SAFETY DATA SHEET

Classified in accordance with 29 CFR 1910.1200

1. IDENTIFICATION

Product Name:	VersEseal© Crystal Clear SXL Over Tile Coating Part B
Chemical Name:	[3-(2,3-epoxypropoxy)propyl]trimethoxysilane
Other Means of Identification:	**CAS Number:** 2530-83-8
Recommended Use:	Coupling and crosslinking agent for Liquid Applied Over Tile Coating for ceramic tiles
Restrictions on Use	Not determined
Supplier:	LRM Products Pty Ltd
ABN:	98 158 623 753
Address:	4/2 Link Drive, Yatala, QLD 4207
Telephone:	+61 7 3807 2545
Emergency Phone:	**+61 7 3807 2545** **For advice, contact Poisons Information Centre (Phone Australia: 131 126) or a doctor.**
All other inquiries:	lrmproducts.com.au

2. HAZARDS IDENTIFICATION

Hazard Classification

Health Hazards

Serious Eye Damage/Eye Irritation	Category 1

Environmental Hazards

Acute hazards to the aquatic environment	Category 3
Chronic hazards to the aquatic environment	Category 3

Label Elements

Hazard Symbol:

Signal Word:	Danger
Hazard Statement:	Causes serious eye damage. Harmful to aquatic life with long lasting effects.

Precautionary Statements

Prevention:	Avoid release to the environment. Wear protective gloves/protective

clothing/eye protection/face protection.

Response: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor.

Disposal: Dispose of contents/ container to an approved facility in accordance with local, regional, national and international regulations.

Hazard(s) not otherwise classified (HNOC): None

3. COMPOSITION: Information on Ingredients

Chemical Ingredient	CAS Number	Proportion (% v/v)
[3-(2,3-epoxypropoxy)propyl]trimethoxysilane	2530-83-8	<=100%

* All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

The exact concentration has been withheld as a trade secret.

4. FIRST AID MEASURES

Description of necessary first-aid measures

General information: Immediately remove contaminated clothing.

Inhalation: If aerosol or mists are formed: Move to fresh air. Get medical attention if any discomfort continues.

Skin Contact: Wash off immediately with plenty of water. If skin irritation persists, call a physician.

Eye contact: With eye held open, thoroughly rinse immediately with plenty of water for at least 10 minutes. Continue rinsing process with eye rinsing solution. Protect unharmed eye. Call ambulance. (Cue: caustic burn of the eyes) Immediate further treatment in eye clinic/by eye doctor. continue rinsing eye until arrival at ophthalmic hospital.

Ingestion: Have the mouth rinsed with water. Only when patient fully conscious: Have patient drink plenty of water in small sips. Get medical attention immediately.

Personal Protection for First-aid Responders: No data available.

Most important symptoms and effects, both acute and delayed

Symptoms: After absorbing large amounts of substance: Liberation of reaction products (Methanol) can lead to symptoms of poisoning.

Possible signs of poisoning: daze, dizziness, nausea, colicky abdominal pain, respiratory disturbance. Symptoms upon increasing intoxication: dysopia, loss of eyesight.

Hazards: None known.

Indication of immediate medical attention and special treatment needed

Treatment: If required, therapy of irritative effect. Treatment Early endoscopy in order to assess mucosa lesions in the oesophagus and stomach which may appear. If necessary, aspirate leftover substance. Detection of substance (Methanol) possible in: Blood Antidote treatment: ethanol.

5. FIRE FIGHTING MEASURES

Suitable (and unsuitable) extinguishing media

Suitable extinguishing media: Water spray, foam, dry powder or carbon dioxide.
Unsuitable extinguishing media: High volume water jet.
Special hazards arising from the substance or mixture: Standard procedure for chemical fires.

Special protective equipment and precautions for firefighters

Special fire fighting procedures: Water used to extinguish fire should not enter drainage systems, soil or stretches of water. Ensure there are sufficient retaining facilities for water used to extinguish fire. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

Special protective equipment for fire fighters: As in any fire, wear self-contained positive pressure breathing apparatus, (MSHA/NIOSH approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures: Use personal protective equipment. Do not breathe in vapours or aerosols.

Accidental release measures: No data available.

