

MATERIAL SAFETY DATA SHEET



SOLUTIONS

SEALERS FOR STONE & TILE
The Next Generation of Stone Care Products

PRODUCT: CONSOLIDATE Stone Densifier



Date of Issue: JULY 2010

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SECTION 1 – STATEMENT OF CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

SUPPLIER:	Solutions – Sealers for Stone & Tile.		
ADDRESS:	2/14 Textile Avenue, Warana, QLD 4575, Australia.		
Trade Name:	“CONSOLIDATE” STONE DENSIFIER		
TELEPHONE:	1300 4 STONE (78663)	FAX:	(07) 5437 7715
AH EMERGENCY TELEPHONE:	13 1126 in Australia 0800 764 766 in New Zealand	ABN:	25 128 656 082.
Substance:	solvent based sealer	Product Use:	Solvent borne silicone based formulation for consolidating or strengthening of siliceous substrates such as natural stone as well as reducing water absorption of the substrate to protect against the elements
Creation Date:	July 2010	Revision Date:	July 2015
Product Code:			

SECTION 2 – HAZARDS IDENTIFICATION

- This product is **classified as HAZARDOUS** according to criteria of the National Occupational Health and Safety Commission Australia.
- This product is **classified as Dangerous Goods** according to the Australian Dangerous Goods (ADG) Code.
- This product is **not a scheduled Poison** according to the SUSDP.

Approved Worksafe

Classification



Xi -IRRITANT
Risk Phrases:
R10, R20, R36/37/38.

Safety Phrases:
S2, S16, S23, S26, S28, S37/39.

UN Number	1263
ADG Classification	3 (Paint)
ADG Subsidiary Risk	Not applicable
Packing Group	II
Hazchem Code	3[Y]E
SUSDP Classification	not scheduled

EMERGENCY OVERVIEW

Colour	Colourless.
Physical Description	Liquid.
Odour	alcohol odour.

SECTION 3 – COMPOSITION AND INFORMATION ON INGREDIENTS

Ingredients determined not to be hazardous are present in concentrations that do not exceed the relevant cut-off concentrations as found from NOHSC publication “List of Designated Hazardous Substances” or have been found NOT to meet the criteria of a hazardous substance as defined in the NOHSC publication “Approved Criteria for Classifying Hazardous Substances”.

Ingredients:	CAS Number:	Proportion:	Exposure Standards TWA	Exposure Standards STEL
Triethoxyisobutylsilane	17980-47-1	10 - 30% w/w	not set	not set

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Tetraethylsilicate	78-10-4	10 - 30% w/w	10 ppm, 85 mg/m ³	not set
Ethanol	64-17-5	30 - 60% w/w	1000ppm 1880 mg/m ³	not set

The TWA exposure value is the Time Weighted Average airborne concentration of a particular substance when calculated over a normal 8 hour working day for a 5 day working week. The STEL (Short Term Exposure Limit) is an exposure value that should not be exceeded for more than 15 minutes and should not be repeated for more than 4 times per day. There should be at least 60 minutes between successive exposures at the STEL. The term "peak" is used when the TWA limit, because of the rapid action of the substance, should never be exceeded, even briefly.

SECTION 4 – FIRST AID MEASURES

Scheduled Poisons	Poisons Information Centre in each Australian State capital city or in Christchurch, New Zealand can provide additional assistance for scheduled poisons. (Phone Australia 131126 or New Zealand 0800 764 766).
First Aid Facilities Required	Eye wash station. Showering facility. Normal washroom facilities.
Inhalation	Remove person from contaminated area to fresh air. Avoid becoming a casualty. If irritation develops seek medical attention.
Skin contact	After contact with skin or hair, wash immediately with plenty of soap-suds. Immediately remove contaminated clothing and wash before reuse. If irritation develops seek medical attention.
Eye contact	If in eyes, hold eyelids apart and flush the eye continuously with running water. Continue flushing until advised to stop by the Poisons Information Centre or a doctor, or for at least 15 minutes. If irritation develops seek medical attention.
Ingestion	Do NOT induce vomiting. If swallowed, immediately wash out mouth with water, and then give plenty of water to drink. If vomiting occurs naturally, have victim lean forward to reduce the risk of aspiration into the lungs.
Advice to Doctor	Treat symptomatically. Poisons Information Centre in each Australian State capital city or in Christchurch, New Zealand can provide additional assistance for scheduled poisons.

