



1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

1.1 PRODUCT IDENTIFICATION

Supershield Multiguard

1.2 RECOMMENDED USE

Waterproofing and protection of concrete

1.3 COMPANY IDENTIFICATION

Supershield Private Limited

No 37, 3rd main road, R.A. Puram, Chennai - 600028, India.

Email: contact@supershieldglobal.com

Website: www.supershieldglobal.com

1.4 EMERGENCY TELEPHONE

1-800-425-5505

In times of unavailability, contact your local emergency services.

2. HAZARDS IDENTIFICATION

2.1 CLASSIFICATION OF THE SUBSTANCE OR MIXTURE

2.1.1 Classification in accordance with GHS

Skin Irrit. 2: H315 Causes skin irritation.

Eye Dam. 1: H318 Causes serious eye damage.

Skin Sens. 1: H317 May cause an allergic skin reaction.

STOT SE 3: H335 May cause respiratory irritation.

STOT RE 2: H373 May cause damage to respiratory organs through prolonged or repeated exposure.

2.2 LABEL ELEMENTS: in accordance with GHS



DANGER

2.3 HAZARD STATEMENTS

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 respiratory organs through prolonged or repeated exposure.



2.4 PRECAUTIONARY STATEMENTS

P280 - Wear protective gloves / protective clothing / eye protection / face protection & approved duct masks.

P260 - Do not breathe dust.

P264 - Wash thoroughly after handling.

2.5 RESPONSIVE PRECAUTIONARY STATEMENTS

P260 Do not breathe dust

P264 Wash thoroughly after handling

P280 Wear protective gloves / protective clothing / eye protection / face protection.

P305 + P351 + P338 IF IN EYES- Rinse cautiously with water for several minutes.

Remove contact lenses, if present and easy to do. Continue rinsing.

P310 Immediately call a POISON CENTRE or doctor / physician.

P304 + P340 IF INHALED- Remove victim to fresh air and keep at rest in a position comfortable for breathing.

Not classified as a dangerous goods by the criteria of the ADG Code

Risk Phrases: R/36, 37, 38 Irritating to eyes, respiratory system and skin

R/43 May cause sensitization by skin contact.

Safety Phrases: S/22 Do not breathe dust.

S/24/25 Avoid contact with the eyes.

S/26 In case of contact with eyes, rinse immediately with plenty of water.

S37/S39 Wear suitable gloves and eye / face protection.

3. COMPOSITION /INFORMATION ON INGREDIENTS

Hazardous Ingredients	%	CAS. No.	Classification According to GHS
Portland Cement	35 - 60%	65997 -15-1	Skin Irrit. 2: H315 Skin Sens. 1: H317 Eye Dam. 1: H318 STOT SE 3: H335
Alkaline Earth Compounds (calcium dihydroxide)	5 - 20%	1305 -62-0	Skin Irrit. 2: H315 Eye Dam. 1: H318 STOT SE 3: H335
Silica Sand (< 0.005 % (w/w) 10 ?m respirable silica)	30 - 40%	14808 -60-7	STOT RE 2: H373



4. FIRST AID MEASURES

4.1 DESCRIPTION OF FIRST AID MEASURES

When seeking medical advice take this safety data sheet with you.

INHALATION: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Dust in throat and nasal passages should clear spontaneously. If not, irrigate nose and throat with clean water for at least 20 minutes. Seek immediate professional medical attention.

EYE CONTACT: IF IN EYES – Quickly and gently blot away any dry powder. Irrigate cautiously with large amounts of water for at least 60 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Do not rub eyes as this may cause additional irritation or damage. Seek immediate professional medical attention if irritation persists.

SKIN CONTACT: Quickly and gently blot away any dry powder. Under running water, remove contaminated clothing, shoes and leather goods. Continuously flush contaminated area with lukewarm, gently flowing water for at least 60 minutes. If skin irritation or rash occurs, seek medical advice / attention.

INGESTION: Do not induce vomiting. If vomiting occurs naturally, have victim lean forward to reduce risk of aspiration. If conscious, wash out mouth with clean water. Drink 1 cup (240 - 300 ml) of water followed by dilution with milk if available. Never give anything by mouth if victim is rapidly losing consciousness, unconscious or convulsing. Seek immediate professional medical assistance and contact a poison centre.

