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**Gravel Lock Ltd**

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New Zealand

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**Where Science Meets the Earth**

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HSC - HYGROSCOPIC SOIL CEMENT

**MATERIAL DATA SAFETY SHEET**

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| Section 1: SUBSTANCE IDENTIFICATION AND SUPPLIER |

Product Name: HYGROSCOPIC SOIL CEMENT - HSC

Recommended Use: Roading: Long Term Dust Suppression & Soil Stabilization

Chemical Identity: Powder Product

Product Type: Non-Hydraulic Cement

Product Composition: Solution of inorganic salts and polymers in water.

Company Identification: Gravel Lock NZ Ltd,

44 Wairahi Road, Langs Beach, Waipu

PO Box 23, Waipu

Northland

New Zealand 0545

Gravel Lock Customer Centre: 0800 199 199

National Poisons Information Centre: 0800 POISON (0800 764 766)

Emergency Telephone Number: 0800 699 699) (24hr) (Emergencies Only)

Transport Emergency Phone: 111 - tell operator what service is needed: Fire, Ambulance, Police

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| Section 2: HAZARD IDENTIFICATION |

Hazard Classifications: 6.1E, 6.4A, 6.9B

Priority Identifiers: WARNING KEEP OUT OF REACH OF CHILDREN

Secondary Identifiers: 6.1E = May be harmful if swallowed, inhaled or absorbed through the skin

6.4A = Eye irritant

6.9B = Harmful to human target organs or systems

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| Section 3: COMPOSITION INFORMATION |

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| INGREDIENTS | CAS NO. | PERCENT |
| Magnesium Chloride Hexahydrate | 7791-18-6 | 47.5 |
| Magnesium Oxide | 1309-48-4 | 47.5 |
| Polymers | 9063-87-0 | 025-5 |

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| Section 4: FIRST AID MEASURES |

First Aid Measures: Consult the National Poisons Centre on 0800 POISON (0800 764 766) or a doctor immediately in every case of suspected poisoning.

Inhalation: Remove patient to fresh air. Lay down and keep warm and rested. If breathing is shallow or has stopped ensure airway is clear and apply resuscitation. Seek medical assistance immediately.

Ingestion: Never give anything by mouth to an unconscious person. If swallowed DO NOT induce vomiting. For advice, contact the National Poisons Centre on 0800 POISON (0800 764 766). Seek medical assistance immediately.

Skin: Remove contaminated clothing and wash affected area thoroughly with soap and water. If a large area is affected seek medical assistance.

Eye: Flush with plenty of water for 15 minutes holding eyelids open if necessary. Call a doctor immediately.

Advice to Doctor: No specific antidote. Treat symptomatically. If vomiting is induced, suggest endotracheal and/or oesophageal control. Danger from lung aspiration must be weighed against toxicity when considering emptying the stomach.

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| Section 5: FIREFIGHTING |

Flash Point: Not applicable (non-flammable)

Combustion Products: Hydrogen Chloride

Extinguishing Media: Based on surrounding materials

Protective Equipment: Breathing apparatus plus protective gloves

HAZCHEM Code: Not applicable

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| Section 6: ACCIDENTAL RELEASE MEASURES |

Spills and Disposal: Wear appropriate protective clothing. Exclude non-essential people from the area. Contain spill and absorb with inert material such as soil, sand or absorbent granules and place in a sealable waste container. Dispose of waste safely in an approved landfill.

Protective Clothing: For appropriate personal protective equipment see section 8.

Environmental Precaution: Prevent from entering drains, waterways or sewers. If spill does enter waterways contact the local authority.

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| Section 7: HANDLING AND STORAGE |

Handling: Keep out of reach of children. Avoid contact with skin, eyes and inhalation of vapours. Use personal protective equipment as required.

Approved Handler: Not required

Tracking: Not required

Record Keeping: Not required

Storage: Store in original container tightly closed and in a locked, dry, cool area away from foodstuffs, fertiliser and seed. Store in accordance with NZS 8409; Management of Agrichemicals.