SECTION 5 – FIRE FIGHTING MEASURES

Fire and Explosion Hazards	Fire: Flammable liquid. Product may form flammable/explosive vapour-air mixture during use. Hazardous combustion products: Carbon Monoxide, Carbon Dioxide and other possibly toxic gases and vapours on burning. Will float and can be reignited on surface water. The vapour is heavier than air, spreads along the ground and distant ignition is possible.
Extinguishing Media	Carbon Dioxide, foam, dry powder.
Fire Fighting	Move container from fire area if it can be done without risk. Do not scatter spilled material with high-pressure water streams. Dyke for later disposal. Use extinguishing agents for surrounding fire. Avoid inhalation of material or combustion by-products. Stay upwind and keep out of low areas.
Flash Point	Ca 15 °C.

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SECTION 6 – ACCIDENTAL RELEASE MEASURES

Emergency Procedures

HAZCHEM code : **3[Y]E**

3 = use foam extinguisher to fight fires.

Y = Yes – risk of violent reaction, recommend breathing apparatus, contain.

- Shut off engine and electrical equipment off.
- No smoking or naked lights within 50 metres.
- Move people from immediate area; keep upwind.
- Send messenger to notify fire brigade and police.
- Tell them location, material quantity, UN number and emergency contact. Indicate condition of vehicle and damage or injuries observed.
- Warn other traffic.

E = Consider evacuation.

Occupational Release

In case of spill, remove all sources of ignition, increase ventilation, evacuate all unnecessary personnel. Isolate hazard area and deny entry. Wear personal protection as indicated in section 8 below. Spilt material may result in a slip hazard and should be absorbed into dry, inert material (e.g. sand), which then can be put into appropriately labelled drums. The wasted material can be disposed of by incineration (Preferably high temperature), by an approved agent according to local conditions.

SECTION 7 – HANDLING AND STORAGE

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. DO NOT enter confined spaces until atmosphere has been checked. Avoid smoking, naked lights or ignition sources. Avoid contact with incompatible materials. When handling, DO NOT eat, drink or smoke. Keep containers closed at all times. Avoid physical damage to containers. Always wash hands with soap and water after handling. Work clothes should be laundered separately. Launder contaminated clothing before re-use.

Storage

Avoid all sources of ignition – (heat, sparks, static electricity, open flame). Use flameproof equipment and fittings to prevent flammability risk. Store in a well-ventilated area. Store in a cool, dry place and out of direct sunlight. Store away from incompatible substances i.e. strong oxidizing agents, acids or bases. Keep containers closed at all times – check regularly for leaks.

SECTION 8 – EXPOSURE CONTROLS AND PERSONAL PROTECTION

Exposure Limits

National Occupational Exposure Limits, as published by National Occupational Health & Safety Commission:

Time-weighted Average (TWA): None established for specific product.

See **SECTION 3** for Exposure Limits of individual ingredients.

Short Term Exposure Limit (STEL): None established for specific product.

See **SECTION 3** for Exposure Limits of individual ingredients.

Engineering Controls

Use only in a well-ventilated area. Ensure airflow, where this product is used, is directed away from the operators. Ensure ventilation is adequate to maintain air concentrations below exposure standards. If this is not possible, use appropriate personal protective equipment (meeting the requirements of AS/NZS 1715 and AS/NZS 1716).

Personal Protective Equipment

This product is classified as hazardous according to the criteria of Worksafe Australia. Use good occupational work practice. The use of protective clothing and equipment depends upon the degree and nature of exposure. Final choice of appropriate protection will vary according to individual circumstances i.e. methods of handling or engineering controls and according to risk assessments undertaken. The following

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Eye Protection



protective equipment should be available;

The use of safety glasses with side shield protection, goggles or a face shield is recommended to handle in quantity, cleaning up spills, decanting, etc. Contact lenses pose a special hazard ; soft lenses may absorb irritants and all lenses concentrate them.