Methods and material for containment and cleaning up: Soak up with absorbent material, e.g., sand, silica gel, acid binder, universal binder or sawdust. Place in a marked sealable container and dispose of in accordance with existing federal, provincial, state and local regulations.

Environmental Precautions: Obey relevant local, state, provincial and federal laws and regulations. Do not contaminate any lakes, streams, rivers, groundwater or soil.

7. HANDLING AND STORAGE

Handling

Technical measures (e.g. Local and general ventilation):	Provide for good ventilation if vapours/aerosols are formed.
Safe handling advice:	Handle in accordance with good industrial hygiene and safety practice. Provide good ventilation or extraction. Handle in accordance with good industrial hygiene and safety practice. Wear suitable protective equipment. Do not breathe in vapours or aerosols. If workplace exposure limits are exceeded and/or larger amounts are released (leakage, spilling, dust) the indicated respiratory protection should be used. Avoid contact with eyes, skin, and clothing. If there is the possibility of skin/eye contact, the indicated hand/eye/body protection should be used. Keep away from heat. Keep away from sparks, flames and other sources of ignition. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. Use with adequate ventilation. Ground and bond containers when transferring material. Use explosion-proof equipment. Follow all SDS/label precautions even after the container is emptied because it may retain product residues. Wash thoroughly after handling.
Contact avoidance measures:	No data available.

Storage

Safe storage conditions:	Keep away from heat and from sources of ignition. Keep containers tightly closed in a cool, well-ventilated place. Protect from moisture.
Safe packaging materials:	No data available.

8. EXPOSURE CONTROLS: PERSONAL PROTECTION

Control Parameters

Occupational Exposure Limits	None of the components have assigned exposure limits.
Biological Limit Values	No biological exposure limits noted for the ingredient(s).

Appropriate Engineering Controls Provide for good ventilation if vapours/aerosols are formed.

Individual protection measures, such as personal protective equipment

Eye/face protection:	Wear safety glasses with side shields.

Skin Protection

Hand Protection:	Material: Butyl rubber. Break-through time: >= 480 min Material: Fluorinated rubber (Viton) Break-through time: >= 480 min Additional Information: Selection of protective gloves to meet the requirements of specific workplaces., The suitability for a specific workplace should be discussed with the producers of the protective gloves. The above mentioned hand protection is based on knowledge of the chemistry and anticipated uses of this product, but it may not be appropriate for all workplaces. A hazard assessment should be conducted prior to use to ensure suitability of gloves for specific work environments and processes prior to use. Use impermeable gloves.
Skin and Body Protection:	Safety showers and eye showers should be easily accessible. In order to determine further specifications applicable to the personal protection equipment, a hazard assessment according to the OSHA standards (29 CFR 1910.132) for personal protection equipment (PPE) is recommended before the product is used.
Respiratory Protection:	A respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2 or applicable federal/provincial requirements must be followed whenever workplace conditions warrant respirator use. NIOSH's "Respirator Decision Logic" may be useful in determining the suitability of various types of respirators.
Hygiene measures:	Avoid contact with skin, eyes and clothing. Do not inhale vapors or aerosols. Do not eat, drink, or smoke when using the product. Remove contaminated or saturated clothing.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance	
Physical state:	liquid
Form:	liquid
Colour:	Colourless
Odor:	ester-like
Odor Threshold:	No data available.
Freezing point:	< -94 °F/< -70 °C (literature)
Boiling Point:	194 °F/90 °C (0.7 hPa) (DIN 51 356) 504 °F/262 °C (1,013 hPa) (DIN 51 356)
Flammability:	No data available.
Upper/lower limit on flammability or explosive limits	
Explosive limit - upper:	(DIN EN 1839) > 13.6 %(V)
Explosive limit - lower:	(DIN EN 1839) 0.7 %(V)

Flash Point:	252 °F/122 °C (DIN EN ISO 2719)
Autoignition Temperature:	No data available.
Decomposition Temperature:	No data available.
pH:	No data available.
Viscosity	
Dynamic viscosity:	3.65 mPa.s (77 °F/25 °C, DIN 53015)
Kinematic viscosity:	No data available.
Flow Time:	No data available.
Solubility(ies)	
Solubility in Water:	not miscible decomposition by hydrolysis
Solubility (other):	No data available.
Partition coefficient (n octanol/water):	0.5
Vapor pressure:	< 0.1 hPa (68 °F/20 °C)
Relative density:	No data available.
Density:	Approximate 1.07 g/cm3 (68 °F/20 °C) (DIN 51757)
Bulk density:	No data available.
Relative vapor density:	No data available.

