SealShield

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

1.1. Product Name/Identifier

SealShield.

1.2. Relevant identified uses of the substance or mixture and uses advised against

Polymer-mineral coating for reinforcing and waterproofing surfaces.

1.3. Details of the supplier of the safety data sheet

Premier Sealant Systems Ltd.
Mercia Way,
Foxhills Industrial Park,
Scunthorpe,
North Lincolnshire,
DN15 8RE
Tel. 01724 864 100

1.4. Emergency telephone number

NPIS (National Poisons Information Service): 0344 892 0111 (for medical professionals only). For medical advice, members of the public should contact NHS 111 in England: 111; NHS 24 in Scotland: 111; NHS Direct in Wales: 111 or 0845 4647. In Northern Ireland: contact your local GP or pharmacist. In Europe call 112.

2. HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

Classification according to GHS:

Skin corrosion, category 1B
Eye damage, category 1.

2.2. Label elements

Labelling according to Regulation (EC) No 1272/2008, as retained and amended in UK law.
Hazard pictograms:

Signal word:
DANGER

Hazard statements:
H314 - Causes severe skin burns and eye damage.

Precautionary statements:
P260 - Do not breathe dust/fume/gas/mist/ vapours/spray.
P280 - Wear protective gloves/protective clothing/eye protection/face protection.
P301+P330+P331 - IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303+P361+P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
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 CENTER/doctor.

Supplemental label information
Not applicable.

2.3. Other hazards

This substance/mixture contains no components considered to be an endocrine-disrupting substance, persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substances

Not applicable.

3.2. Mixtures

Product/ingredient name	Identifiers	%	Classification 1272/2008/EC	Nano material form	M factor	Specific conc'n limits (SCL(	Acute toxicity estimate (ATE)
Sodium Silicate	CAS No 1344-09-8 EC No 215-687-4 REACH No 01-2119448725-31-XXXX	6%	Met. Corr. 1 H290 Skin Corr. 1B H314 Eye dam 1 H318	No	1	No SCL in Annex VI	No ATE in Annex VI
Siloxanes and Silicones, 3-[(2aminoethyl)amino]propyl Me, di-Me, methoxy-terminated	CAS No 102782-92-3 EC No 600-354-1 REACH No n/a	<2%	Skin Irrit 2 H315 Eye Dam 1 H318	No	1	No SCL in Annex VI	No ATE in Annex VI
Aliphatic ester	CAS No n/a EC No n/a REACH No n/a	0.4 - 1.8%	Skin irrit 2 H315 Eye dam 1 H318 STOT RE 2 H373	No	1	No SCL in Annex VI	No ATE in Annex VI
Ammonia	CAS No 1336-21-6 EC No 215-647-6 REACH No 01-2119982985-14-XXXX	⩽ 0.3 %	Skin Corr. 1B H314 Aquatic Acute 1	No	1	No SCL in Annex VI	No ATE in Annex VI

Other information:

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in section 8.

See section 16 for the full text of the H and P phrases declared above.

4. FIRST AID MEASURES

4.1. Description of first aid measures

General information

First Aid responders should pay attention to self-protection and use the recommended protective clothing (chemical resistant gloves, splash protection). If potential for exposure exists refer to Section 8 for specific personal protective equipment.

Inhalation: Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. Get medical attention. If necessary, call a poison center or physician.

Ingestion:	Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. Do NOT induce vomiting. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. If necessary, call a poison center or physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway.
Skin contact:	Wash with water and soap and rinse thoroughly. Seek medical advice if irritation or pain develops.
Eye contact:	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 20 minutes. Get medical attention.

4.2. Most important symptoms and effects, both acute and delayed

Causes severe skin burns and eye damage.

Notes for the doctor

No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.

Specific treatments

If any symptoms are observed, contact a physician and give them this SDS sheet. Provide general supportive measures and treat symptomatically.

5. FIREFIGHTING MEASURES

5.1. Extinguishing media

Suitable extinguishing media

In case of fire: Use water spray, dry chemical, carbon dioxide or alcohol resistant foam to extinguish.

Unsuitable extinguishing media

Do not use water jet as an extinguisher, as this will spread the fire.

5.2. Special hazards arising from the substance or mixture

Specific hazards

Use suitable measures for surrounding area. Containers may explode when heated. Hazardous combustion products: Carbon monoxide, carbon dioxide, nitrogen oxides, silicon oxides.

