

SAFETY DATA SHEET

According to
HSNO Hazardous Substances (Safety Data Sheets) Notice 2017

Section 1. Identification of the material and the supplier

Product: **Asphalt**

Other/Trade Names:

| | | | | | | |
|--------|------|------|------|-------|-------|------|
| Mix 5 | DG7 | AC7 | SP7 | SMA5 | PA7 | EME2 |
| Mix 10 | DG10 | AC10 | SP10 | SMA7 | PA10 | |
| Mix 15 | DG14 | AC14 | SP14 | SMA8 | PA14 | |
| Mix 20 | DG20 | AC20 | SP20 | SMA10 | PA20 | |
| Mix 40 | | AC28 | SP28 | SMA11 | EPA7 | |
| | | | | SMA14 | EPA10 | |
| | | | | SMA20 | EPA14 | |
| | | | | | EPA20 | |

Product Use: Asphaltic Concrete is used for the construction of bituminous road and pavement surfaces. The formulations will vary in the ranges shown in Section 3, depending on the type of product.

Restriction of Use: Refer to section 15.

NZ Supplier: **Higgins Contractors Ltd.**
Address: 27 Waitangi Road,
Awatoto,
Napier, 4110
Telephone: +64 6 835 7288
Email: Contractors.HB@Higgins.co.nz

Emergency Telephone: 111 (FIRE POLICE AMBULANCE)
021 784 057 (National Bitumen Burns Centre)
0800 764 766 (National Poison Centre)

Date of SDS Preparation: 8 May 2026

Section 2. Hazards Identification

This substance is NOT hazardous according to the EPA Hazardous Substances (Classification) Notice 2020.

Other Hazards:

Risk of burns when handled, stored and transported at elevated temperatures.
Can emit noxious fumes when hot.

Section 3. Composition / Information on Ingredients

| Ingredients | Wt% | CAS NUMBER. |
|---|-----|-------------|
| Bitumen | <10 | 8052-42-4 |
| Mineral Aggregates | >60 | - |
| Other ingredients determined not to be hazardous. | <10 | |

Section 4. First Aid Measures

Routes of Exposure:

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| If in Eyes | If hot material contacts the eyes, immediately cool the affected area under cold water for at least 20 minutes. DO NOT attempt to remove the product from burnt areas. Refer to the CCNZ Bitumen Burns Card (see Section 16) <u>and</u> seek immediate medical assistance. Excessive exposure to fumes can cause eye irritations including redness, swelling, stinging and tearing. Remove affected person to a ventilated area. Flood eyes with plenty of water, holding eyelids open. If irritation due to fumes develops and persists, seek medical attention. |
| If on Skin | If hot material contacts the skin, immediately cool the affected area under cold water for at least 20 minutes. DO NOT attempt to remove the product from burnt areas. Refer to the CCNZ Bitumen Burns Card (see Section 16) <u>and</u> seek immediate medical assistance. Material that contacts the skin at ambient temperatures and does not result in burns can be removed using vegetable based oils, or industrial hand cleaners. Do not use thinners or solvents. Repeated skin contact may cause skin irritations or dermatitis. |
| If Swallowed | Do not induce vomiting, wash out mouth thoroughly. If symptoms develop seek medical assistance. |
| If Inhaled | Remove affected person to a ventilated area. If symptoms persist, seek medical advice. If not breathing, apply artificial respiration and seek urgent medical advice. |

Most important symptoms and effects, both acute and delayed

Symptoms: Various studies have concluded that there is no evidence of long-term health effects arising from the use of asphalt. Ingestion may cause pain, nausea or gastrointestinal irritations. Inhalation of fumes, mists or aerosols is likely to cause irritations to the nose or throat or coughing.

Section 5. Fire Fighting Measures

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| Hazard Type | Combustible solid. Unlikely to cause a fire or explosion hazard under normal conditions of use. |
| Hazardous Combustion Products: | Complete or incomplete combustion can produce oxides of carbon, sulfur and nitrogen, hydrogen sulphide and polyaromatic hydrocarbons. |
| Suitable Extinguishing Media | For large fires use foam or water fog to extinguish fire. For small fires use CO ₂ , dry powder, foam, sand or soil. High pressure water hoses can be used provided they do not spread the burning material. |
| Precautions for firefighters and special protective clothing | Fire fighters should wear full protective clothing and self-contained breathing apparatus. |
| HAZCHEM CODE | 2Y (if transport at temperatures >100°C) |

Section 6. Accidental Release Measures

Wear suitable personal protective clothing as described in Section 8 to prevent skin or eye contact with the material.

Small Spills:

Allow the material to cool and solidify before removing using a shovel or other suitable equipment.

Large Spills:

Allow the material to cool and solidify before removing using earth moving or excavation equipment. If a spillage enters the aquatic environment, contact the appropriate regional council for advice on removing it correctly.

