

SAFETY DATA SHEET

MAKGROUT HES

Makrete Pty Ltd
Version No: 1.00

Issue Date: May 2023

Section 1 MATERIAL AND SUPPLY COMPANY IDENTIFICATION

Product Identifier

Product Name	MAKGROUT HES
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Relevant identified uses of the substance or mixture and uses advised against

Relevant Identified uses	High early strength, fast setting non-shrink cementitious grout.
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Details of the supplier of the safety data sheet

Registered Company Name	Makrete Pty Ltd
Address	Suite 2A, 20 Arthur Street, Eltham
Telephone	1300 911 161
Website	www.makrete.com.au
Email	admin@makrete.com.au

Emergency telephone number

Emergency Telephone Numbers	
Other emergency telephone numbers	

SECTION 2 HAZARDS IDENTIFICATION

Classification of the substance or mixture

HAZARDOUS CHEMICAL. NON-DANGEROUS GOODS. According to the WHS Regulations and the ADG Code

Poisons Schedule	Not Applicable
Classification	Skin Corrosion/Irritation Category 2, Serious Eye Damage Category 1, Skin Sensitizer Category 1, Carcinogenicity Category 1A, Specific target organ toxicity - single exposure Category 3 (respiratory tract irritation), Specific target organ toxicity - repeated exposure Category 2

Label elements

Hazard Pictogram(s)	
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SIGNAL WORD	DANGER
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Hazard statement(s)

H315	Causes skin irritation.
H318	Causes serious eye damage.
H317	May cause an allergic skin reaction.
H335	May cause respiratory irritation.
H373	May cause damage to organs through prolonged or repeated exposure.

Precautionary statement(s) Prevention

P260	Do not breathe dust/fume/gas/mist/vapours/spray.
P271	Use only outdoors or in a well-ventilated area.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P272	Contaminated work clothing should not be allowed out of the workplace.

Precautionary statement(s) Response

P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P302+P352	IF ON SKIN: Wash with plenty of soap and water.
P310	Immediately call a POISON CENTER or doctor/physician.
P362	Take off contaminated clothing and wash before reuse.

Precautionary statement(s) Storage

P405	Store locked up.
P403+P233	Store in a well-ventilated place. Keep container tightly closed.

Precautionary statement(s) Disposal

P501	Dispose of contents/container in accordance with local regulations.
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SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS

Substances

See section below for composition of Mixtures

Chemical Entity

CAS No	%[weight]	Name
14808-60-7	30-60	Silica Crystalline
65997-15-1	30-60	Portland Cement

SECTION 4 FIRST AID MEASURES

Description of first aid measures

Eye Contact	If this product comes in contact with the eyes: Immediately hold eyelids apart and flush the eye continuously with running water. Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids. Continue flushing until advised to stop by the Poisons Information Centre or a doctor, or for at least 15 minutes. Transport to hospital or doctor without delay. Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.
Skin Contact	If skin contact occurs: Immediately remove all contaminated clothing, including footwear. Flush skin and hair with running water (and soap if available). Seek medical attention in event of irritation.
Inhalation	If fumes or combustion products are inhaled remove from contaminated area. Lay patient down. Keep warm and rested. Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures. Apply artificial respiration if not breathing, preferably with a demand valve resuscitator, bag-valve mask device, or pocket mask as trained. Perform CPR if necessary. Transport to hospital, or doctor, without delay.
Ingestion	If swallowed do NOT induce vomiting. If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration. Observe the patient carefully. Never give liquid to a person showing signs of being sleepy or with reduced awareness; i.e., becoming unconscious. Give water to rinse out mouth, then provide liquid slowly and as much as casualty can comfortably drink. Seek medical advice.

Indication of any immediate medical attention and special treatment needed – Treat symptomatically.

SECTION 5 FIREFIGHTING MEASURES

Extinguishing media

There is no restriction on the type of extinguisher which may be used. Use extinguishing suitable for surrounding area.