4.2 MOST IMPORTANT SYMPTOMS AND EFFECTS, BOTH ACUTE AND DELAYED

ACUTE: Irritation to skin and mucous membranes.

DELAYED: Precautions should be taken to ensure that dust is not inhaled; however, long-term exposure to high levels of dust may result in damage to the lungs.

4.3 IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT

Move person to fresh air and away

5. FIRE FIGHTING MEASURES

5.1 EXTINGUISHING MEDIA

Supershield Cementitious Products are not flammable and are not subject to explosion.

5.2 SPECIAL HAZARDS ARISING FROM THE SUBSTANCE OR MIXTURE

No hazardous combustion products. Alkaline earth compounds will cause explosive decomposition of maleic anhydride, nitroalkanes and nitroparaffins, in the presence of water, form salts with inorganic salts and with inorganic bases. The dry salts are explosive.



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5.3 ADVICE FOR FIREFIGHTERS



Ensure adequate ventilation and have ventilation equipment available if required due to possibility of generation of airborne dust.

Do not eat, drink or smoke when handling or applying product. Remove contaminated clothing and protective equipment before entering eating areas.

Avoid mishandling of pails of bags so as to prevent accidental bursting and creation of dust.

7.2 STORAGE

P402 + P232 + 233 Store in a dry place. Protect from moisture. Keep container tightly closed.

Store this product in a draught free environment, clear of the ground, avoiding humid conditions and extremes of temperature (minimum lower temperature of 7°C (45°F)). The product should be used within 12 months of the date of production; product should not have been exposed to the atmosphere prior to use.

Any product that is stacked should be done so in a stable manner, and to a safe height. The stacking of product should be done in such a manner that it does not create any risk of product falling and accidentally bursting the packaging open.

This product contains Portland cement and thus Chromium (VI) and may produce an allergic reaction. The cement in this product may contain a reducing agent; the effectiveness of the reducing agent reduces with time.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Substance	CAS No	Regulatory Limits			Recommended Limits	
		OSHA PEL		Cal/OSHA PEL (as of 4/26/13)	NIOSH REL (as of 4/26/13)	ACGIH 2015 TLV
		ppm	mg/m	8-hour TWA (ST) STEL (C) Ceiling	Up to 10-hour TWA (ST) STEL (C) Ceiling	8-hour TWA (ST) STEL (C) Ceiling
Calcium hydroxide	1305 -62 -0					
Total dust			15	5 mg/m ³	5 mg/m ³	5 mg/m ³
Respirable fraction			5			
Portland cement	65997 -15 -1					
Total dust			15	10 mg/m ³	10 mg/m ³	
Respirable fraction			5	5 mg/m ³	5 mg/m ³	1 mg/m (no asbestos and < 1% crystalline silica)
Silica: Crystalline	14808 -60 -7					0.025 (resp.) for a-quartz and cristobalite mg/m ³
Quartz (Respirable)		250(h) (%SiO ₂ +5)	10 mg/m (%SiO ₂ +2)	0.1 mg/m ³	Ca 0.05 mg/m ³	
Quartz (Total Dust)			30 mg/m (%SiO ₂ +2)			



Please refer to OSHA website for additional information.

Please note that the % of respirable crystalline silica in the silica sand is < 0.005 % but some processes and uses may increase this fraction.

8.2 EXPOSURE CONTROLS

8.2.1 Appropriate Engineering Controls

Provide adequate and suitable ventilation / ventilation equipment when handling product, to maintain dust below OES. All ventilation systems should be filtered before discharge to atmosphere. Isolate personnel from dusty areas.

Do not eat, drink or smoke when working with the product to avoid contact with skin or mouth. Immediately after working with the product, workers should wash or shower or use skin moisturizers. Remove contaminated clothing, footwear, watches, etc... and clean thoroughly before re-using.

8.2.2 Personal Protection Equipment

P280 - Wear protective gloves / protective clothing / eye protection / face protection.