Environmental Impact:

None when cooled.

Waste Disposal:

Cooled product should be loaded to suitable containers and returned to the manufacturer for recycling. Check with relevant authorities before disposing to land fill.

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| Section 7. | Handling and Storage |
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Precautions for Handling:

- Following manufacturing and during laying the material is hot and can cause severe burns.
- Wear personal protective clothing when handling (see Section 8). Avoid accidental release to the environment.
- CCNZ, 'BPG01 - Best Practice Guideline: Safe Handling of Bituminous Materials Used for Roading` provides more information on the safe handling and storage of bituminous materials.

Precautions for Storage:

Material cannot be stored unless kept at an elevated temperature. When allowed to cool it will set to a hard solid. Insulated steel containers or covered tip trucks are recommended.

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| Section 8 | Exposure Controls / Personal Protection |
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WORKPLACE EXPOSURE STANDARDS (provided for guidance only)

| | | | |
|--------------------|--------------------------------------|-------------|------|
| Asphalt Fumes: | 0.5mg/m ³ | 8 Hour TWA | (NZ) |
| Oil mist, mineral: | 5mg/m ³ | 8 Hour TWA | (NZ) |
| | 10mg/m ³ | 15 min STEL | (NZ) |
| Carbon Dioxide: | 5,000ppm (9000mg/m ³) | 8 Hour TWA | (NZ) |
| | 30,000ppm (54,000mg/m ³) | 15 min STEL | (NZ) |
| Carbon Monoxide: | 20ppm (200ppm Ceiling) | 8 Hour TWA | (NZ) |
| | 100ppm | 15 min STEL | (NZ) |
| Hydrogen Sulphide: | 5ppm (7mg/m ³) | 8 Hour TWA | (NZ) |
| | 10ppm (14mg/m ³) | 15 min STEL | (NZ) |

Workplace Exposure Standard – Short-term exposure limit (WES-STEL). The 15-minute time weighted average exposure standard. Applies to any 15-minute period in the working day and is designed to protect the worker against adverse effects of irritation, chronic or irreversible tissue change, or narcosis that may increase the likelihood of accidents. The WES-STEL is not an alternative to the WES-TWA; both the short-term and time-weighted average exposures apply. Exposures at concentrations between the WES-TWA and the WESSTEL should be less than 15 minutes, should occur no more than four times per day, and there should be at least 60 minutes between successive exposures in this range. Workplace Exposure Standards and Biological Exposure Indices. February 2025, Edition 15.

Notes:

It is unlikely that the product will form mists or aerosols during use. However, it may generate decomposition products under heating, which may have specific exposure limits. The decomposition products may include oxides of carbon, nitrogen and sulfur, hydrogen sulfide, and PCAs and PAHs.

Engineering Controls

Provide adequate ventilation to ensure fumes remain at a minimum level. Where vapors or mist are generated, particularly in closed areas, and natural ventilation is inadequate, a local exhaust ventilation system is required. Ensure that product cannot be heated above 200°C.

Personal Protection Equipment



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| Eyes | Eye protection is required when handling hot product. |
| Hands and Skin | <p>Wear full length overalls that fully cover the arms and legs. The overalls must be zipped up. It is advisable to wear a hat to prevent contact with hot product.</p> <p>Wear PVC or other impervious gloves to prevent burns when handling hot product.</p> <p>Wear safety boots that are oil resistant and have slip resistant soles. Overalls should cover the top of the boot.</p> |
| Respiratory | Respiratory protection or breathing apparatus are not usually required unless engineering controls are inadequate for providing sufficient ventilation. Dust masks should be used when removing old asphalt if dust is generated |

Section 9 Physical and Chemical Properties

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| Appearance | Solid black mixture of aggregates at ambient temperature. |
| Odour | Odourless at room temperature. Odour may become noticeable as the product is heated. |
| Odour Threshold | Not available |
| Chemical Nature | Inert solid at ambient temperature. |
| pH | N/A |
| Boiling Point | N/A |
| Melting Point | N/A |
| Flash Point | Not available. |
| Flammability | Not flammable, but combustible if heated strongly in the presence of an ignition source. |
| Upper and Lower Explosive Limits | Not available |
| Vapour Pressure | <0.75 mm Hg @ 180°C |
| Vapour Density | N/A |
| Density @ 20°C | 1.9 – 2.5 g/cm ³ |
| Solubility in Water | Insoluble/Not miscible |
| Partition Coefficient: N octanol/water | Not available |
| Auto-ignition Temperature | >400°C |
| Decomposition Temperature | Not available |
| Viscosity (25°C) | N/A |

