



SAFETY DATA SHEET

According to
HSNO Hazardous Substances (Safety Data Sheets) Notice 2017

Section 1. Identification of the material and the supplier

Product: **HML Silco Liquid**
Chemical name of active ing: Silicic Acid, potassium salt

Product Use: Used in agriculture and many other industries, mostly as Adhesives, detergents, flame retardants, construction materials, additives, fillers etc.

Restriction of Use: Refer to Section 15

New Zealand Supplier: **Henry Manufacturing Limited**
Address: 140 Clovelly Road
Bucklands Beach
Auckland 2012

Telephone: +64 21 294 1490
Emergency No: 0800 764 766 (National Poison Centre)

Date of SDS Preparation: 20 June 2018

Section 2. Hazards Identification

This substance is hazardous according to the EPA Hazardous Substances (Classification) Notice 2017

EPA Approval No: HSR004658

Pictograms



Toxic/Irritant

Signal Word: **Warning**

HSNO Classification	Hazard Code	Hazard Statement	GHS Category
6.1D (oral)	H302	Harmful if swallowed.	Acute Tox. 4
6.3A	H315	Causes skin irritation.	Skin Irrit. 2
6.4A	H319	Causes serious eye irritation.	Eye Irrit. 2A
9.3C	H433	Harmful to terrestrial vertebrates.	

Prevention Code	Prevention Statement
P102	Keep out of reach of children.
P103	Read label before use.
P264	Wash hands thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P273	Avoid release to the environment.
P280	Wear protective clothing as detailed in Section 8.

Response Code	Response Statement
P101	If medical advice is needed, have product container or label at hand.
P330	Rinse mouth.
P362	Take off contaminated clothing and wash before re-use.
P301 + P312	IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
P302 + P352	IF ON SKIN: Wash with plenty of soap and water.
P305 + P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P332 + P313	If skin irritation occurs: Get medical advice/ attention.
P337 + P313	If eye irritation persists: Get medical advice/attention.

Storage Code	Storage Statement
None allocated	

Disposal Code	Disposal Statement
P501	Dispose of according to Local Regulations or Authorities

Section 3. Composition / Information on Hazardous Ingredients

Ingredients	Wt%	CAS NUMBER.
Silicic Acid, Potassium Salt	44	1312-76-1
Water	bal	7732-18-5

Section 4. First Aid Measures

Routes of Exposure:

If in Eyes	Rinse cautiously with water for 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice.
If on Skin	Take off contaminated clothing and wash before re-use. Wash with plenty of soap and water. If skin irritation occurs: get medical advice/attention.
If Swallowed	Do not induce vomiting. Wash out mouth and drink 1-2 cupfuls of milk or water. Never give anything to the mouth of an unconscious person. If vomiting occurs, place victim face downwards, with the head turned to the side and lower than the hips to prevent vomit entering the lungs. Seek medical attention if needed.
If Inhaled	Remove person to fresh air. Remove contaminated clothing and loosen remaining clothing. Allow person to assume most comfortable position and keep warm. Keep at rest until fully recovered. Apply artificial respiration if not breathing. Get medical advice if breathing becomes difficult.

Most important symptoms and effects, both acute and delayed

Symptoms:

Ingestion: Harmful if swallowed. May cause irritation to mouth, esophagus and stomach.

Inhalation: Dust or mist generated during processing may cause respiratory irritation.

Skin: Causes skin irritation.

Eye: Causes severe eye irritation.

Chronic: Not applicable.

Note to physician: Treat symptomatically. This product contains alkali silicate.

Section 5. Fire Fighting Measures

Hazard Type	This product is not combustible, self-igniting or explosive.
Hazards from combustion products	Fire will produce irritating vapours and toxic gases.
Suitable Extinguishing media	Use water spray, alcohol-resistant foam, dry chemicals or carbon dioxide. Use any means suitable for extinguishing surrounding fire.
Precautions for firefighters and special protective clothing	Firefighters should wear full protective clothing and positive pressure self-contained breathing apparatus. Approach fire from upwind side. Fight fire from a distance or protected area. Cool fire exposed containers with water spray. If safe to do so, remove containers from path of fire. Prevent fire extinguishing water from contaminating surface water or the ground water system.
HAZCHEM CODE	1Z

Section 6. Accidental Release Measures

Wear protective gear as detailed in Section 8. Evacuate all unnecessary personnel. Ensure adequate ventilation.