Other Information: Always read the label before use. See label for further information on handling and storage.

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| Section 8: EXPOSURE CONTROL/PERSONAL PROTECTION |

Exposure Limits: No exposure limits have been assigned for this product.

Protective Equipment: When contact with product is likely, wear protective gloves.

Engineering Controls: Handle in well-ventilated area. Avoid inhalation of dust.

Hygiene Precautions: Do not eat, drink or smoke while using this product. Remove protective clothing and wash hands and face before meals and after work. Wash protective clothing daily after work. Contaminated clothing should not be allowed out of the workplace.

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| Section 9: PHYSICAL AND CHEMICAL PROPERTIES |

Appearance: White, off white or brown powder or small granule/prill

Odour: Odourless

Specific Gravity: 1.2

pH: 5.0-6.5 (50g/l in water @ 200C)

Solubility in Water: Insoluble

Flash Point: Not applicable (non-flammable)

Melting Point 2,600 C

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| Section 10: STABILITY AND REACTIVITY |

Stability: Stable. Stable. When stored appropriately this product should show no significant degradation for at least 5 years from the date of manufacture.

Hazardous Decomposition Hydrogen Chloride Products

Hazardous Polymerisation: Hazardous polymerisation is not likely to occur

Materials to Avoid: None

Conditions to Avoid: High humidity

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| Section 11: TOXICOLOGICAL INFORMATION |

Hazard Classifications: 6.1E, 6.4A, 6.9B

Ingestion: Oral LD50; 8,100 mg/kg (rat). Ingestion of large quantities may lead to nausea, vomiting and diarrhoea.

Inhalation: Inhalation of dust may be irritating

Skin: May be mildly irritating and may cause drying of skin

Eye: Irritating to the eye

Chronic Effects: Repeated exposure may damage lungs and respiratory system

Reproductive Toxicity: No reproductive effects

Mutagenicity: Non-mutagenic

Carcinogenicity: Not considered to be carcinogenic

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| Section12: ECOLOGICAL INFORMATION |

Hazard Classifications: Not considered an Eco toxic substance

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| Section 13: DISPOSAL INFORMATION |

Product Disposal: Dispose of product only by using according to label or at an approved landfill. Recycle where possible. Do not contaminate bodies of water with chemical or empty container.

Container Disposal: Burn container in an appropriate incinerator if circumstance, such as wind direction permit. Otherwise bury in an approved landfill. Do not use container for any other purpose.

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| Section 14: TRANSPORT INFORMATION |

Transport Information: It is good practice to separate this product from food, food related materials, animal feedstuffs, seed or fertilisers during transport.

RAIL/ROAD; SEA (IMDG Code); AIR (ICAO/IATA)

UN Number: N/A

Proper Shipping Name: N/A

DG Class: N/A

Subsidiary Class N/A

Packing Group: N/A

Marine Pollutant: No

MTQ (non-commercial): N/A

HAZCHEM Code: N/A

IERG Number: N/A

Other information: Check the latest versions of the Land Transport Dangerous Goods Rule 45001 and associated Transport of Dangerous Goods on Land (NZS 5433) for additional information on maximum allowable transport quantities (MTQ’s), placarding and segregation. Sea transport may require further segregation.

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| Section 15: REGULATORY INFORMATION |

ACVM: Exempt from Registration under the ACVM Act 1997

EPA: Approved pursuant to the HSNO Act 1996, Approval numbers:

HSR002764 See www.epa.govt.nz for approval controls.

HSR006644 See [www.epa.govt.nz](http://www.epa.govt.nz) for approval controls

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| Section 16: OTHER INFORMATION |

This Safety Data Sheet was updated on the date shown on page 1 and supersedes all previous versions.

The data in this MSDS relates only to the specific material designated herein and does not relate to use in combination with any other material. The information is provided in good faith based on current knowledge and experience. No warranty with regard to the product properties is expressed or implied.