

1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

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| Product Name | CONCRETE | |
| Supplier Name | ADELAIDE BRIGHTON CEMENT A.B.N. 96 007 870 199 | |
| Address | 62 Elder Road, Birkenhead, SA 5015 | |
| Manufacturing Plant | Birkenhead Works, 62 Elder Road, Birkenhead, SA 5015 | |
| Telephone | 08 8300 0300 | |
| Fax | 08 8341 1591 | |
| Emergency | Bus Hrs 08 8300 0300 A/Hrs 08 8300 0530 | |
| Email | orderstodespatch@adbri.com.au | |
| Web Site | http://www.drypak.com.au | |
| Synonym(s) | CONCRETE, SPEED SET, RIP RAP, SURESPRAY, SURESPRAY F, SURESHOT, SURESHOT F, SURESHOT FL, MARBELITE, DRYPAK GENERAL PURPOSE CONCRETE | |
| Use(s) | Concrete | Paths, mowing strips, borders, stepping-stones, light foundations, footings, slabs and lintels. |
| | Speed Set | Hole filling for fence posts and pergola posts, securing clotheslines, letterboxes, basketball rings, street signage, playground equipment, garden trellis, any non-structural elements around the home. |
| | Rip Rap | Temporary and permanent retaining walls. |
| | Surespray and Sureshot | Sprayed concrete application including repairs, tunnel linings, embankment stabilisation. |

2. HAZARDS IDENTIFICATION

This product is classified as hazardous according to criteria of NOHSC.
Not classified as a dangerous good by the criteria of the ADG Code.

RISK PHRASES

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| R36/37/38 | Irritating to eyes, respiratory system and skin. |
| R40 | Limited evidence of a carcinogenic effect. |
| R43 | May cause sensitisation by skin contact. |
| R48/20 | Harmful : danger of serious damage to health by prolonged exposure through inhalation. |

SAFETY PHRASES

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| S20/21 | When using do not eat, drink or smoke. |
| S22 | Do not breathe dust. |
| S24/25 | Avoid contact with skin and eyes. |
| S36/37 | Wear suitable protective clothing and gloves. |
| S38 | In case of insufficient ventilation, wear suitable respiratory equipment. |

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|-----------------|----------------|---------------------------|----------------|------------------|----------------|
| UN No | None Allocated | Hazchem Code | None Allocated | Pkg Group | None Allocated |
| DG Class | None Allocated | Subsidiary Risk(s) | None Allocated | EPG | None Allocated |

3. COMPOSITION/INFORMATION ON INGREDIENTS

| Ingredient | Formula | Conc. | CAS No. |
|---------------------|-------------------------|-----------|------------|
| PORTLAND CEMENT | Not Available | Up to 50% | 65997-15-1 |
| HIGH ALUMINA CEMENT | Not Available | Up to 10% | 65997-16-2 |
| FLY ASH | Not Available | Up to 5% | 68131-74-8 |
| CRYSTALLINE SILICA | Quartz SiO ₂ | Up to 80% | 14808-60-7 |
| SILICA FUME | Not Available | Up to 15% | 69012-64-2 |
| CHROMIUM (VI) | Cr ⁶⁺ | <2 ppm | 18540-29-9 |

Aggregates used may be siliceous and/or dolomitic stone.

4. FIRST AID MEASURES

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| Eye | Flush thoroughly with flowing water for at least 15 minutes. Seek medical attention if symptoms persist. |
| Inhalation | Remove from dusty area to fresh air. If symptoms persist, seek medical attention. |
| Skin | Wash thoroughly with water. A shower may be required. |
| Ingestion | Rinse mouth and lips with water. Do not induce vomiting. Give water to drink to dilute stomach contents. If symptoms persist, seek medical attention. |
| Advice to Doctor | Treat symptomatically. |
| First Aid Facilities | Eye wash station. |