P264 - Wash hands thoroughly after handling.

P272 - Contaminated work clothing should not be allowed out of the workplace.

Skin Protection – Use impervious, abrasion and alkali resistant gloves, enclosed rubber boots that resist powder and liquid penetration, closed long-sleeved impervious protective clothing that protects skin from contact. Close all fittings at opening.

Eye Protection – Wear safety goggles / glasses at all times when handling the product. Ensure the goggles / glasses have suitable side protection, are wide vision, and that there is no risk of product particles being able to enter the eye(s).

Respiratory Protection – Always use respiratory protection. Inhalation of product dust must be avoided at all times. Use an APPROVED NIOSH dust mask. Respiratory protective equipment must be in compliance with relevant national legislation. It is good practice to conduct fit-testing when selecting respiratory protective equipment. Additional safety precautions may include the provision a shower facility.

8.2.3 Environmental Exposure Controls

According to available technology that limit dust dispersion into the environment.



9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Grey particulate powder
Odour	None
pH	pH 9.1 – 9.8
Melting / Freezing Point	Not applicable
Initial Boiling Point and Range	Not applicable
Flash Point	Not applicable
Evaporation Rate	Not applicable
Flammability Upper / Lower flammability / Explosive Limits	Not applicable
Vapour Pressure	Not applicable
Vapour Density	Not applicable
Solubility	Powder forms slurry with water, hardens over time
Auto-ignition Temperature	Not applicable
Decomposition Temperature	Alkaline earth compounds: 580°C
Viscosity	Not applicable
Explosive Properties	Not applicable
Oxidizing Properties	Not applicable
Specific Gravity	2.0 to 2.8 (water = 1)

10. STABILITY AND REACTIVITY

10.1 REACTIVITY

Alkaline earth compounds react vigorously with strong acids. They also attack aluminum, lead and brass in the presence of moisture.

In the presence of water, calcium aluminates react chemically and harden to form stable calcium aluminate hydrates. This reaction is exo-thermal and may last up to 24 hours.

The total heat released is < 500 kJ/kg.

10.2 CHEMICAL STABILITY

The product is chemically stable. When mixed with water it will harden, with time, into a stable mass. Products may liberate Carbon Monoxide or Carbon Dioxide.

10.3 POSSIBILITY OF HAZARDOUS REACTIONS

Alkaline earth compounds will cause explosive decomposition of maleic anhydride, nitroalkanes and nitroparaffins, in the presence of water, form salts with inorganic salts and with inorganic bases. The dry salts are explosive. Alkaline earth compound is stable up to 580°C. Alkaline earth



compounds decompose with loss of water at approximately 580°C to form Calcium Oxide.

10.4 CONDITIONS TO AVOID

Avoid humid and drafty environments during storage. Also avoid storage temperatures below 7°C.

10.5 INCOMPATIBLE MATERIALS

Products are incompatible with strong acids. It should be noted that the uncontrolled use of aluminum powder in wet cement should be avoided as hydrogen is produced.

10.6 HAZARDOUS DECOMPOSITION PRODUCTS

None known.

11. TOXICOLOGICAL INFORMATION

11.1 INFORMATION ON TOXICOLOGICAL EFFECTS

Acute Dermal Toxicity: The cement incorporated with the other ingredients in this product has been subject to a Limit test. (Limit test, rabbit, 24 hours contact, 2,000 mg/kg body weight – no lethality.) Calcium dihydroxide is not acutely toxic. Rabbit dermal LD50 > 2,500 mg/kg/bw.

Acute Oral Toxicity: May cause irritation to the gastrointestinal tract. Calcium dihydroxide is not acutely toxic. Rat oral LD50 > 2,000 mg/kg/bw.

Acute Inhalation Toxicity: The product may irritate the throat and respiratory tract. Inhalation may lead to irritation, inflammation or burns. Coughing, sneezing and shortness of breath may occur following exposures in excess of occupational exposure limits.

Skin Corrosion / Irritation: When skin is exposed to the product in its dry or wet state, thickening, cracking or fissuring of the skin may occur. Prolonged contact in combination with abrasion can cause severe burns.

