DETAILED SAFETY DATA SHEET

SOLIDFIX

1. IDENTIFICATION OF THE SUBSTANCE / MIXTURE AND OF THE COMPANY / UNDERTAKING

Product Name	: SOLIDFIX
Manufacturer	: Solid Green Tech Solutions Sdn. Bhd. Lot 772 (10-14), Jalan Subang 4 Kawasan Perindustrian Sg. Penaga 47620 Subang Jaya, Selangor, Malaysia
Emergency Phone Number	: +(60) 3 8081 4777 / 4776
Fax Numbers	: +(60) 3 8081 4771

2. HAZARD 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).

3. COMPOSITION / INFORMATION OF INGREDIENTS

NAME	CAS RN	%
Portland Cement	65997-15-1	30-60
Silica Crystalline - Quartz	14808-60-7	30-60

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

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.

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.

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 No. 8 of the MSDS.

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.

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.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Controls

Source	Material	TWA mg/m³	Notes
Australia Exposure Standards	*Portland Cement* (Portland cement (a))	10	(see Chapter 14)
Australia Exposure Standards	*Silica Crystalline - Quartz* (Silica - Crystalline Quartz)	0.1	(see Chapter 14)

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.

Portland Cement :
for calcium silicate:
containing no asbestos and < 1% crystalline silica
ES TWA : 10 mg / m³ inspirable 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" 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.*

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.

Personal Protection

Respirator
> Type AX-P Filter of sufficient capacity. (AS/NZS 1716 & 1715, EN 143:2000 & 149:2001, ANSI Z88 or national equivalent)

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 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.
> Contaminated leather items, such as shoes, belts and watch-bands should be removed and destroyed. Suitability and durability of glove type is dependent on usage. Important factors in the selection of gloves include:
  - frequency and duration of contact,
  - chemical resistance of glove material,
  - glove thickness and
  - dexterity.
> 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
  - fluorocaoutchouc.

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.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance
Fine grey powder; Partly mixes with water.

Physical Properties

State	Divided Solid
Molecular Weight	Not Applicable
Melting Range (°C)	Not Available
Viscosity	Not Applicable
Boiling Range (°C)	Not Applicable
Solubility in water (g / L)	Partly Miscible
Flash Point (°C)	Not Applicable
pH (1% solution)	Not Available
Decomposition Temp (°C)	Not Available
pH (as supplied)	Not Applicable
Autoignition Temp (°C)	Not Available
Vapour Pressure (kPa)	Negligible
Upper Explosive Limit (%) Specific Gravity (water=1) 1.5	Not Applicable
Lower Explosive Limit (%)	Not Applicable
Relative Vapour Density (air=1)	Not Available
Volatile Component (%vol)	Not Available
Evaporation Rate	Not Available

10. STABILITY AND REACTIVITY

Conditions Contribute to Instability
> Presence of incompatible materials.
> Product is considered stable.
> Hazardous polymerisation will not occur.

For incompatible materials - refer to No. 7 - ***Handling and Storage.***

11. TOXICOLOGY INFORMATION

Potential Health Effects
Acute Health Effects:

Swallowed
Ingestion may result in nausea, abdominal irritation, pain and diarrhoea.

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

Skin
This material can cause inflammation of the skin oncontact 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. 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 respirableparticles. 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.

Chronic Health Effects
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. 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.

Carcinogen

Silica dust, crystalline, in the form of quartz or cristobalite	International Agency for Research on Cancer (IARC) - Agents Reviewed by the IARC Monographs	Group 1

12. STABILITY AND REACTIVITY

No data

Ecotoxicity

Ingredient	**Persistence: Water / Soil**	**Persistence: Air Bioaccumulation Mobility**
Portland Cement	No Data Available	No Data Available
Silica Crystalline - Quartz	No Data Available	No Data Available

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.

14. TRANSPORTATION INFORMATION

HAZCHEM:
None (ADG7)

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

15. REGULATORY INFORMATION

Poisons Schedule
None

Regulations
Regulations for ingredients
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"

Silica Crystalline - Quartz **(CAS: 14808-60-7,122304-48-7,122304-49-8,12425-26-2,1317-79-9, 70594-95-5,87347-84-0) is found on the following regulatory lists;**
"Australia - New South Wales Hazardous Substances Prohibited for Specific Uses","Australia - New South Wales Hazardous Substances Requiring Health Surveillance","Australia - South Australia - Hazardous Substances Requiring Health Surveillance","Australia - Tasmania Hazardous Substances Prohibited for Specified Uses","Australia - Tasmania Hazardous Substances Requiring Health Surveillance", "Australia - Western Australia Hazardous Substances Prohibited for Specified Uses or Methods of Handling", "Australia - Western Australia Hazardous Substances Requiring Health Surveillance","Australia Exposure Standards","Australia Hazardous Substances","Australia Hazardous Substances Requiring Health Surveillance","Australia High Volume Industrial Chemical List (HVICL)","Australia Inventory of Chemical Substances (AICS)","Australia Occupational Health and Safety (Commonwealth Employment) (National Standards) Regulations 1994 - Hazardous Substances Requiring Health Surveillance","International Agency for Research on Cancer (IARC) - Agents Reviewed by the IARC Monographs","International Fragrance Association (IFRA) Survey: Transparency List","OECD List of High Production Volume (HPV) Chemicals","United Nations Consolidated List of Products Whose Consumption and/or Sale Have Been Banned, Withdrawn, Severely Restricted or Not Approved by Governments"