5.3. Advice for firefighters

Use water spray or fog for cooling exposed containers. As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Evacuate all non-emergency personnel from area. Irritating substances may be released during a fire including carbon oxides. In addition, wear other appropriate protective equipment as conditions warrant (see Section 8).

Keep out of drains, surface waters and soil against pollution.

Special protective equipment for firefighters
Wear self-contained breathing apparatus for firefighting if necessary. Use personal protective equipment.

6. ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

No action shall be taken involving any personal risk or without suitable training. Keep unnecessary and unprotected personnel from entering.

For emergency responders
Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. Use appropriate containment to avoid environmental contamination.
For personal protection, see section 8 of the SDS.
See Sections 2 and 7 for additional information on hazards and precautionary measures

6.2. Environmental precautions

Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and material for containment and cleaning up
Soak up with inert absorbent material. Keep in suitable, closed containers for disposal. Avoid dispersal of spilt material and runoff, and avoid contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
For waste disposal, see section 13 of the SDS.

7. HANDLING AND STORAGE

7.1. Precautions for safe handling

Usage precautions
Avoid contact with eyes and skin. Avoid inhalation of vapour or mist. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Observe good industrial hygiene practices. (Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas).

Advice on general occupational hygiene
Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash their hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas.

7.2. Conditions for safe storage, including any incompatibilities

Storage precautions
Store locked up. Store in a cool, dry place out of direct sunlight. Store in original tightly closed container. Store in a well-ventilated place. Store away from incompatible materials such as acids, bases, oxidizing agents.

Storage class
Not classified.

7.3. Specific end use(s)

Field of application of the product is described in Technical Data Sheet (TDS).

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

If exposure limits exist, they are listed below. If no exposure limits are displayed, then no values are applicable.

Ingredient name	CAS Number	Occupational exposure limits	Source
Sodium Silicate	1344-09-8	Short-term value: None known Long-term value: None known	Europe occupational exposure limits
Siloxanes and Silicones, 3-[(2-aminoethyl)amino]pro pyl Me, di-Me, methoxy-terminated	102782-92-3	Short-term value: None known Long-term value: None known	Europe occupational exposure limits
Aliphatic ester	n/a	Short-term value: None known Long-term value: None known	Europe occupational exposure limits
Ammonia	1336-21-6	Short-term value: 50 ppm 36 mg/m3 (Finland) Long-term value: 20 ppm 14 mg/m3 (Finland)	Europe occupational exposure limits

Recommended monitoring procedures
Use methods described in European Standards.

Derived No Effect Level (DNEL):

Sodium Silicate

Application Area	Exposure routes	Health Effect	Value
Workers	Inhalation	Long-term systemic effects	5.61 mg/m3
Workers	Dermal	Long-term systemic effects	1.59 mg/kg bw/day
General population	Inhalation	Long-term systemic effects	1.38 mg/m3
General population	Inhalation	Long-term systemic effects	0.8 mg/kg bw/day
General Population	Oral	Long-term systemic effects	0.8 mg/kg bw/day

Siloxanes and Silicones, 3-[(2-aminoethyl)amino]propyl Me, di-Me, methoxy-terminated
None know.

Aliphatic ester
None known.

Ammonia
None known.

Predicted No Effect Concentration (PNEC):

Sodium Silicate

Compartment	Value
Fresh water	7.5 mg/L
Marine water	1 mg/L
Sewage treatment plant	348 mg/L
Fresh water sediment	no hazard identified
Marine sediment	no hazard identified
Soil	no hazard identified

Siloxanes and Silicones, 3-[(2-aminoethyl)amino]propyl Me, di-Me, methoxy-terminated
None known.

Aliphatic ester
None known.

Ammonia
None known.

8.2. Exposure controls

Appropriate engineering controls
Good general ventilation should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits.
If exposure limits have not been established, maintain airborne levels to an acceptable level.
Provide eyewash station. Eye wash fountain and emergency showers are recommended.
Concentrations should be monitored hazardous substances in the workplace in accordance with recognized test methods. Mode, method, type and frequency of testing and measurement of harmful factors in the working environment should meet the requirements of local/regional/national laws.

Eye/face protection
Wear safety glasses with side shields (or goggles).