Other information

Explosive properties:	Not explosive
Minimum ignition temperature:	451 °F/233 °C (EC Method A.15)
Peroxides:	Not applicable
Metal Corrosion:	Not to be expected in view of the structure
Evaporation Rate:	No data available.
Molecular weight:	236.3 g/mol

10. STABILITY AND REACTIVITY

Reactivity:	No dangerous reaction known under conditions of normal use.
Chemical Stability:	Stable under recommended storage conditions.
Possibility of hazardous reactions:	Exothermic reaction with: Peroxides.
Conditions to avoid:	Protect from moisture.
Incompatible Materials:	Water. Peroxides.
Hazardous Decomposition Products:	Methanol in case of hydrolysis. Alcohol formed by hydrolysis lowers the flash point of the product.

11. TOXICOLOGICAL INFORMATION

Information on toxicological effects

Information on likely routes of exposure

Inhalation: No data available.

Skin Contact: No data available.

Eye contact: No data available

Ingestion: No data available

Acute toxicity (list all possible routes of exposure)

Oral

Product: LD 50 (Rat, Female, Male): 8,025 mg/kg (OECD 401)

Dermal

Product: LD 50 (Rabbit, Male): > 2,000 mg/kg (OECD 402) Not toxic after single exposure;

Inhalation

Product: LC 50 (Rat, Female, Male, 4 h): 5.3 mg/l Dust and mist

Repeated dose toxicity

Product: NOAEL (Rat(Female, Male), Oral, 90 day, 7 days a week): >= 1,000 mg/kg NOAEC (Rat(Male), Inhalation - dust and mist, 28 day, 6 hours/day): 119 mg/m³

Skin Corrosion/Irritation

Product: Not irritating OECD 404 (Rabbit):

Serious Eye Damage/Eye Irritation

Product: Risk of serious damage to eyes. Rabbit:

Respiratory or Skin Sensitization

Product: Buehler Test, OECD 406 (Guinea Pig): Not a skin sensitizer.

Carcinogenicity

Product: Did not show carcinogenic effects in animal experiments.

IARC Monographs on the Evaluation of Carcinogenic Risks to Humans:

No carcinogens present or none present in regulated quantities

ACGIH: US.ACGIH Threshold Limit Values:

No carcinogens present or none present in regulated quantities

US. National Toxicology Program (NTP) Report on Carcinogens:

No carcinogens present or none present in regulated quantities

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050), as amended:

No carcinogens present or none present in regulated quantities

Germ Cell Mutagenicity

In vitro

Product: Ames test (OECD 471): positive and negative;

In vivo

Product: No data available.

Reproductive toxicity

Product: Animal testing did not show any effects on fertility.

Specific Target Organ Toxicity - Single Exposure

Product: Not classified based on available information.

Specific Target Organ Toxicity - Repeated Exposure

Product: Not classified based on available information.

Aspiration Hazard

Product: No evidence of aspiration toxicity

Information on health hazards

Other hazards

Product: Glycidoxypropyl trimethoxysilane administration by gavage to timed-pregnant rats during organogenesis resulted in maternal toxicity and slight fetotoxicity at 3000 mg/kg/day. No treatment related malformation occurred at any dosage. The NOEL (No Observable Effect Level) for maternal toxicity as well as developmental toxicity was 1500 mg/kg/day for the specified study.;

12. ECOLOGICAL INFORMATION

Ecotoxicity:

Acute hazards to the aquatic environment:

Fish

Product: LC 50 (Cyprinus carpio, 96 h): 55 mg/l

Aquatic Invertebrates

Product: LC 50 (Simocephalus vetulus, 48 h): 324 mg/l

NOEC (Simocephalus vetulus, 48 h): 250 mg/l

Toxicity to Aquatic Plants

Product: EC 50 (Algae (Pseudokirchneriella subcapitata), 96 h): 350 mg/l (OECD 201)

Toxicity to microorganisms

Product: EC 50 (local activated sludge, 3 h): > 100 mg/l (OECD 209) tested in the presence of emulsifiers

Chronic hazards to the aquatic environment:

Fish

Product: No data available.