Skin Protection



Wear normal work clothes, boots and impervious gloves (as per AS/NZS 2161, or as recommended by supplier), especially to handle concentrate in quantity, cleaning up spills, decanting, etc.

Protective Material Types Respirator



Material suitable for solvent contact – eg- Neoprene, PVC, and Nitrile.
No respirator should be required under normal conditions of use in well-ventilated areas (outdoors) provided air concentrations are below exposure standards. If engineering controls are not effective in controlling airborne exposure then respiratory protective equipment should be used suitable for protecting against airborne contaminants. Final choice of appropriate breathing protection is dependant upon actual airborne concentrations and the type of breathing protection required will vary according to individual circumstances. Expert advice may be required to make this decision. Reference should be made to Australian Standards AS/NZS 1715, Selection, Use and maintenance of Respiratory Protective Devices; and AS/NZS 1716, Respiratory Protective Devices. If the exposure limit is exceeded briefly, a full facepiece respirator with an organic vapour cartridge may be worn. For short elevated exposures, eg, spillages:- Appropriate organic vapour cartridge respirator as per the requirements of AS/NZS 1715 and AS/NZS 1716 (Respiratory protective devices). For emergencies or instances where the exposure levels are not known, use a full-face piece positive-pressure, air-supplied respirator. Exposure Limit by more than ten times, air supplied apparatus should be used.

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

Physical State	liquid	Colour	colourless
Odour	alcohol odour	Specific Gravity	Ca 0.84
Boiling Point	Approx. 78 - 186 °C	Freezing Point	Not available
Vapour Pressure	Not available	Vapour Density	Not available
Flash Point	approx 15 °C	Flammable Limits	LEL 3.5%, UEL 19%
Water Solubility	Partially soluble	pH	Not applicable
Volatile Organic Compounds (VOC)	50% v/v	Coefficient of Water/Oil	
Viscosity	Not available	Distribution	Not available
Evaporation Rate	Not available	Odour Threshold	Not available
Odour Threshold	Not available	Per Cent Volatile	50% v/v
		Evaporation Rate	Not available

SECTION 10 – STABILITY AND REACTIVITY

Reactivity	Stable at normal temperatures and pressure.
Conditions to Avoid	Avoid contact with incompatible materials. Avoid contact with heat, flames, sparks.
Incompatibilities	Strong oxidizing agents or acids.
Hazardous Decomposition	Thermal decomposition products: Carbon Monoxide, Carbon Dioxide and other possibly toxic gases and vapours on burning.

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SECTION 11 – TOXICOLOGICAL INFORMATION

Local Effects Irritant: skin, eye, inhalation and ingestion.
Target Organs Skin, eyes, mucous membranes, liver, kidneys, CNS.

POTENTIAL HEALTH EFFECTS

Inhalation

short term exposure Moderately irritating to respiratory system and mucous membranes. Inhalation of vapour may result in headaches, nausea and vomiting. High concentrations may cause unconsciousness.

long term exposure From human experience, liver and kidney injuries may occur (Tetraethylsilicate).

Skin contact

short term exposure Contact with skin will result in irritation. Not expected to be a skin sensitiser.

long term exposure Prolonged and repeated skin contact may cause dermatitis due to defatting effect.

Eye contact

short term exposure Mildly irritating to the eyes, which can result in redness and lachrymation.

long term exposure Not known.

Ingestion

short term exposure If swallowed, the alcohol content will cause harmful central nervous system effects. Symptoms include excitation, euphoria, headache, dizziness, drowsiness, blurred vision, fatigue, tremors, convulsions, loss of consciousness, coma, respiratory arrest, and death. Severe, acute intoxication may cause hypoglycemia, hypothermia and extensor rigidity. Other effects may include decreased blood pressure, vomiting blood and blood discharges. Aspiration to the lungs may cause chemical pneumonitis.

long term exposure From human experience, liver and kidney injuries may occur (Tetraethylsilicate).

