Ronacrete Limited
Ronac House
Flex Meadow, Merring Way
Harlow, Essex CM19 5TD
Tel: 01279 638700
Fax: 01279 638701

HEALTH AND SAFETY INFORMATION
RonaFloor Concrete Dustproofer

1. COMPOSITION

Chemical Synonyms:	Silicate of Soda	Specific Gravity:	@ 20°C: 1.42g/ml
Solubility in Water:	Complete	Vapour Pressure:	As water vapour
Vapour in Density:	As water	Boiling Point:	100-101°C
Freezing Point:	Approximately 0°C	pH:	11.6

2. HAZARDS IDENTIFICATION

Risk Phrases:	Recommended 38,41.
Safety Phrases:	Recommended 2, 26, 37/39.
Primary Risk:	Irritant.
S.I. Number:	None.
CAS Number:	1344-09-8.
Hazchem Code:	Recommended 2R.
UK Customs Number:	CUS 23379.

Irritating to skin. Risk of serious damage to eyes. Keep out of reach of children. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Wear suitable gloves and eye/fact protection. Spillage will effect vegetation. Toxic to aquatic life. An alkaline material which may cause caustic burns to skin and eyes, the danger being greater when hot. Harmful by ingestion, causing internal irritation.

3. FIRST AID MEASURES

Inhalation:	Move from exposure. Keep warm and at rest. If there is respiratory distress give oxygen. If respiration stops or shows signs of falling, apply artificial respiration. Do not use mouth to mouth ventilation. Obtain medical attention urgently.
Skin Contact:	Remove contaminated clothing. Wash affected area with copious quantities of water until no soapy feeling remains. Obtain medical attention if irritation persists.
Eye Contact:	Speed is essential. The eye should be thoroughly irrigated for not less than 20 minutes with clean water. This prolonged irrigation is of extreme importance and must be done at once otherwise permanent damage will result. Continue irrigation until medical attention can be obtained.
Ingestion:	Wash out mouth with water and give sips of water or milk to drink to soothe the affected parts. Obtain medical attention. Do not induce vomiting.

4. FIRE FIGHTING MEASURES

Non-combustible. May generate toxic fumes in a fire. Therefore fire fighters should wear self-contained breathing apparatus and full body protective clothing.
Compatible with all standard fire fighting techniques. No special procedures required. Select extinguishing medium appropriate to other materials involved in and/or to the circumstances of the fire.
Non-flammable. Contact with certain metals liberates highly flammable hydrogen gas which may form an explosive mixture with air.

5. ACCIDENTAL RELEASE MEASURES

Small or large spills:- Contain with dry sand and transfer solids to polythene buckets, for neutralisation and disposal.
Wash residual liquid to drain with copious amounts of water and possibly detergent.
Disposal of hazardous waste in accordance with waste disposal and water authority regulations.

Personal Precautions
Avoid contact with the product. Ventilate the area to dispel airborne concentrations, protective clothing and (under severe conditions) breathing apparatus should be worn when dealing with spillage.

Environmental Precautions
If size of spillage warrants and has contaminated water courses, drains or vegetation - advise appropriate authorities.

6. HANDLING AND STORAGE

Handling:	Exposure by inhalation or skin contact should be minimised by good industrial hygiene practice. Wear appropriate protective clothing. See exposure control. Safety showers and eye baths should be available in areas where accidental exposure is possible. If freezing occurs, a solution may be reconstituted by warming and agitating with no change in properties. The products should be kept in a closed system away from strong acids.
Storage:	Store in well ventilated area away from incompatible chemicals or materials. See stability and reactivity. Store in closed steel or other suitable vessels which prevent the free circulation of air over the surface of the material. If not exposed to the atmosphere solution will keep indefinitely. Drums must be kept closed when not in use. The product absorbs carbon dioxide on exposure to the atmosphere and may even loose water resulting in a formation of a gel, initially turning clouding then eventually solidifying. Avoid exposure to low temperature. Dilute solutions may freeze and ice crystals may separate, rising to the surface. Do not pack into containers which may be attacked or which absorb more moisture from the solution - see materials to avoid.