Portland cement and alkaline earth compound are an irritant to skin. Ingredients are dermal irritants and dermatitis may develop following exposure.

Cement may have an irritating effect on moist skin (due to transpiration of humidity) after prolonged contact.

Prolonged skin contact with wet cement or fresh concrete may cause serious burns because they develop without pain being felt. Repeated skin contact with wet cement may cause dermatitis.

This mixture contains < 2 ppm Chromium (VI), which is a skin irritant.

Serious Eye Damage / Irritation: Direct contact with product may cause corneal damage by mechanical stress, immediate or delayed irritation or inflammation. Direct contact either in dry or wet form may cause effects ranging from moderate eye irritation (eg. conjunctivitis or blepharitis) to chemical burns or blindness.



Skin Sensitization: This product contains Portland cement which is classified as a skin sensitizer.

Contact Dermatitis / Sensitizing Effects: Prolonged and repeated skin contact with Alkaline earth products may cause dermatitis.

Some individuals may exhibit eczema upon exposure to wet cementitious products, caused either by the high pH which induces irritant contact dermatitis, or by an immunological reaction to soluble Cr (VI) which elicits allergic contact dermatitis. The response may appear in a variety of forms ranging from a mild rash to severe dermatitis and is a combination of those two mechanisms. An exact diagnosis is often difficult to assess.

Germ Cell Mutagenicity: With the exception of Chromium (VI) (< 2 ppm) in the Portland cement, none of the individual substances in this mixture are classified as mutagenic.

Carcinogenicity: This product contains silica sand and this form of silica is not classified as carcinogenic due to its large particle size. However, prolonged and / or massive exposure to respirable crystalline silica-containing dust may cause silicosis, a nodular pulmonary fibrosis caused by deposition in the lungs of fine respirable particles of crystalline silica.

In 1997, IARC (the International Agency for Research on Cancer) concluded that crystalline silica inhaled from occupational sources can cause lung cancer in humans. However it pointed out that not all industrial circumstances, nor all crystalline silica types, were to be incriminated.

IARC (1997) has concluded that there is 'sufficient evidence for the carcinogenicity of inhaled crystalline silica in the form of quartz and cristobalite in certain industrial circumstances, but that the carcinogenicity may be dependent on inherent characteristics of the crystalline silica or on external factors affecting its biological activity or distribution of polymorphs'.

Principle symptoms of lung fibrosis (commonly referred to as silicosis) are cough and breathlessness.

Occupational exposure to respirable dust and respirable crystalline silica dust should be monitored and controlled.

Reproductive Toxicity: None of the individual substances in this mixture are classified as reproductive toxicants.

Specific Target Organ Toxicity – Single Exposure: Inhalation of dust can result in damage to the respiratory tract.

Specific Target Organ Toxicity – Repeat Exposure: Prolonged or repeated inhalation exposure may cause damage to the lungs, including chronic obstructive pulmonary disease (COPD).

Certain ingredients within these products do give potential for generation of respirable dust during handling and use. The dust may contain respirable crystalline silica.

Prolonged or frequent or excessive exposure to respirable crystalline silica dust, cement dust and alkaline earth products may cause respiratory disease, lung disease, lung and respiratory tract damage, ulceration and perforation of the nasal septum, pneumonitis and other serious bad health effects.



The excessive inhalation of crystalline silica dust may result in respiratory disease, including silicosis, pneumoconiosis and pulmonary fibrosis.

11.2 ASPIRATION HAZARD

No data available.

11.3 LIKELY ROUTES OF EXPOSURE

Inhalation: YES

Skin – Eyes: YES

Ingestion: NO – except in accidental cases

11.4 POTENTIAL HEALTH EFFECTS

The product may irritate and burn the throat and respiratory tract. Coughing, sneezing and shortness of breath may occur following exposures in excess of occupational exposure limits. Causes skin irritation and is a severe eye irritant.

Chronic exposure to respirable dust in excess of occupational exposure limits may cause coughing, shortness of breath and may cause chronic obstructive lung disease (COPD).

11.5 MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE

Inhaling dust may aggravate existing respiratory system disease(s) and / or medical conditions such as emphysema or asthma and / or existing skin and / or eye conditions.