Do not allow to enter waterways.

Stop leak if without risk. Move containers from spill area. Don't touch or walk through the spilled material. Be aware of risk of slippery surfaces.

Small spill: Mop up and neutralize liquid, then discharge to sewer.

Large spill: Prevent runoff from entering into storm sewers and ditches which lead to natural waterways. Isolate, dike and store discharged material if possible. Use sand or earth to contain spilled material. If containment is impossible, neutralize contaminated area and flush with large quantities of water. Dispose of waste according to the applicable local and national regulations.

Section 7. Handling and Storage

Precautions for Handling:

- Keep out of reach of children.
- Read label before use.
- Do not breathe fumes, vapours or spray.
- Wash hands thoroughly after handling.
- Do not eat, drink or smoke when using this product.
- Wash contaminated clothing before reuse.
- Ensure good ventilation.
- Due to alkalinity, care should be exercised during handling. In addition, silicate that has dried will become glasslike, thereby presenting a cut hazard. Be careful.
- Avoid release to the environment.
- Wear protective clothing as detailed in Section 8.

Precautions for Storage:

- Store away from incompatible materials listed in Section 10.
- Store locked up.
- Keep container tightly closed until ready for use.
- Keep in a cool, dry, well ventilated place.
- Protect from frost and excessive heat. Avoid direct sunlight.

Section 8 Exposure Controls / Personal Protection

WORKPLACE EXPOSURE STANDARDS (provided for guidance only)

Substance	TWA		STEL	
	ppm	mg/m ³	ppm	mg/m ³

No ingredients have exposure limits

Workplace Exposure Standard – Time Weighted Average (WES-TWA). The time-weighted average exposure standard designed to protect the worker from the effects of long-term exposure. Workplace Exposure Standard – Short-Term Exposure Limit (WESSTEL). The 15-minute average exposure standard. Applies to any 15- Minute period in the working day and is designed to protect the worker against adverse effects of irritation, chronic or irreversible tissue change, or narcosis that may increase the likelihood of accidents. The WES-STEL is not an alternative to the WES-TWA; both the short-term and time-weighted average exposures apply. Workplace Exposure Standards and Biological Exposure Indices NOV 2017 9TH EDITION.

Engineering Controls

Use adequate ventilation to keep airborne concentrations low. Ensure that eyewash stations and safety showers are close to the workstation location.

Personal Protection Equipment



Eyes	Wear safety glasses with side shields or goggles if splash hazards exist. Avoid wearing contact lenses.
Hands and skin	Wear chemical or alkali-resistant protective gloves. Wear impervious protective clothing and safety boots.
Respiratory	In case of creation of dust/mist and insufficient ventilation, use a NIOSH approved dust or mist respirator.

Section 9 Physical and Chemical Properties

Appearance	Viscous Liquid
Colour	Colourless translucent
Odour	Weak odour
Odour Threshold	Not available
pH	13
Boiling Point	Not available
Melting Point	Approx 0°C
Freezing Point	Not available
Flash Point	Not available
Flammability	Not available
Upper and Lower Explosive Limits	Not available
Vapour Pressure	Approx 2.2 kPa (20°C) (similar to water)
Relative Vapour Density	<1 (air=1)
Relative Density	1.45 (20°C)
Water Solubility	Completely miscible with water.
Partition Coefficient:	Not available
Auto-ignition Temperature	Not available
Decomposition Temperature	Not available
Dynamic Viscosity	Not available
Particle Characteristics	Not available
Evaporation Rate	<1 (butyl acetate=1)
Other physio-chemical properties:	Baume degree (20°C): 45° Be

Section 10. Stability and Reactivity

Stability of Substance	This product is stable under normal conditions.
Reactivity	Gels and generates heat when mixed with acid. May react with ammonium salts resulting in evolution of ammonia gas. Flammable hydrogen gas may be produced on contact with Aluminium, tin, lead and zinc.
Possibility of hazardous reactions	Not available.
Conditions to Avoid	Moisture, frost, direct sunlight, high temperatures and incompatibles.
Incompatible Materials	Acids, reactive metals, ammonium salts and some organics.
Hazardous Decomposition Products	None known.

