemical Properties

Appearance (physical state, colour, etc.):

Brown-black mixture of bitumen and aggregate. Solid to semi-solid depending on temperature.

Odour:

Petroleum

Odour threshold:

Information not available.

pH:

2.3

Melting point/freezing point:

Information not available.

Initial boiling point and boiling range:

Information not available.

Flash point:

Bitumen >232°C

Aggregate: Information not applicable.

Flammability (solid, gas):

Product is not flammable but thermal decomposition can occur.

Upper/lower flammability or explosive limits:

Information not available.

Vapour pressure:

Information not applicable.

Vapour density:

Information not applicable.

Relative density (Specific Gravity):

Asphalt: 2.00 – 2.80

Aggregate: 2.00 – 2.80

Bitumen: 0.97 – 1.03 (25°C)

Solubility (ies):

Insoluble.

Partition coefficient: n-octanol/water:

Information not available.

Auto-ignition temperature:

Bitumen: >300°C

Aggregate: Information not applicable.

Decomposition temperature:

Information not available.

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Kinematic viscosity:

Information not available.

Particle characteristics:

Information not available.

10. Stability and Reactivity

Reactivity

Reacts with materials that are incompatible.

Chemical Stability

Stable under normal conditions of handling and storage.

Conditions to Avoid

Protect material from freezing. Direct sunlight and extreme temperatures.

Incompatible Materials

Strong oxidizing agents, water.

Hazardous Decomposition Products

Release of irritation and/or toxic fumes such as hydrogen sulphide can be a result of thermal decomposition of the material.

Possibility of Hazardous Reactions

The material will react with strong oxidising agents.

Hazardous Polymerization

Will not occur.

11. Toxicological Information

Toxicology Information

Toxicity data not available.

Ingestion

Irritation of the gastric tract may occur through ingestion of this material resulting in vomiting and nausea.

Inhalation

Irritation of the nose, respiratory system and throat may occur through inhalation of this material's vapours. Inhaling large concentrations can lead to headaches, drowsiness, narcosis, dizziness, nausea or vomiting. This material can release traces of H₂S. High concentrations of this can result in headaches, nausea, dizziness, vomiting or diarrhoea. Levels above 300 ppm may lead to respiratory paralysis that can result in unconsciousness and death.

Skin

Irritation to skin may occur. Can include itching, redness and swelling. Skin dryness and cracking may be result of repeated exposure and could cause dermatitis. Molten product coming in contact can lead to severe irritation and permanent scarring of tissue through thermal burns.

Eye

Serious eye irritation may be caused. Eye contact with this material will cause stinging, tearing, redness and blurred vision. Molten product coming into contact can lead to severe irritation and permanent scarring of tissue through thermal burns.

Respiratory Sensitisation

Not expected to be a respiratory sensitiser.

Skin Sensitisation

Not expected to be a skin sensitiser.

Germ Cell Mutagenicity

Not considered to be a mutagenic hazard.

Carcinogenicity

Not expected to be a carcinogenic.

According to International Agency for Research on Cancer (IARC) Bitumen is listed as Group 2B: Possibly carcinogenic to humans. Diesel fuels, hydrogen chloride and distillate are listed as Group 3: Not classifiable as to carcinogenicity to humans.

Reproductive Toxicity

Not expected to be toxic to reproduction.

STOT-Single Exposure

Not expected to cause toxicity to a specific target organ from single exposure.

STOT-Repeated Exposure

Not expected to cause toxicity to a specific target organ from repeated exposures.

Aspiration Hazard

Not classified as an aspiration hazard.

Other Important Information

There is a potential of this material releasing hydrogen sulphide. The largest hazard with H₂S is overexposure during inhalation. Odour cannot be relied on to indicate

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concentration present as H₂S fatigues the sense of smell rapidly. Airborne levels of 5-70 ppm for H₂S if inhaled, can lead to eye and upper respiratory tract irritation. Higher levels than this can result in dizziness, headaches, nausea, coughing and vomiting as well as nose, throat and chest dryness and pain. An atmosphere may be regarded as immediately hazardous to life when levels

range from 1000 ppm to 2000 ppm. Repetitive or extensive exposure to hydrogen sulphide can lead to long-lasting health problems including eye, skin and respiratory tract irritation. It is possible for hydrogen sulphide to absorb into the skin. However, the rate is too slow for the chance of poisoning.

12. Ecological Information

Ecotoxicity

Information not available.

Environmental Protection

Prevent and stop any material to enter sewers, watercourses or drains.

Persistence and Degradability

Information not available.

Bioaccumulative Potential

Information not available.

Mobility in Soil

Information not available.

Other Adverse Effects

Information not available.

13. Disposal Considerations

Disposal of Product

The wastes of the product are controlled and should be disposed of according to specific regulations set by local and national regions. This material is able to be disposed through a commercial waste collection service that is licensed.

Personal protective equipment (PPE) and appropriate clothing (specified in Section 8) must be worn at all times when handling and disposing this product. During disposal, the ventilation requirements (specified in Section 8) must include the precautions regarding handling on the product (Section 7). Do not discharge product into sewerage systems, drains and watercourses. Do not dispose product anywhere that could affect surface and/or ground waters.

The New Zealand Hazardous Substances (Disposal) Notice 2017 must be complied with by the contractor or disposal agency for New Zealand.

Disposal of Container

To dispose of the container or the packaging, it must be classed as incapable of holding any substance and be cleaned. The disposal of the container should be consistent with the disposal of the product it contained. For this specific product, the container and packaging may be disposed of through a licensed waste collection service. However, if the packaging or container has been cleaned thoroughly or deemed non-hazardous, it can be recycled. Lawfully disposed (clean or unclean) packaging by householders or other consumers through a commercial or public waste collection service, is a means of following regulations in New Zealand.

14. Transport Information

Road and Rail Transport:

Not classified as Dangerous Goods for transport according to the New Zealand Standard NZS 5433:2012 Transport of Dangerous Goods on Land.

Marine Transport:

Not classified as Dangerous Goods for transport according to the International Maritime Dangerous Goods Code (IMDG) for transport by sea.

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Air Transport:

Not classified as Dangerous Goods for transport according to the International Air Transport Association (IATA) Dangerous Goods Regulations for transport by air.

15. Regulatory Information

Not classified as Hazardous according to the Hazardous Substances (Hazard Classification) Notice 2020, New Zealand.

Group Standard

Information not applicable.

HSNO Approval Number

Information not available.

16. Other Information

Date of Preparation: 10/2022

Reason for Issue

First Issue

In good faith, all information was prepared based on the best available information at the time of issue. We believe it is as accurate as possible through being based on the upmost relevant level of research. There is no guarantee made or implied regarding the accuracy of this SDS due to conditions of use being beyond our control. All relevant information is given without warranty.

Any unauthorised use, modified/alterd versions of this information is of no responsibility of the manufacturer. It is the duty of the employer to inform any person that may be affected (employees or other), of the hazards discussed in this SDS followed by all precautions required.

Ensure that all SDS's are up to date due to frequently being updated.

Abbreviations

SCBA: Self-Contained Breathing Apparatus

PPE: Personal Protective Equipment

STEL: Short-Term Exposure Limit

TWA: Time Weighted Average

STOT: Specific Target Organ Toxicity

IMDG: International Maritime Dangerous Goods

IATA: International Air Transport Association