12. ECOLOGICAL INFORMATION

12.1 ECOTOXICITY

Do not allow the material to enter water course. If water is contaminated inform the relevant authorities immediately. The addition of a significant amount of cementitious products to water may cause a rise in the pH value and therefore may be toxic to aquatic life under certain circumstances.

Alkaline conditions may also have effects on vegetation.

The following toxicity values are available for calcium dihydroxide:

LC50 (96h) for freshwater / marine fish: 50.6 mg/l and 457 mg/l

EC50 (48h) for freshwater invertebrates: 49.1 mg/l

LD50 (96h) for marine water invertebrates: 158 mg/l

EC50 (72h) for freshwater algae: 184.57 mg/l and the NOEC is 48 mg/l

NOEC (14d) for marine water invertebrates: 32 mg/l

EC10/LC10 or NOEC for soil macro-organisms: 2,000 mg/kg soil dw and for micro-organisms is 12,000 mg/kg/ soil dw

NOEC (21d) for terrestrial plants: 1,080 mg/kg



12.2 PERSISTENCE AND DEGRADABILITY

Alkaline earth material is non bio-degradable; it reacts with atmosphere and dissolved carbon dioxide to form calcium carbonate (chalk).

12.3 BIO ACCUMULATIVE POTENTIAL

None of the substances in this mixture are known to bioaccumulate.

12.4 MOBILITY IN SOIL

Not known.

12.5 RESULTS OF PBT AND VPVB ASSESSMENT

This mixture does not contain any substances that are assessed to be PBT or vPvB.

13. DISPOSAL CONSIDERATIONS

13.1 WASTE TREATMENT METHODS

Avoid creation of airborne and respirable dust when disposing of product.

Product – Unused Residue or Dry Spillage

Pick up dry and put in containers. Mark container clearly. In case of disposal, harden with water to avoid dust creation. Dispose of at a licensed waste facility accepting cementitious and alkaline earth based waste. Dispose of all materials in accordance with current local regulations / legislation.

Product – Slurries

Allow to harden. Avoid entry into sewage and drainage systems or into bodies of water and dispose of as indicated for hardened product.

Product – After Addition of Water, Hardened

Dispose of at a licensed waste facility accepting cementitious and alkaline earth based waste. Dispose of all materials in accordance with current regulations / legislation. Avoid entry into sewage and drainage systems or into bodies of water.

13.2 PACKAGING

Completely empty packaging and process it according to current regulations / legislation.

14. TRANSPORT INFORMATION

The product is not classified as hazardous for transport purposes.

15. REGULATORY INFORMATION

GHS

WHMIS

OSHA



16. OTHER INFORMATION

Abbreviations

ACGIH American Conference of Governmental Industrial Hygienists
CAS Chemical Abstract Service Number
OEL Occupational Exposure Limit
TWA Time Weighted Averages
PEL Permissible Exposure Limit
MEL Maximum Exposure Limit
LC Lethal Concentration
LD Lethal Dose
UEL Upper Explosion Limit
LEL Lower Explosion Limit
PPE Personal Protective Equipment
EC50 Median effective concentration
LC50 Median lethal concentration
LD50 Median lethal dose
NOEC No observable effect concentration
WHMIS Workplace Hazardous Materials Information System

Hazard Statements In Full

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 respiratory organs through prolonged or repeated exposure.

Precautionary Statements In Full

P260 Do not breathe dust.
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.
P264 Wash ... thoroughly after handling.

Responsive Precautionary Statements

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes.
Remove contact lenses, if present and easy to do. Continue rinsing.
P310 Immediately call a POISON CENTRE or doctor / physician.
P304 + P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P302 + P352 IF ON SKIN: Wash with plenty of soap and water.
P332+ P313 If skin irritation or rash occurs: Get medical advice / attention.
P362 Take off contaminated clothing and wash before reuse.
P501 Dispose of contents / container to ...
P403 + P233 Store in a well-ventilated place. Keep container tightly closed.
P405 Store locked up.
P314 Get medical advice / attention if you feel unwell.