Special hazards arising from the substrate or mixture.

Fire Incompatibility	None known.
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Advice for firefighters

Fire Fighting	When silica dust is dispersed in air, firefighters should wear inhalation protection as hazardous substances from the fire may be adsorbed on the silica particles. When heated to extreme temperatures, (>1700 °C) amorphous silica can fuse. Alert Fire Brigade and tell them location and nature of hazard. Wear breathing apparatus plus protective gloves in the event of a fire. Prevent, by any means available, spillage from entering drains or water courses. Use firefighting procedures suitable for surrounding area. Use water fog or fine water spray, standard foam, dry agent (carbon dioxide, dry chemical powder)
Fire/Explosion Hazard	Non-combustible. Not considered a significant fire risk, however containers may burn. Decomposition may produce toxic features of Silicon Dioxide (SiO ₂). When aluminium oxide dust is dispersed in air, firefighters should wear protection against inhalation of dust particles, which can also contain hazardous substances from the fire absorbed on the alumina particles. May emit poisonous fumes. May emit corrosive fumes.
HAZCHEM	Not Applicable

SECTION 6 ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures – See Section 8

Environmental precautions

See section 12

Minor Spills	Remove all ignition sources. Clean up all spills immediately. Avoid contact with skin and eyes. Control personal contact with the substance wear protective equipment.
Major Spills	Moderate hazard. CAUTION: Advise personnel in area. Alert Emergency Services and tell them location and nature of hazard. Control personal contact by wearing protective clothing.

Personal Protective Equipment advice is contained in Section 8 of the SDS.

SECTION 7 HANDLING AND STORAGE

Precautions for safe handling

Safe Handling	Avoid all personal contact, including inhalation. Wear protective clothing when risk of exposure occurs. Use in a well-ventilated area. Prevent concentration in hollows and sumps.
Other Information	Store in original containers. Keep containers securely sealed. Store in a cool, dry, well-ventilated area. Store away from incompatible materials and foodstuff containers.

Conditions for safe storage, including any incompatibilities

Suitable Container	Polyethylene or polypropylene container. Check all containers are clearly labelled and free from leaks.
Storage Incompatibility	Warning: Avoid or control reaction with peroxides. All transition metal peroxides should be considered as potentially explosive. For example, transition metal complexes of alkyl hydroperoxides may decompose explosively. The pi-complexes formed between chromium (0), vanadium (0) and other transition metals(haloarene-metal complexes) and mono or poly-fluorobenzene show extreme sensitivity to heat and are explosive. Avoid strong acids, acid chlorides and chloroformates. Avoid contact with copper, aluminium and their alloys.

SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

CONTROL PARAMETERS


OCCUPATIONAL EXPOSURE LIMITS (OEL)

Source	Ingredient	Material name	TWA	STEL
Australia Exposure Standards	Graded Sand	Quartz (respirable dust)	0.1 mg/m3	Not Available
Australia Exposure Standards	Graded Sand	Quartz (respirable dust)	0.1 mg/m3	Not Available
Australia Exposure Standards	Graded Sand	Silica - Crystalline	Not Available	Not Available
Australia Exposure Standards	Portland Cement	Portland Cement	10 mg/m3	Not Available

EMERGENCY LIMITS				
Ingredient	Material name	TEEL-1	TEEL-2	TEEL-3
Graded Sand(Crystalline)	Silica, Crystalline-Quartz; (Silicon Dioxide)	0.075 mg/m3	33 mg/m3	200 mg/m3

Ingredient	Original IDLH	Revised IDLH
Graded Sand(Crystalline)	Not Available	Not Available
Portland Cement	5,000 mg/m3	Not Available