Section 10. Stability and Reactivity

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| Stability of Substance | This product is stable under normal conditions. |
| Reactivity | Violent, explosive reaction when heated above 100°C in the presence of water. Do not allow water to come into contact with hot un-compacted asphalt. |
| Conditions to Avoid | Do not heat above 200°C as oxidation and degradation will occur. |
| Incompatible Materials | Product will degrade in presence of strong oxidizing and reducing agents, such as acids and alkalis. |
| Hazardous Decomposition Products | Normal combustion forms CO ₂ , H ₂ O, NO _x , and SO _x . Incomplete combustion may produce CO, H ₂ S, PCA, PAH, and volatile hydrocarbon and particulate matter. |

Section 11 Toxicological Information**Acute Effects:**

Data is not available for the formulated product, but data is presented for a constituent. This product is not classified as toxic under the NZ HSNO regulations. On this basis, oral toxicity is expected to exceed 5000 mg/kg.

| Ingredient | Species | Toxicity | Route |
|-------------------|------------------------|-----------------|--------------|
| Bitumen | LD ₅₀ (Rat) | >5000 mg/kg | Oral |

| | |
|-------------------|---|
| Swallowed | Not triggered, however ingestion may cause pain, nausea or gastrointestinal irritations. Ingestion of hot bitumen can cause serious burns. |
| Dermal | Not triggered. |
| Inhalation | Not triggered, however inhalation of fumes, mists and aerosols may cause throat or lung irritations, nausea, headaches, or dizziness. Symptoms are usually alleviated once the affected person is removed to a well-ventilated area. |
| Eye | Not triggered, however excessive exposure to fumes may cause slight to moderate eye irritation including redness, tearing, swelling and stinging. Irritation quickly subsides once removed from the fumes. Contact with hot asphalt can cause serious burns (see Section 4) and abrasion. |
| Skin | Not triggered, however repeated skin contact can cause skin abrasion, irritations and dermatitis. Contact with hot asphalt can cause serious burns (see Section 4). |

Chronic Effects:

| | |
|-------------------------------|---|
| Carcinogenicity | Not triggered. |
| Reproductive Toxicity | Not triggered. |
| Germ Cell Mutagenicity | Not triggered. |
| Aspiration | Not triggered. |
| STOT/SE | Not triggered. |
| STOT/RE | Not triggered. |
| Chronic | <p>Prolonged and/or repeated skin exposure can cause irritation and dermatitis.</p> <p>Numerous studies have concluded that bitumen does not cause any increase in the occurrence of carcinogenic, mutagenic or reproductive toxicity effects in workers.</p> |

Section 12. Ecotoxicological Information

May be harmful to aquatic environment when present in sufficiently large quantities.

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| Persistence and degradability | Based on its use as a road surfacing material, asphalt is expected to be highly persistent and not degradable in the environment. |
| Bioaccumulation | No data Available |
| Mobility in Soil | Insoluble in water. Solid at ambient temperature. No reports have been found to indicate that significant quantities of hazardous components are leached from the asphalt once it has cured. |
| Environmental Fate | Asphalt is persistent in the environment. |

Section 13. Disposal Considerations

Disposal Method:

Allow to cool and return to the manufacturer for recycling. Alternatively, dispose of in accordance with local authority regulations. This product can be disposed of as clean fill at landfills and other designated disposal sites.

Packaging:

Dispose of in accordance with local authority regulations.

Section 14 Transport Information

This product is **NOT** classified as a Dangerous Good for transport in NZ ; NZS 5433:2020.

Section 15 Regulatory Information

This substance is NOT hazardous according to the EPA Hazardous Substances (Classification) Notice 2020.

Section 16 Other Information

Glossary

| | |
|------------------|---|
| Cat | Category |
| EC ₅₀ | Median effective concentration. |
| EEL | Environmental Exposure Limit. |
| EPA | Environmental Protection Authority |
| HSNO | Hazardous Substances and New Organisms. |
| LC ₅₀ | Lethal concentration that will kill 50% of the test organisms inhaling or ingesting it. |
| LD ₅₀ | Lethal dose to kill 50% of test animals/organisms. |
| LEL | Lower explosive level. |
| OSHA | American Occupational Safety and Health Administration. |
| TEL | Tolerable Exposure Limit. |
| TLV | Threshold Limit Value-an exposure limit set by responsible authority. |
| UEL | Upper Explosive Level |
| WES | Workplace Exposure Limit |

References:

1. EPA Hazardous Substances (Safety Data Sheets) Notice 2017.
2. EPA Hazardous Substances (Hazard Classification) Notice 2020.
3. Workplace Exposure Standards and Biological Exposure Indices, February 2025 edition 15.
4. Assigning a hazardous substance to HSNO Approval (June 2014).
5. Transport of Dangerous goods on land NZS 5433:2020.
6. HSW (Hazardous Substances) Regulations 2017.
7. CCNZ, BPG01 - Best Practice Guideline: Safe Handling of Bituminous Materials Used for Rooding.

Disclaimer

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