Carcinogen Status

NOHSC No significant ingredient is classified as carcinogenic by NOHSC.

NTP No significant ingredient is classified as carcinogenic by NTP.

IARC No significant ingredient is classified as carcinogenic by IARC.

Classification of Hazardous Ingredients

NOTE : This information relates to each individual ingredient, when evaluated as pure undiluted chemical. See SECTION 3 for actual proportions of ingredients present in this product.

Ingredients	R-Phrases.
Ethanol	R11
Triethoxyisobutylsilane	R38
Tetraethylsilicate	R10, 20, 36/37/38.

100% Triethoxyisobutylsilane

Irritation Data LD₅₀ Dermal (rabbit) >2000 mg/Kg (manufacturer's study).

Eyes: Not irritating (manufacturer's study).

Skin: Irritating. (manufacturer's study).

Toxicity Data LD₅₀ Oral (rat) >5000 mg/Kg (manufacturer's study)

LC₅₀ Inhalation (rat) 5.88 mg/l 4hr

Local Effects Irritant to skin.

Target Organs Skin, mucous membranes.

Mutagenic Data No information

Reproductive Effects No information

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100% Tetraethylsilicate

Irritation Data	LD ₅₀ Dermal (rabbit) 5,878 mg/Kg Skin Irritation: Irritant Eyes Irritation: Irritant
Toxicity Data	Sensitisation: Not sensitising LD ₅₀ Oral (rat) >2,000 mg/Kg LC ₅₀ Inhalation (rat) 10-16 mg/l 4h
Local Effects	Irritant to skin and eyes.
Target Organs	Human Experience: Liver and kidney injuries may occur.
Reproductive Effects	No information.
Mutagenic Data	No information.

ETHANOL 100%

Irritation Data	Moderately irritating to skin – may cause redness. Moderately irritating to eyes – may injure tissue. Moderately irritating to respiratory system and mucous membranes.
Toxicity Data	Excessive chronic absorption may result in liver damage. LD50 oral (rat) : 2080 mg/kg
Local Effects	Absorbed into the body by inhalation and ingestion. Irritant of sensitive tissues, eg eyes and mucous membranes. Central nervous system depression.
Target Organs	Eyes, mucous membranes, liver, central nervous system.
Acute Toxicity Level	Mild toxicity. Narcotic properties: ingestion.
Mutagenic Data	No available information.
Reproductive Effects	No available information.

SECTION 12 – ECOLOGICAL INFORMATION

Fish toxicity	No data available for specific product. Ingredient tetraethylsilicate: LC ₅₀ / 96hr >=245 mg/l (Brachydanio rerio) (Acute toxicity test; EC 92/69) Ingredient triethoxyisobutylsilane: LC ₅₀ / 96hr 85 mg/l (Oncorhynchus mykiss) (EC 84/449)
Algae toxicity	No data available for specific product. Ingredient tetraethylsilicate: EC ₅₀ / 72hr 410.4 mg/l (Scenedesmus subspicatus) EC 88/302 Ingredient triethoxyisobutylsilane: NOEC/ 72hr 36 mg/l (Scenedesmus subspicatus) EC 88/302
Invertebrates toxicity	No data available for specific product. Ingredient tetraethylsilicate: Toxicity to Daphnia EC ₅₀ / 48hr >844 mg/l EC 84/449 Ingredient triethoxyisobutylsilane: Toxicity to Daphnia EC ₅₀ / 48hr >49 mg/l EC 84/449
Toxicity to Bacteria	No data available for specific product. Ingredient tetraethylsilicate: EC ₁₀ / 5hr >1,878 mg/l (Pseudomonas putida) Bringmann und Kuhn, Z. Wasser Abwasser Forsch. 10, 87-98 (1977).
OECD Biological degradation	Ingredient: tetraethylsilicate is 98% (readily biodegradable) EC 79/831. Ingredient: triethoxyisobutylsilane stated to be 75% Readily Biodegradable OECD 301D.
General	AS WITH ANY CHEMICAL PRODUCT, DO NOT DISCHARGE INTO DRAINS, WATERWAYS, SEWER OR ENVIRONMENT. Inform local authorities if this occurs.