EXPOSURE CONTROLS

Appropriate Engineering Controls	<p>Engineering controls are used to remove a hazard or place a barrier between the worker and the hazard. Well-designed engineering controls can be highly effective in protecting workers and will typically be independent of worker interactions to provide this high level of protection.</p> <p>The basic types of engineering controls are:</p> <p>Process controls which involve changing the way a job activity or process is done to reduce the risk.</p> <p>Enclosure and/or isolation of emission source which keeps a selected hazard "physically" away from the worker and ventilation that strategically "adds" and "removes" air in the work environment.</p>
Personal Protection	
Eye and Face Protection	<p>Safety glasses with side shields.</p> <p>Chemical goggles.</p> <p>Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lenses or restrictions on use, should be created for each workplace or task.</p>
Skin Protection	See Hand protection below
Hands/Feet Protection	<p>NOTE:</p> <p>The material may produce skin sensitisation in predisposed individuals. Care must be taken, when removing gloves and other protective equipment, to avoid all possible skin contact.</p> <p>Contaminated leather items, such as shoes, belts and watchbands should be removed and destroyed.</p> <p>The selection of suitable gloves does not only depend on the material, but also on further marks of quality which vary from manufacturer to manufacturer. Where the chemical is a preparation of several substances, the resistance of the glove material cannot be calculated in advance and has therefore to be checked prior to the application.</p> <p>The exact break through time for substances has to be obtained from the manufacturer of the protective gloves and has to be observed when making a final choice.</p> <p>Personal hygiene is a key element of effective hand care. Use Neoprene rubber gloves.</p> <p>Experience indicates that the following polymers are suitable as glove materials for protection against undissolved, dry solids, where abrasive particles are not present.</p> <p>Polychloroprene Nitrile rubber Butyl rubber</p>
Body Protection	See Other protection below
Other Protection	<p>Overalls</p> <p>P.V.C. apron</p> <p>Barrier cream</p>
Thermal Hazards	Not Available

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance	Fine grey powder; Partly soluble in water.		
Physical State	Divided Solid	Relative Density (Water = 1)	1.5
Odour	Not Available	Partition Coefficient -Octanol/ Water	Not Available
Odour Threshold	Not Available	Auto-Ignition Temperature (°C)	Not Available
pH (as supplied)	Not Applicable	Decomposition Temperature	Not Available
Melting point /Freezing Point (°C)	Not Available	Viscosity (cSt)	Not Applicable
Initial Boiling Point and Boiling Range (°C)	Not Applicable	Molecular Weight (g/mol)	Not Applicable
Flash Point (°C)	Not Applicable	Taste	Not Available
Evaporation Rate	Not Available	Explosive Properties	Not Available
Flammability	Not Applicable	Oxidising Properties	Not Available
Upper Explosive Limit (%)	Not Applicable	Surface Tension (dyn/cm or mN/m)	Not Applicable
Lower Explosive Limit (%)	Not Applicable	Volatile Component (%vol)	Not Available
Vapour Pressure (kPa)	Negligible	Gas Group	Not Available
Solubility in Water (g/L)	Partly miscible	pH as a Solution (1%)	Not Available
Vapour Density (Air = 1)	Not Applicable	VOC g/L	Not Available

SECTION 10 STABILITY AND REACTIVITY

Reactivity	See Section 7
Chemical Stability	Unstable in the presence of incompatible materials. Product is considered stable. Hazardous polymerisation will not occur.
Possibility of Hazardous Reactions	See Section 7
Conditions to Avoid	See Section 7
Incompatible Materials	See Section 7
Hazardous Decomposition Products	See Section 5