Hand protection

Wear appropriate chemical resistant gloves. The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material cannot be calculated in advance and has therefore to be checked prior to the application. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

Other skin and body protection

The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace. Wash hands after use.

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a chemical respirator with organic vapour cartridge and full facepiece. Use respirators and components tested and approved under appropriate government standards such as NIOSH or MSHA-approved respiratory protection.

Hygiene measures

Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Environmental exposure controls

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Appearance	Liquid
Colour	White/Milky
Odour	Not significant
Odour threshold	Not available
pH	Not available
Melting point	Not determined
Initial boiling point and range	Not available
Flash point	Not available
Evaporation rate	No information available
Evaporation factor	No information available
Flammability (solid, gas)	No information available
Upper/lower flammability or explosive limits	No information available
Vapour pressure at 20 °C	No information available
Vapour pressure at 50 °C	No information available
Vapour density	No information available

Density	Not determined
Relative density	Not determined
Solubility(ies)	No information available
Partition coefficient	No information available
Auto-ignition temperature	No information available
Decomposition temperature	No information available
Explosive properties	Not applicable

9.2. Other information

NOTE: The physical data presented above are typical values and should not be construed as a specification.

10. STABILITY AND REACTIVITY

10.1. Reactivity
No hazardous reactions anticipated under normal storage and handling conditions.

10.2. Chemical stability
Stable under normal ambient and anticipated conditions of use.

10.3. Possibility of hazardous reactions
None expected.

10.4. Conditions to avoid
High temperatures and sources of ignition.

10.5. Incompatible materials
Materials to avoid include strong oxidizing agents.

10.6. Hazardous decomposition products
No decomposition if used and stored according to specifications. In case of fire, the following may be formed: Carbon monoxide, Carbon dioxide (CO2), and silica compounds.

11. TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

Acute toxicity (Acute oral toxicity)
Does not meet the requirements for classification.

Acute toxicity (Acute inhalation toxicity)
Does not meet the requirements for classification.

Product/ingredient name	Test	Species	Dose
Sodium Silicate	LD50 Oral LD50 Dermal LC50 Inhalation	Rat Rabbit Rat	3400 mg/kg > 5000 mg/kg > 2.06 mg/L 4h
Siloxanes and Silicones, 3-[(2- aminoethyl)amino]propyl Me, di-Me, methoxy-terminated	LD50 Oral LD50 Dermal LC50 Inhalation	Rat Rabbit Rat	None known None known None known
Aliphatic ester	LD50 Oral LD50 Dermal LC50 Inhalation	Rat Rabbit Rat	> 5000 mg/kg > 2000 mg/kg 2120 mg/m3.4h
Ammonia	LD50 Oral LD50 Dermal LC50 Inhalation	Rat Rabbit Rat	350 mg/kg None known 9850 mg/m3 1h

Skin Corrosion/Irritation
Causes severe skin burns.

Serious Eye Damage/Irritation
Causes serious eye damage.

Respiratory or Skin Sensitisation
Does not meet the requirements for classification.

Germ Cell Mutagenicity
Does not meet the requirements for classification.

Carcinogenicity
Does not meet the requirements for classification.

Reproductive Toxicity
Does not meet the requirements for classification.

Specific target organ toxicity (single exposure)
Does not meet the requirements for classification.

Specific target organ toxicity (repeated exposure)
Does not meet the requirements for classification.

Aspiration Hazard
Does not meet the requirements for classification.

Endocrine disrupting properties
None known.

Information on other hazards
None known.

12. ECOLOGICAL INFORMATION

12.1. Toxicity

Substance name	Toxicity to fish / other aquatic invertebrates
Sodium Silicate	Fish LC50 - Oncorhynchus mykiss - 260 - 310 mg/L – 96 h Invertebrates EC50 - Daphnia magna – 1700 mg/L – 48 h Algae EC50 - Desmodesmus subspicatus – 207 mg/L – 72h
Siloxanes and Silicones, 3- [(2-aminoethyl)amino]propyl Me, di-Me, methoxy- terminated	None known
Aliphatic ester	Fish LC50 – 4.5 mg/L – 96 h Invertebrates EC50 - Daphnia magna – > 100 mg/L – 48 h Algae EC50 – 19 mg/L – 72h
Ammonia	Fish LC50 - Lepomis macrochirus – 0.26 – 4.6 mg/L – 96 h Invertebrates EC50 - Daphnia magna – 25.4 mg/L – 48 h

12.2. Persistence and degradability

Not determined.