Additional Information - Aggravated Medical Conditions

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| Inhalation | Inhalation of dust through prolonged, repeated exposure can cause bronchitis, silicosis (scarring of the lung.) It may also increase the risk of scleroderma (a disease affecting the connective tissue of the skin, joints, blood vessels and internal organs) and lung cancer. Epidemiological studies have shown that smoking increases the risk of bronchitis, silicosis (scarring of the lung) and lung cancer. |
| Skin | Prolonged and repeated skin contact with cement in wet concrete, mortars and slurries may cause both irritant dermatitis and allergic (contact) dermatitis. The latter is due to the presence of traces of water soluble hexavalent chromium in cement. |

5. FIRE FIGHTING

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| Flammability | Non flammable. Does not support combustion of other materials. |
| Fire and Explosion | Non flammable. Does not cause dust explosions. |
| Extinguishing | Non flammable. |
| Hazchem Code | None. |

6. ACCIDENTAL RELEASE MEASURES

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| Spillage | If spilt (bulk), contact emergency services if appropriate. Wear dust-proof goggles, PVC/rubber gloves, a Class P2 respirator (where an inhalation risk exists), coveralls and rubber boots. Clear area of all unprotected personnel. Prevent spill entering drains or waterways. Collect and place in sealable containers for disposal or reuse. Avoid generating dust. |
| Emergency Procedures | Follow safety requirements for personal protection under Section 8 Exposure Controls/Personal Protection. |

7. HANDLING AND STORAGE

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| Storage | Store off the floor, in the original bags in cool, dry, well ventilated area, removed from moisture, oxidising agents (eg. Hypochlorites, phosphorus oxide), acids, (eg hydrochloric acid), ethanol, interhalogens (eg. chlorine trifluoride) and foodstuffs. Ensure packages are adequately labelled, protected from physical damage and sealed when not in use. |
| Handling | DryPak General Purpose Concrete is supplied in 20 and 30 kg bags. DryPak Speed Set is supplied in 20 and 30 kg bags. Surespray and Sureshot materials are supplied in 20 kg bags. Rip Rap is supplied in 20kg bags. Recognised local safe lifting methods should be used. Before use carefully read the product label. Use of safe work practices are recommended to avoid eye or skin contact and inhalation. Observe good personal hygiene, including washing hands before eating. Prohibit eating, drinking and smoking in contaminated areas. |
| Property/ Environmental | Refer to Section 13. |

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

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| Ventilation | Do not inhale dust/powder. Use with adequate ventilation. Where a dust inhalation hazard exists, mechanical extraction ventilation is recommended. Maintain dust levels below the recommended exposure standard. |
| Exposure Standards | <p>CALCIUM HYDROXIDE (1305-62-0) ES-TWA: 5 mg/m³ WES-TWA: 5mg/m³</p> <p>CHROMIUM (VI) (18540-29-9) ES-TWA: 0.05 mg/m³ (Chromium VI compounds)</p> <p>SILICA, CRYSTALLINE – QUARTZ (14808-60-7) ES-TWA: 0.1 mg/m³ (Silica Quartz, respirable, NOHSC) ES-TWA: 0.1 mg/m³ (QLD); 0.15 mg/m³ (NSW) WES-TWA: 0.1 mg/m³</p> <p>PORTLAND CEMENT (65997-15-1) ES-TWA: 10 mg/m³ Portland Cement ES-TWA: 0.05 mg/m³ Chromium (VI) Compounds (contaminant) WES-TWA: 10 mg/m³</p> <p>SILICA, AMORPHOUS – FUME (69012-64-2) ES-TWA: 2 mg/m³ Silica fume (thermally generated) (respirable)</p> <p>CALCIUM ALUMINATE CEMENT (65997-16-2) ES-TWA: 10mg/m³ (total dust)</p> <p>GYPHUM (10101-41-4) ES-TWA: 10 mg/m³ Inhalable dust</p> <p>CALCIUM CARBONATE (1317-65-3) ES-TWA: 10mg/m³ WES-TWA: 10mg/m³</p> <p>FLYASH (68131-74-8) ES-TWA: 10mg/m³</p> |
| PPE | Wear dust-proof goggles and rubber or PVC gloves. Where an inhalation risk exists, wear a Class P2 respirator. If there is potential for prolonged and/or excessive skin contact, wear coveralls. At high dust levels, wear a Class P3 respirator or a Powered Air Purifying Respirator (PAPR) with Class P3 filter. |