Section 11 Toxicological Information**Acute Effects:**

Swallowed	Harmful if swallowed.
Dermal	Not applicable.
Inhalation	Not applicable.
Eye	Causes severe eye irritation.
Skin	Causes skin irritation.

Chronic Effects:

Carcinogenicity	Not applicable.
Reproductive Toxicity	Not applicable.
Germ Cell Mutagenicity	Not applicable.
Aspiration	Not applicable.
STOT/SE	Not applicable.
STOT/RE	Not applicable.

Acute Toxicity -

Chemical Name	LD50 (Oral)	LD50 (Dermal)	LC50 (inhalation)
Product			
Silicic Acid, potassium salt (Cas No 1312-76-1)	1600mg/kg(Rat)	-	-

Section 12. Ecotoxicological Information

HSNO Classes: 9.3C = Harmful to terrestrial vertebrates.

Persistence and degradability	This product is not persistent in aquatic systems. Studies on biodegradation are not applicable to inorganic substances. No photo degradation is to be expected.
Bioaccumulation	This product has no bioaccumulation potential. Silicon minerals (such as silicates) are used physiologically by algae, plants without retention.
Mobility in Soil	This product will exhibit low mobility in soil. Only water will evaporate from this material. Moreover, the alkalinity of potassium silicate solution enables it to neutralize acidic soils.
Other adverse effects	Untreated solution is alkaline and therefore neutralization should be carried out before discharging to water/effluent systems. Once neutralized, no adverse effects

Section 13. Disposal Considerations

Disposal Method:

Triple rinse container and add to spray tank, dispose of container or otherwise crush and bury in an approved landfill. Do not contaminate any waterway with chemical or empty container.

Precautions or methods to avoid: Avoid release to the environment.

Section 14 Transport Information

This product is NOT classified as a Dangerous Good for transport in NZ ; NZS 5433:2012

Section 15 Regulatory Information

This substance is classified hazardous according to the EPA Hazardous Substances (Classification) Notice 2017

EPA Approval Code: HSR004658

HSNO Classification: 6.1D(oral), 6.3A, 6.4A, 9.3C

HSW (HS) Regulations 2017 and EPA Notices	Trigger Quantity
Certified Handler	Not required
Location Certificate	Not required
Tracking Trigger Quantities	Not required
Signage Trigger Quantities	Not required
Emergency Response Plan	10000L(6.1D, 9.3C)
Secondary Containment	1000L (6.1D)
Restriction of Use	Only use for the intended purpose.

Glossary

EC ₅₀	Median effective concentration.
EEL	Environmental Exposure Limit.
EPA	Environmental Protection Authority
HSNO	Hazardous Substances and New Organisms.
HSW	Health and Safety at Work.
LC ₅₀	Lethal concentration that will kill 50% of the test organisms inhaling or ingesting it.
LD ₅₀	Lethal dose to kill 50% of test animals/organisms.
LEL	Lower explosive level.
OSHA	American Occupational Safety and Health Administration.
TEL	Tolerable Exposure Limit.
TLV	Threshold Limit Value-an exposure limit set by responsible authority.
UEL	Upper Explosive Level
WES	Workplace Exposure Limit

References:

1. EPA Hazardous Substances (Safety Data Sheets) Notice 2017
2. Workplace Exposure Standards and Biological Exposure Indices Nov 2017 edition.
3. Assigning a hazardous substance to a HSNO Approval (Aug 2013).
4. Transport of Dangerous goods on land NZS 5433:2012
5. HSW (Hazardous Substances) Regulations 2017

Disclaimer

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Please contact the New Zealand distributor, if further information is required.

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