Section 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME
KONSTRUKT GENERAL PURPOSE GROUT 20KG

PRODUCT USE
General purpose cementitious grout. Requires mixing with water on site immediately prior to use.

SUPPLIER
Company: SYNERGY Construction & Industrial Supply Group
Address: 3/1274 Boundary Road Wacol QLD, 4076 Australia
Telephone: +61 7 3129 5594

Section 2 - HAZARDS IDENTIFICATION

STATEMENT OF HAZARDOUS NATURE
HAZARDOUS SUBSTANCE. NON-DANGEROUS GOODS. According to the Criteria of NOHSC, and the ADG Code.

RISK
Risk Codes  | Risk Phrases
--- | ---
R37/38 | • Irritating to respiratory system and skin.
R41 | • Risk of serious damage to eyes.
R48/20 | • Harmful: danger of serious damage to health by prolonged exposure through inhalation.

SAFETY
Safety Codes  | Safety Phrases
--- | ---
S22 | • Do not breathe dust.
S24 | • Avoid contact with skin.
S25 | • Avoid contact with eyes.
S36 | • Wear suitable protective clothing.
S37 | • Wear suitable gloves.
S39 | • Wear eye/face protection.
S51 | • Use only in well ventilated areas.
S09 | • Keep container in a well ventilated place.
S401 | • To clean the floor and all objects contaminated by this material, use water and detergent.
S13 | • Keep away from food, drink and animal feeding stuffs.
S26 | • In case of contact with eyes, rinse with plenty of water and contact Doctor or Poisons Information Centre.
S46 | • If swallowed, IMMEDIATELY contact Doctor or Poisons Information Centre. (show this container or label).

continued...
Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>NAME</th>
<th>CAS RN</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>silica crystalline - quartz</td>
<td>14808-60-7</td>
<td>30-60</td>
</tr>
<tr>
<td>portland cement</td>
<td>65997-15-1</td>
<td>30-60</td>
</tr>
</tbody>
</table>

Note: Manufacturer has supplied full ingredient information to allow CHEMWATCH assessment.

Section 4 - FIRST AID MEASURES

**SWALLOWED**
- 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.

**EYE**
- 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.

**SKIN**
- 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.

**INHALED**
- 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.

**NOTES TO PHYSICIAN**
Treat symptomatically.

Section 5 - FIRE FIGHTING MEASURES

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

**FIRE FIGHTING**
- 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 fire fighting procedures suitable for surrounding area.

**FIRE/EXPLOSION HAZARD**
- Non combustible.
- Not considered a significant fire risk, however containers may burn, silicon dioxide (SiO2).
- May emit poisonous fumes.
- May emit corrosive fumes.

**FIRE INCOMPATIBILITY**
None known.

**HAZCHEM**
None
Section 6 - ACCIDENTAL RELEASE MEASURES

MINOR SPILLS
- Remove all ignition sources.
- Clean up all spills immediately.
- Avoid contact with skin and eyes.
- Control personal contact with the substance, by using 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.
- Prevent, by any means available, spillage from entering drains or water courses.

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

Section 7 - HANDLING AND STORAGE

PROCEDURE FOR 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.

SUITABLE CONTAINER
- Polyethylene or polypropylene container.
- Check all containers are clearly labelled and free from leaks.

STORAGE INCOMPATIBILITY
- Avoid strong acids, acid chlorides, acid anhydrides and chloroformates.
- Avoid contact with copper, aluminium and their alloys.

STORAGE REQUIREMENTS
- Store in original containers.
- Keep containers securely sealed.
- Store in a cool, dry area protected from environmental extremes.
- Store away from incompatible materials and foodstuff containers.