SECTION 11 TOXICOLOGICAL INFORMATION

Information on toxicological effects

Inhaled	The material can cause respiratory irritation in some persons. The body's response to such irritation can cause further lung damage. Inhalation of dusts, generated by the material during normal handling, may be damaging to the health of the individual. Persons with impaired respiratory function, airway diseases and conditions such as emphysema or chronic bronchitis, may incur further disability if excessive concentrations of particulate are inhaled. If prior damage to the circulatory or nervous systems has occurred or if kidney damage has been sustained, proper screenings should be conducted on individuals who may be exposed to further risk if handling and use of the material result in excessive exposures. Effects on lungs are significantly enhanced in the presence of respirable particles. Acute silicosis occurs under conditions of extremely high silica dust exposure particularly when the particle size of the dust is small. The disease is rapidly progressive and spreads widely through the lungs within months of the initial exposure and causing death within 1 to 2 years.
Ingestion	Accidental ingestion of the material may be damaging to the health of the individual. Not normally a hazard due to the physical form of product. The material is physical irritant to the gastro-intestinal tract.
Skin Contact	This material can cause inflammation of the skin on contact in some persons. The material may accentuate any pre-existing dermatitis condition. Handling wet cement can cause Dermatitis. Cement when wet is quite alkaline and this alkali action on the skin contributes strongly to cement contact Dermatitis since it may cause drying and defatting of the skin which is followed by hardening, cracking, lesions developing, possible infections of lesions and penetration by soluble salts.

	<p>Skin contact may result in severe irritation particularly to broken skin. Ulceration known as “Chrome Ulcers” may develop. Chrome Ulcers and Skin Cancer are significantly related.</p> <p>Open cuts, abraded or irritated skin should not be exposed to this material</p> <p>Entry into the bloodstream, through for example, cuts, abrasions or lesions, may produce systemic injury with harmful effects. Examine the skin prior to the use of the material and ensure that any external damage is suitably protected.</p>
Eye	If applied to the eyes, this material causes severe eye damage.
Chronic	<p>Long-term exposure to respiratory irritants may result in airways disease, involving difficulty breathing and related whole-body problems. Skin contact with the material is more likely to cause a sensitisation reaction in some persons compared to the general population.</p> <p>Harmful: danger of serious damage to health by prolonged exposure through inhalation.</p> <p>This material can cause serious damage if one is exposed to it for too long periods. It can be assumed that it contains a substance which can produce severe defects.</p> <p>Substance accumulation, in the human body may occur and may cause some concern following repeated or long-term occupational exposure. Animal testing shows long term exposure to aluminium oxides may cause lung disease and cancer, depending on the size of the particle. The smaller the size, the greater the tendencies of causing harm.</p> <p>Red blood cells and rabbit alveolar macrophages exposed to Calcium Silicate insulation materials in vitro showed haemolysis in one study but not in another. Both studies showed the substance to be more cytotoxic than titanium dioxide but less toxic than asbestos.</p> <p>In a small cohort mortality study of workers in a wollastonite quarry, the observed number of deaths from all Cancers combined and lung cancer were lower than expected. Wollastonite is a calcium inosilicate mineral (CaSiO₃).</p> <p>Cement contact dermatitis (CCD) may occur when contact shows an allergic response, which may progress to sensitisation. Sensitisation is due to soluble chromates (chromate compounds) present in trace amounts in some cements and cement products. Soluble chromates readily penetrate intact skin. Cement dermatitis can be characterised by fissures, eczematous rash, dystrophic nails and dry skin: acute contact with highly alkaline mixtures may cause localised necrosis.</p> <p>Crystalline silicas activate the inflammatory response of white blood cells after they injure the lung epithelium. Chronic exposure to crystalline silicas reduces lung capacity and predisposes to chest infections.</p> <p>Overexposure to the breathable dust may cause coughing, wheezing, difficulty in breathing and impaired lung function.</p> <p>Chronic symptoms may include decreased vital lung capacity and chest infections. Repeated exposures in the workplace to high levels of fine divided dusts may produce a condition known as pneumoconiosis, which is the lodgement of any inhaled dusts in the lung, irrespective of the effect. This is particularly true when a significant number of particles less than 0.5 microns(1/50000 inch) are present.</p> <p>Chronic excessive intake of iron has been associated with damage to the liver and pancreas. People with a genetic disposition to poor control over iron are at an increased risk.</p> <p>Prolonged or repeated skin contact may cause drying with cracking irritation and possible dermatitis.</p>

SECTION 12 ECOLOGICAL INFORMATION

Avoid contaminating waterways.