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SECTION 13 – DISPOSAL CONSIDERATIONS

Refer to State Land Waste Management Authority. Transfer product residues to a labelled, sealed container for disposal or recovery. Waste disposal must be by an accredited contractor. Do not put down the drain.

SECTION 14 – TRANSPORT INFORMATION

UN Number	1263
ADG Code	Class 3 (Paint)
HAZCHEM Code	3[Y]E
Special Provisions	SP187
Packing Group	II
Packaging Method	3.8.3
Segregation	Class 3 – Flammable liquid shall not be loaded in the same vehicle or packed in the same freight container with: <ul style="list-style-type: none"> ➤ Class 1, Explosives ➤ Class 2.1, Flammable Gases, if both the Class 3 and Class 2.1 dangerous goods are in bulk ➤ Class 2.3, Toxic Gases ➤ Class 4.2 Spontaneously Combustible Substances ➤ Class 5.1 Oxidising Agents and Class 5.2, Organic Peroxides ➤ Class 6 Toxic Substances (where the flammable liquid is nitromethane) ➤ Class 7 Radioactive Substances. ➤ Foodstuff and foodstuff empties

SECTION 15 – REGULATORY INFORMATION

AICS	All ingredients present on AICS.
Labeling Details	
HAZARD RISK PHRASES	Xi -IRRITANT F - Flammable. R10 - Flammable. R20 - Harmful by inhalation. R36/37/38 - Irritating to eyes, respiratory system and skin.
SAFETY PHRASES	S2 - Keep out of reach of children. S16 - Keep away from sources of ignition - No smoking. S23 - Do not breathe fumes/vapour/spray. S26 - In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. S28 - After contact with skin, wash immediately with plenty of... (to be specified by the manufacturer). S37/39 - Wear suitable gloves and eye/face protection.
SUSDP	Not scheduled
ADG Code	ADG Class 3 (PAINT)

SECTION 16 – OTHER INFORMATION

Acronyms	
SUSDP	Standard for the Uniform Scheduling of Drugs and Poisons.
ADG Code	Australian Code for the Transport of Dangerous Goods by Road and Rail.
CAS Number	Chemical Abstracts Service Registry Number.
UN Number	United Nations Number.
R-Phrases	Risk Phrases.

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HAZCHEM	An emergency action code of numbers and letters which gives information to emergency services.
NOHSC	National Occupational Health and Safety Commission.
NTP	National Toxicology Program (USA).
IARC	International Agency for Research on Cancer.
AICS	Australian Inventory of Chemical Substances.
TWA	Time Weighted Average
STEL	Short Term Exposure Limit

Literature References

List of Designated Hazardous Substances [NOHSC:10005(1999)]
 Australian Code For The Transport Of Dangerous Goods By Road And Rail – Sixth Edition.
 Standard for the Uniform Scheduling of Drugs and Poisons.
 National Code of Practice for the Preparation of Material Safety Data Sheets 2nd Edition [NOHSC:2011(2003)]
 Approved Criteria for Classifying Hazardous Substances [NOHSC:1008(1999)]
 Material Safety Data Sheets – individual raw materials – Suppliers.
 HSIS – Hazardous Substance Information System – National Worksafe Data Base.

Revision Information	New Issue to standard : 2nd Edition [NOHSC:2011(2003)].		
Note	Safety Data Sheets are updated frequently. Please ensure that you have a current copy.		
Contact Point	Regulatory Affairs Manager.	Telephone	(07) 5437 7714
Issue Date	JULY 2010	Supersedes Issue Date	March 2004

This MSDS summarises at the date of issue our best knowledge of the health and safety hazard information of this product, & in particular how to safely handle & use this product in the workplace. Since the supplier cannot anticipate or control the conditions under which the product may be used, each user must, prior to usage, review this MSDS 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 supplier.