9. PHYSICAL AND CHEMICAL PROPERTIES

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| Appearance | A grey or off-white mixture containing finely ground materials (Portland Cement, Fly Ash, Alumina cement) and fine and coarse aggregate particles up to 10 mm nominal size. | Solubility (water) | Slight, hardens on mixing with water |
| Odour | Odourless | Specific Gravity | Average Approx 2.7 |
| pH | Approximately 12 | % Volatiles | Not Available |
| Vapour Pressure | Not Available | Flammability | Non Flammable |
| Vapour Density | Not Available | Flash Point | Not Relevant |
| Boiling Point | Not Available | Upper Explosion Limit | Not Relevant |
| Melting Point | Not Available | Lower Explosion Limit | Not Relevant |
| Evaporation Rate | Not Available | Autoignition Temperature | Not Available |
| Bulk Density | Dry 1500 to 1700 kg/m ³ Compacted (cast) 2250 – 2400 kg/m ³ | | |
| Particle Size | Up to nominal 10 mm | | |

10. STABILITY AND REACTIVITY

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| Reactivity | Incompatible with oxidising agents (eg hypochlorites), ethanol, acids (eg hydrofluoric acid) and interhalogens (eg chlorine trifluoride). Water contact may increase product temperature 2-3 ⁰ C. |
| Decomposition Products | May evolve toxic gases when heated to decomposition. |

11. TOXICOLOGICAL INFORMATION

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| Health Hazard Summary | Slightly corrosive. Avoid eye or skin contact or dust inhalation. This product has the potential to cause acute and chronic health effects with over exposure. Crystalline silica can cause silicosis (lung disease) with chronic over exposure, however due to low levels present and product application, adverse health effects are not anticipated. Crystalline silica and hexavalent chromium compounds are classified as carcinogenic to humans (IARC Group 1). |
| Eye | Slightly corrosive. Severe irritant upon contact with powder/dust. Over exposure may result in pain, redness, corneal burns and ulceration with possible permanent damage. |
| Inhalation | Slightly corrosive. Over exposure may result in severe mucous membrane irritation and bronchitis. Hexavalent chromium is reported to cause respiratory sensitisation, however due to the trace amount present, a hazard is not anticipated under normal conditions of use. |
| Skin | Slightly corrosive. Prolonged and repeated contact with powder or wetted form may result in skin rash, dermatitis and sensitisation. |
| Ingestion | Slightly corrosive. Ingestion may result in burns to the mouth and throat, with vomiting and abdominal pain. Due to product form, ingestion is not considered a likely exposure route. |
| Toxicity Data | SILICA, CRYSTALLINE – QUARTZ (14808-60-7) Carcinogenicity: Classified as a human carcinogen (IARC Group 1) CHROMIUM (VI) (18540-29-9) Carcinogenicity: Confirmed human carcinogen (IARC Group 1) Health Surveillance: Required [NOHSC:1005(1994)] |

12. ECOLOGICAL INFORMATION

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| Environment | Limited ecotoxicity data was available for this product at the time this report was prepared. Ensure appropriate measures are taken to prevent this product from entering the environment. |
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13. DISPOSAL CONSIDERATIONS

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| Waste Disposal | Reuse or recycle where possible. Alternatively, ensure product is covered with moist soil to prevent dust generation and dispose of to an approved landfill site. Contact the manufacturer for additional information. |
| Legislation | Dispose of in accordance with relevant local legislation. Keep out of sewer and stormwater drains. |

14. TRANSPORT INFORMATION

Not classified as a dangerous good by the criteria of the ADG Code.

Drivers of trucks transporting bagged product should ensure that the bags are properly restrained.