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE CONTROLS

<table>
<thead>
<tr>
<th>Source</th>
<th>Material</th>
<th>TWA mg/m³</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia Exposure Standards</td>
<td>silica crystalline - quartz</td>
<td>0.1</td>
<td>(see Chapter 14)</td>
</tr>
<tr>
<td>(Silica - Crystalline Quartz)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Australia Exposure Standards</td>
<td>portland cement (Portland cement (a))</td>
<td>10</td>
<td>(see Chapter 14)</td>
</tr>
</tbody>
</table>

MATERIAL DATA

PORTLAND CEMENT:
SILICA CRystALLINE - QUARTZ:
   The concentration of dust, for application of respirable dust limits, is to be determined from the fraction that penetrates a separator whose size collection efficiency is described by a cumulative log-normal function with a median aerodynamic diameter of 4.0 µm (+-) 0.3 µm and with a geometric standard deviation of 1.5 µm (+-) 0.1 µm, i.e., generally less than 5 µm.

KONSTRUKT GENERAL PURPOSE GROUT 20KG:
   Not available

SILICA CRystALLINE - QUARTZ:
   Because the margin of safety of the quartz TLV is not known with certainty and given the associated link between silicosis and lung cancer it is recommended that quartz concentrations be maintained as far below the TLV as prudent practices will allow.
   WARNING: For inhalation exposure ONLY:
   This substance has been classified by the ACGIH as A2 Suspected Human Carcinogen.

continued...
PORTLAND CEMENT:
- for calcium silicate:
  - containing no asbestos and <1% crystalline silica
- ES TWA: 10 mg/m³ insparable dust
- TLV TWA: 10 mg/m³ total dust (synthetic nonfibrous) A4

Although in vitro studies indicate that calcium silicate is more toxic than substances described as "nuisance dusts" it is thought that adverse health effects which might occur following exposure to 10-20 mg/m³ are likely to be minimal. The TLV-TWA is thought to be protective against the physical risk of eye and upper respiratory tract irritation in workers and to prevent interference with vision and deposition of particulate in the eyes, ears, nose and mouth.

For calcium oxide:
- The TLV-TWA is thought to be protective against undue irritation and is analogous to that recommended for sodium hydroxide.
- NOTE: This substance has been classified by the ACGIH as A4 NOT classifiable as causing Cancer in humans.

Portland cement is considered to be a nuisance dust that does not cause fibrosis and has little potential to induce adverse effects on the lung.

PERSONAL PROTECTION

RESPIRATOR

EYE
- Safety glasses with side shields.
- Chemical goggles.
- Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lens or restrictions on use, should be created for each workplace or task. This should include a review of lens absorption and adsorption for the class of chemicals in use and an account of injury experience. Medical and first-aid personnel should be trained in their removal and suitable equipment should be readily available. In the event of chemical exposure, begin eye irrigation immediately and remove contact lens as soon as practicable. Lens should be removed at the first signs of eye redness or irritation - lens should be removed in a clean environment only after workers have washed hands thoroughly. [CDC NIOSH Current Intelligence Bulletin 59], [AS/NZS 1336 or national equivalent].

HANDS/FEET
- The selection of the 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 can not be calculated in advance and has therefore to be checked prior to the application.
- 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.
- Suitability and durability of glove type is dependent on usage. Important factors in the selection of gloves include:
  - Experience indicates that the following polymers are suitable as glove materials for protection against undissolved, dry solids, where abrasive particles are not present:
    - polychloroprene
    - nitrile rubber
    - butyl rubber
    - fluorocautchouc.

OTHER
- Overalls.
- P.V.C. apron.
- Barrier cream.
- Skin cleansing cream.

ENGINEERING CONTROLS
- 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.
- The basic types of engineering controls are:
  - Process controls which involve changing the way a job activity or process is done to reduce the risk.
  - 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.

<table>
<thead>
<tr>
<th>Section 9 - PHYSICAL AND CHEMICAL PROPERTIES</th>
</tr>
</thead>
</table>

**Appearance**
Fine grey powder; Partly mixes with water.

**Physical Properties**

<table>
<thead>
<tr>
<th>State</th>
<th>Divided Solid</th>
<th>Molecular Weight</th>
<th>Not Applicable</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

continued...
Section 10 - STABILITY AND REACTIVITY

CONDITIONS CONTRIBUTING TO INSTABILITY
- Presence of incompatible materials.
- Product is considered stable.
- Hazardous polymerisation will not occur.
   For incompatible materials - refer to Section 7 - Handling and Storage.