7. EXPOSURE CONTROLS/PERSONAL PROTECTION

Hand:	Wear impermeable plastic or rubber gloves.
Eye:	Wear chemical goggles and a dust mask to prevent inhalation of the product. Eye baths should be provided at places where accidental exposure may be possible.
Skin:	Wear impervious boots and poly cotton overalls. Where significant exposure is possible (for example in dealing with spillage or fire), wear imperious body covering. Showers should be provided at places where accidental exposure may occur.
Respiratory:	Occupation exposure limits not assessed by HSE or ACGIH.
Note:	Sodium Hydroxide has an exposure standard of 2mg/m^3 (10 minutes twa). It is recommended that exposure to alkalinity calculated as NaOH should be kept below this limit. In the case of mist and spray exposure wear self-contained breathing apparatus.

8. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Viscous, aqueous solution
Odour:	Odourless

9. STABILITY AND REACTIVITY

Conditions to avoid:-	Avoid exposure to atmospheric draughts and low temperature.
Materials to avoid:-	Contact with acids will cause the liquid to gel. Absorbs Carbon Dioxide from the air. Ignites and maintains combustion in fluorine. Contact with wood will cause discolouration. Solutions will react with new surfaces of aluminium, zinc and their alloys to liberate hazardous decomposition fumes.
Hazardous Decomposition products:	Contact with aluminium, brass, zinc and tin will product highly flammable and explosive hydrogen gas.

10. TOXICOLOGICAL INFORMATION

Acute effects:-	Liquid and mist causes severe irritation and corrosion to skin, eyes, respiratory and digestive tracts. There is little danger of cold solutions causing acute damage to the skin. Prolonged contact may cause dryness and reddening. Hot solutions may cause chemical damage. Corrosive to eyes and may cause corneal damage. Inhalation effects respiration and may cause pulmonary oedema. Ingestion causes systemic dehydration and nausea. Ingestion of large amounts may result it severe abdominal pain, vomiting, diarrhoea, convulsions and collapse.
Chronic effects:-	No known hazards are associates with the use of this compound under conditions of good industrial hygiene.

11. ECOLOGICAL INFORMATION

Exotoxicity:-	Increase in pH to 10 or more is lethal to aquatic life. No evidence of bioaccumulation or tainting of seafood. Practical non-toxic to living resources - 96 hrs LC50 = 100-1000mg/l.

12. DISPOSAL CONSIDERATIONS

Disposal Dangers:-	Treat as for spillage. Wear appropriate protective clothing - see accidental release measures. Care should be taken to ensure accidental mixing with acids, in drains is avoided. Do not attempt to neutralise with strong acids. Neutralisation generates much heat. See disposal methods.
Disposal Methods:-	Treat as for spillage. See accidental release measures. Disposal of hazardous waste in accordance with special waste regulations - (control pollution act regulations 1980). First neutralise with careful addition of soda ash (Sodium Carbonate). Carefully mix and then spray with water and transfer the slurry into larger containers. Decant off liquid into another container and neutralise to litmus with 6m Hydrochloric Acid. Wash to drain with plenty of water. Arrange for removal of containers by a licensed contractor, in accordance with waste disposal regulations.

13. TRANSPORT INFORMATION

Not assigned in the following:-

S1 1981/1059	Dangerous substance (conveyance by road in road tankers and tanker containers) regulations.
S1 1984/1244	Classification, packing and labelling of dangerous substance regulations.
S1 1986/1951	Road traffic (carriage of dangerous substance in packages etc) regulations.

14. REGULATORY INFORMATION

Classification:	Not classified under the classification, packing and labelling of dangerous substances.
Supply Recommended:	Irritant.
Conveyance:	Not classed in part IA2 of the CPL.
Recommended Phrases:	Irritating to skin. Risk of serious damage to eyes. Keep out of reach of children. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Wear suitable gloves and eye/face protection. Voluntary label "splashes can damage eyes".

15. OTHER INFORMATION

Training Advice:-	Dilute Silicate Solutions are a dispersion of molecular species, indistinguishable from natural dissolved silica. However the pH of most Silicate solutions if above the acceptable limits for direct discharge of sewers or water courses.
Recommended Use:-	As a dust proof/hardener for concrete.
Data Sources:-	HSE Guidance note EH40 occupational exposure limits (latest edition). ACGIH (threshold limit values and biological exposure indices) 1985-86. Classification, packing and labelling of dangerous substances regulations 1984. IMO reports and studies No 35 (the evaluation of hazards of harmful substances carried by ships) 1989. IMDG code (International Maritime Dangerous Goods Codes) 1990. Control of substances hazardous to health regulations (SI 1988 - 1657). Control of pollution act 1974. Hazchem list no 6 (Emergency action codes and supplementary information) 1990.