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|----------------------|----------------|---------------------------|----------------|------------------|----------------|
| Shipping Name | None Allocated | Hazchem Code | None Allocated | Pkg Group | None Allocated |
| UN No | None Allocated | Subsidiary Risk(s) | None Allocated | EPG | None Allocated |
| DG Class | None Allocated | | | | |

15. REGULATORY INFORMATION

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| Poison Schedule AICS | A poison schedule number has not been allocated to this product using the criteria in the Standard for the Uniform Scheduling of Drugs and Poisons (SUSDP). All chemicals listed on the Australian Inventory of Chemical Substances (AICS). |
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16. OTHER INFORMATION

Additional Information

CEMENT CONTACT DERMATITIS: Individuals using wet cement, mortar, grout or concrete could be at risk of developing cement dermatitis. Symptoms of exposure include itchy, tender, swollen, hot, cracked or blistering skin with the potential for sensitisation. The dermatitis is due to the presence of soluble (hexavalent) chromium.

IARC – GROUP 1 – PROVEN HUMAN CARCINOGEN. This product contains an ingredient for which there is sufficient evidence to have been classified by the International Agency for Research into Cancer as a human carcinogen. The use of products known to be human carcinogens should be strictly monitored and controlled.

RESPIRATORS: In general the use of respirators should be limited and engineering controls employed to avoid exposure. If respiratory equipment must be worn ensure correct respirator selection and training is undertaken. Remember that some respirators may be extremely uncomfortable when used for long periods. The use of air powered or air supplied respirators should be considered where prolonged or repeated use is necessary.

PERSONAL PROTECTIVE EQUIPMENT GUIDELINES: The Recommendation for protective equipment contained within this MSDS report is provided as a guide only. Factors such as method of application, working environment, quantity used, product concentration and the availability of engineering controls should be considered before final selection of personal protective equipment is made.

HEALTH EFFECTS FROM EXPOSURE: It should be noted that the effects from exposure to this product will depend on several factors including: frequency and duration of use; quantity used; effectiveness of control measures; protective equipment used and method of application. Given that it is impractical to prepare an MSDS report which would encompass all possible scenarios, it is anticipated that users will assess the risks and apply control methods where appropriate.

ABBREVIATIONS:

mg/m³ – Milligrams per cubic metre

ppm – Parts Per Million

ES-TWA – Exposure Standard - Time Weighted Average

CNS – Central Nervous System

NOS – Not Otherwise Specified

pH – relates to hydrogen ion concentration – this value will relate to a scale of 0 – 14, where 0 is highly acidic and 14 is highly alkaline.

CAS# - Chemical Abstract Service Number – used to uniquely identify chemical compounds.

IARC – International Agency for Research on Cancer.

WES-TWA – Workplace Exposure Standard – Time Weighted Average

Report Status

This document has been compiled by Adelaide Brighton Cement the manufacturer of the product and serves as the manufacturer's Material Safety Data Sheet ("MSDS").

While Adelaide Brighton Cement has taken all due care to include accurate and up-to-date information in this MSDS, it does not provide any warranty as to accuracy or completeness. As far as lawfully possible, Adelaide Brighton Cement accepts no liability for any loss, injury or damage (including consequential loss) which may be suffered or incurred by any person as a consequence of their reliance on the information contained in this MSDS.



Material Safety Data Sheet

Product Name **CONCRETE**

Contact Point

For further information on this product contact:

Telephone: Office hours 08 8300 0300
After hours 08 8300 0530
Facsimile: 08 8341 1591
Web site: <http://www.adelaidebrighton.com.au>

Advice Note

The information in this document is believed to be accurate. Please check the currency of this MSDS by contacting:

08 8300 0300
or
<http://www.drypak.com.au>

The provision of this information should not be construed as a recommendation to use this product in violation of any patent rights or in breach of any statute or regulation. Users are advised to make their own determination as to the suitability of this information in relation to their particular purposes and specific circumstances. Users should read this MSDS and consider the information in the context of how the product will be handled and used in the workplace and in conjunction with other substances or products.