Section 11 - TOXICOLOGICAL INFORMATION

POTENTIAL HEALTH EFFECTS

ACUTE HEALTH EFFECTS

SWALLOWED
Considered an unlikely route of entry in commercial/industrial environments.
Accidental ingestion of the material may be damaging to the health of the individual.

EYE
- If applied to the eyes, this material causes severe eye damage.

SKIN
This material can cause inflammation of the skin on contact in some persons.
The material may accentuate any pre-existing dermatitis condition.
Open cuts, abraded or irritated skin should not be exposed to this material.
Entry into the blood-stream, 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.

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 the course of 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.

CHRONIC HEALTH EFFECTS
- Long-term exposure to respiratory irritants may result in disease of the airways involving difficult breathing and related systemic problems.
  Harmful: danger of serious damage to health by prolonged exposure through inhalation.
  This material can cause serious damage if one is exposed to it for long periods. It can be assumed that it contains a substance which can produce severe defects. This has been demonstrated via both short- and long-term experimentation.
  Substance accumulation, in the human body, may occur and may cause some concern following repeated or long-term occupational exposure.
  Overexposure to respirable dust may cause coughing, wheezing, difficulty in breathing and impaired lung function. Chronic symptoms may include decreased vital lung capacity, chest infections
  Repeated exposures, in an occupational setting, 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.

TOXICITY AND IRRITATION
- Not available. Refer to individual constituents.
Section 11 - TOXICOLOGICAL INFORMATION

CARCINOGEN
silica crystalline - quartz

International Agency for Research on Cancer (IARC) - Agents Reviewed by the IARC Monographs

Section 12 - ECOLOGICAL INFORMATION

No data

Ecotoxicity
Ingredient Persistence: Water/Soil Persistence: Air Bioaccumulation Mobility
silica crystalline - quartz No Data No Data No Data No Data
portland cement No Data No Data No Data No Data

Section 13 - DISPOSAL CONSIDERATIONS

- Recycle wherever possible or consult manufacturer for recycling options.
- Consult State Land Waste Management Authority for disposal.
- Bury residue in an authorised landfill.
- Recycle containers if possible, or dispose of in an authorised landfill.

Section 14 - TRANSPORTATION INFORMATION

HAZCHEM: None (ADG7)

NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS: ADG7, UN, IATA, IMDG

Section 15 - REGULATORY INFORMATION

Indications of Danger:
Xn Harmful

POISONS SCHEDULE None

REGULATIONS

Regulations for ingredients

silica crystalline - quartz (CAS: 14088-60-7,122304-48-7,122304-49-8,12425-26-2,1317-79-9, 70594-95-5,87347-84-0) is found on the following regulatory lists:

Portland cement (CAS: 65997-15-1) is found on the following regulatory lists:
"Australia Exposure Standards", "Australia High Volume Industrial Chemical List (HVICL)", "Australia Inventory of Chemical Substances (AICS)", "OECD List of High Production Volume (HPV) Chemicals"

No data for Konstrukt General Purpose Grout 20Kg (CW: 34-7484)

Section 16 - OTHER INFORMATION

INGREDIENTS WITH MULTIPLE CAS NUMBERS

<table>
<thead>
<tr>
<th>Ingredient Name</th>
<th>CAS</th>
</tr>
</thead>
<tbody>
<tr>
<td>silica crystalline</td>
<td>14808-60-7, 122304-48-7, 122304-49-8, 12425-26-2, 1317-79-9,</td>
</tr>
<tr>
<td>quartz</td>
<td>70594-95-5, 87347-84-0</td>
</tr>
</tbody>
</table>

Classification of the preparation and its individual components has drawn on official and authoritative sources as well as independent review by the Chemwatch Classification committee using available literature references.

A list of reference resources used to assist the committee may be found at:
www.chemwatch.net/references.

The (M)SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings.

This document is copyright. Apart from any fair dealing for the purposes of private study, research, review or criticism, as permitted under the Copyright Act, no part may be reproduced by any process without written permission from CHEMWATCH. TEL (+61 3) 9572 4700.

Issue Date: 22-Feb-2013
Print Date: 26-Feb-2013

This is the end of the MSDS.