Aquatic Invertebrates

Product: NOEC (Daphnia magna, 21 d): 100 mg/l (OECD 211)

Lowest Observed Effect Concentration (Daphnia magna, 21 d): > 100 mg/l (OECD 211)

Toxicity to Aquatic Plants

Product: NOEC (Algae (Pseudokirchneriella subcapitata), 96 h): 130 mg/l (OECD 201)

Toxicity to microorganisms

Product: EC 50 (local activated sludge, 3 h): > 100 mg/l (OECD 209) tested in the presence of emulsifiers

Persistence and Degradability

Biodegradation

Product: 37 % (28 d, (DOC; Die Away test - 79/831/EEC part C.4-A)), aerobic, Not readily degradable.

BOD/COD Ratio

Product: No data available.

Bioaccumulative potential

Bioconcentration Factor (BCF)

Product: not bioaccumulative

Partition Coefficient n-octanol / water (log Kow)

Product: Log Kow: 0.5 20 °C

Mobility in soil:

Product Adsorption on the floor: low.

Results of PBT and vPvB assessment:

Product No data available.

Other adverse effects:

Other hazards

Product: Harmful to aquatic life with long lasting effects.

13. DISPOSAL CONSIDERATIONS

Disposal methods: Waste must be disposed of in accordance with local, state, provincial and federal laws and regulations. Empty containers must be handled with care due to product residue.

Contaminated Packaging: Do not reuse empty containers and dispose of in accordance with the regulations issued by the appropriate local authorities. If there is product residue in the emptied container, follow directions for handling on the container's label. Incorrect disposal or reuse of this container is illegal and can be dangerous. Other countries: observe the national regulations.

14. TRANSPORT INFORMATION

Domestic regulation

49 CFR Not regulated as a dangerous good

Remarks : Not dangerous according to transport regulations.

International Regulations

UNRTDG Not regulated as a dangerous good

IATA-DGR Not regulated as a dangerous good

IMDG-Code Not regulated as a dangerous good

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

15. REGULATORY INFORMATION

US Federal Regulations

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

None present or none present in regulated quantities.

US. Toxic Substances Control Act (TSCA) Section 5(a)(2) Final Significant New Use Rules (SNURs) (40 CFR 721, Subpt E)

None present or none present in regulated quantities.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050), as amended None present or none present in regulated quantities.

CERCLA Hazardous Substance List (40 CFR 302.4):

Chemical Identity

METHANOL

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories

Serious eye damage or eye irritation

US. EPCRA (SARA Title III) Section 304 Extremely Hazardous Substances Reporting Quantities and the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Hazardous Substances

None present or none present in regulated quantities.

US. EPCRA (SARA Title III Section 313 Toxic Chemical Release Inventory (TRI) Reporting None present or none present in regulated quantities.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130): None present or none present in regulated quantities.

Clean Water Act Section 311 Hazardous Substances (40 CFR 117.3)

None present or none present in regulated quantities.

US State Regulations

US. California Proposition 65

WARNING: This product can expose you to chemicals including, methanol which is [are] known to the State of California to cause birth defects or other reproductive harm.
For more information go to www.P65Warnings.ca.gov.

16. OTHER INFORMATION

Reasons for Issue: New product; amalgamated supplier and regulatory updates in all sections

Abbreviations:

AICS: Australian Inventory of Chemical Substances
CAS Number: Chemical Abstracts Number
GHS: Global Harmonised System
IARC: International Agency for Research on Cancer
PPE: Personal Protective Equipment
N/R: Non-regulated
N/A: Not applicable UN: United Nations

References:

- Supplier Safety Data Sheets
- http://hsis.safework.gov.au/SearchHS.aspx

- Animal toxicology data: http://chem.sis.nlm.nih.gov/chemidplus
- Ecotoxicology data: https://cfpub.epa.gov/ecotox

The information sourced for the preparation of this document was correct and complete at the time of writing to the best of the writer's knowledge. The document represents the commitment to the company's responsibilities surrounding the supply of this product, undertaken in good faith. This document should be taken as a safety guide for the product and its recommended uses, but is in no way an absolute authority.

Please consult the relevant legislation and regulations governing the use and storage of this type of product. For further information, please contact LRM Products Pty Ltd.