12.3. Bioaccumulative potential

Not determined.

12.4. Mobility in soil

Not determined.

12.5. Results of PBT and vPvB assessment

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6. Endocrine disrupting properties

This substance/mixture contains no components considered to be an endocrine-disrupting substance.

12.7. Other adverse effects

None known.

13. DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Product

Do not allow product to reach sewage system.
Dispose of waste materials in accordance with applicable local and national laws and regulations. Where possible, recycling is preferred to disposal or incineration. Contact the proper local authorities.

Contaminated packaging

Since emptied containers retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal .

Disposal methods

Dispose of in accordance with local regulations.

13.2. Waste class

EWC code will depend on the use that is made of this material. Contact the authorized waste disposal services.

14. TRANSPORT INFORMATION

14.1. UN number

ADR/RID: UN 1760

IMDG: UN 1760

IATA: UN 1760.

14.2. Proper shipping name

ADR/RID: CORROSIVE LIQUID, N.O.S. (contains sodium silicate)

IMDG: CORROSIVE LIQUID, N.O.S. (contains sodium silicate)

IATA: CORROSIVE LIQUID, N.O.S. (contains sodium silicate).

14.3. Transport hazard class(es)

ADR/RID: 8

IMDG: 8

IATA: 8.

14.4. Packing group

ADR/RID: II

IMDG: II

IATA: II

14.5. Environmental hazard

Marine Pollutant: No

14.6. Special precautions for user

No data available.

14.7. Maritime transport in bulk according to IMO instruments

Not applicable.

15. REGULATORY INFORMATION

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

This safety datasheet complies with the requirements of:
EU Commission Regulation (EU) 2020/878 (REACH)
EU Regulation (EC) No 1272/2008 (CLP)
EINECS: All components in this product are listed on the European Inventory of Existing Chemical Substance.

15.2. Chemical safety assessment

For this product a chemical safety assessment was not carried out on this product.

16. OTHER INFORMATION

Full text of H-Statements referred to under sections 2 and 3:

Met corr Corrosive to metals
Skin corr Skin corrosion
Eye dam Eye damage
STOT RE Specific target organ toxicity, repeated exposure
Aquatic Acute Hazardous to the aquatic environment – short-term (acute) aquatic hazard
H314 Causes severe skin burns and eye damage
P260 Do not breathe dust/fume/gas/mist/ vapours/spray.
P264 Wash thoroughly after handling
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
P304+P340 If INHALED: Remove person to fresh air and keep comfortable for breathing.
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 CENTER/doctor
P321 Specific treatment (see section 4 to 8 of this SDS and any additional information on this label).
P363 Wash contaminated clothing before reuse.
P405 Store locked up
P501 Dispose of contents/containers to an approved disposal site in accordance with local/regional/national/international regulations.

Training advice: Before using/handling the product one must read carefully present SDS

Key literature references and sources for data

This SDS is prepared by Product Regulatory Services and Hazard Communications Groups from information supplied by internal references within our company.

Full text of other abbreviations

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European
CAS: Chemical Abstracts Service (division of the American Chemical Society)
CLP: Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures
DNEL: Derived No Effect Level
EC50: Half maximal effective concentration
EINECS: European Inventory of Existing Commercial Chemical Substances
EU: European Union
GHS: Globally Harmonized System of Classification and Labeling of Chemicals
IATA: International Air Transport Association
IBC: International Bulk Code
IMDG: International Maritime Code for Dangerous Goods
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
MARPOL: International Convention for the Prevention of Pollution from Ships
OEL: Occupational Exposure Level
PBT: Persistent, Bioaccumulative and Toxic

PNEC: Predicted No Effect Level
REACH: Registration, Evaluation, Authorisation and Restriction of Chemicals
SCBA: Self Contained Breathing Apparatus
SCL: Specific Concentration Limits
UN: United Nations
VPvB: Very Persistent and very Bioaccumulative
WEL: Workplace Exposure Limit.

Revision comments

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24/02/2025
Revision
1
Supersedes date
Not applicable
SDS status
Approved.