Acute aquatic hazard: This material has been classified as non-hazardous. Acute toxicity estimate (based on ingredients):>100mg/L

Long-term aquatic hazard: This material has been classified as non-hazardous. Non-rapidly or rapidly degradable substance for which there are adequate chronic toxicity data available OR in the absence of chronic toxicity data. Acute toxicity estimate (based on ingredients):>100 mg/L, where the substance is not rapidly degradable and/or BCF < 500 and/or log Kow<4.

Ecotoxicity: No information available

Persistence and degradability: No information available

Bioaccumulative potential: No information available

Mobility: No information available

SECTION 13 DISPOSAL CONSIDERATIONS

Waste treatment methods

Product / Packaging disposal	<p>Containers may still present a chemical hazard/danger when empty.</p> <p>Return to supplier if possible.</p> <p>Otherwise: If container cannot be cleaned sufficiently well to ensure that residuals do not remain or if the container cannot be used to store the same product, then puncture containers to prevent reuse and bury at an authorised landfill.</p> <p>Where possible retain label warnings and SDS and observe all notices pertaining to the product.</p> <p>DO NOT allow wash water from cleaning or process equipment to enter drains.</p> <p>It may be necessary to collect all wash water for treatment before disposal.</p> <p>In all cases disposal to sewer may be subject to local laws and regulations and these should be considered first. Where in doubt contact the responsible authority.</p> <p>Recycle wherever possible or consult manufacturer for recycling options.</p> <p>Consult State Land Waste Management Authority for disposal.</p> <p>Bury residue in an authorised landfill.</p> <p>Recycle containers if possible or dispose of in an authorised landfill.</p>
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SECTION 14 TRANSPORT INFORMATION

Labels Required

Marine Pollutant	No
HAZCHEM	Not Applicable

Land transport (ADG): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

Air transport (ICAO-IATA / DGR): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS\

Sea transport (IMDG-Code / GGVSee): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

Transport in bulk according to Annex II of MARPOL and the IBC code

Not Applicable

SECTION 15 REGULATORY INFORMATION

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

GRADED SAND (14808-60-7) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Exposure Standards

Australia Hazardous Substances Information System - Consolidated Lists

Australia Inventory of Chemical Substances (AICS)

International Agency for Research on Cancer (IARC) – Agents classified by the IARC Monographs

PORTLAND CEMENT (65997-15-1) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Exposure Standards National Inventory	Australia Inventory of Chemical Substances (AICS) Status
Australia - AICS	Y
Canada - DSL	Y
Canada - NDSL	N (Portland Cement; Silica Crystalline - Quartz)
China - IECSC	Y
Europe - EINEC / ELINCS / NLP	Y
Japan - ENCS	N (Portland Cement; Silica Crystalline - Quartz)
Korea - KECI	Y
New Zealand - NZIoC	Y
Philippines - PICCS	N (Portland Cement)
USA - TSCA	Y
Legend:	Y = All ingredients are on the inventory N = Not determined or one or more ingredients are not on the inventory and are not exempt from listing(see specific ingredients in brackets)

SECTION 16 OTHER INFORMATION

This Safety Data Sheet (SDS) summarises at the date of issue our best knowledge of the health and safety hazard information of the product, and in particular how to safely handle and use the product in the workplace. Since the company cannot anticipate or control the conditions under which the product may be used, each user must, prior to usage review the SDS in the context of how the user intends to handle and use the product in the workplace.

If clarification or further information is needed to ensure that an appropriate assessment can be made, the user should contact this company.

Our responsibility for product as sold is subject to our standard terms and conditions, a copy of which is sent to our customers and is also available upon request.