

SAFETY DATA SHEET

According to

HSNO Hazardous Substances (Safety Data Sheets) Notice 2017

Section 1.	Identification of the material and the supplier
Product: Other names:	Slurry Additive Retarder Alum Solution Break Control Additive Aluminum Sulphate Solution
Product Use: Restriction of Use:	Slurry Additive is used for delaying the break time and controlling the workability of bituminous slurry and microsurfacing products used in road construction. Refer to Section 15
New Zealand Supplie Address:	r: Higgins Bitumen Manufacturing 26 Waitangi Road Awatoto Napier, New Zealand
Telephone: E-mail:	+64 6 834 1589 HBM@higgins.co.nz
Emergency Telepho	one: 0800 764 766 (National Poison Centre)
Date of SDS Prepara	tion: 17 May 2021
Section 2.	Hazards Identification

This substance is hazardous according to the EPA Hazardous Substances (Classification) Notice 2020.

EPA Approval No: Additives, Process Chemicals and Raw Materials (subsidiary) - HSR002503

Pictograms



Irritant

Signal Word: Warning

GHS Classification and Category	Hazard Code	Hazard Statement
Skin irritation Cat. 2	H315	Causes skin irritation.
Eye irritation Cat. 2	H319	Causes serious eye irritation.
Hazardous to the aquatic	Ни12	Harmful to aquatic life with long lasting
environment chronic Cat. 3	11412	effects.

Prevention Code	Prevention Statement
P103	Read label before use.
P264	Wash hands thoroughly after handling.

P273	Avoid release to the environment.
P280	Wear protective clothing as detailed in Section 8.

Response Code	Response Statement
P362	Take off contaminated clothing and wash before re-use.
P391	Collect spillage.
P302 + P352	IF ON SKIN: Wash with plenty of soap and water.
P305 +	IF IN EYES: Rinse cautiously with water for several minutes. Remove
P351+P338	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 Ingredients

Ingredients	Wt%	CAS NUMBER.
Aluminum Sulphate	<10	10043-01-3
Other ingredients determined not to be	>60	
hazardous		

Routes of Exposure:

If in Eyes	Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
If on Skin	Take off contaminated clothing and wash before re-use. Wash skin with plenty of soap and water. If skin irritation occurs: Get medical advice/attention.
If Swallowed	Do not induce vomiting, flush the mouth with water and give water to drink. Seek immediate medical assistance if any of these symptoms are experienced.
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. Get medical advice if breathing becomes difficult.
Most important sy Symptoms:	mptoms and effects, both acute and delayed
Ingestion:	Ingestion can cause pain, nausea, vomiting or gastrointestinal irritations. Ingestion of large quantities can cause burns to the mouth, bleeding stomach, muscle spasms, incoordination and kidney damage.
Inhaled:	Inhalation of mists and aerosols can cause throat and lung irritations.
Skin:	Causes skin irritation.
Lye. Long-term effects:	Prolonged exposure can cause irritation and numbing of the fingers.
, in the second se	Repeated ingestion can cause phosphate deficiency, which can lead to bone weakening. Ingested material is not easily absorbed.

Section 5.	Fire Fighting Measures
Hazard Type	Non Flammable
Hazards from	This material is non-combustible. However, aluminum sulphate forms
products	aluminum oxide and sulphur trioxide at temperatures above 650°C.
Suitable	For large fires use foam or water fog
Extinguishing	For small fires use CO ₂ , dry powder, foam, sand or soil
media	
Precautions for	Fire fighters should wear full protective clothing and self-contained
firefighters and	breathing apparatus.
special protective	Aluminum sulphate dissolves in water to form sulphuric acid, which can
clothing	react with metal containers to produce flammable and explosive
	hydrogen gas.
HAZCHEM CODE	None Allocated

Wear suitable personal protective clothing as described in Section 8 to prevent skin or eye contact with the material.

Small Spills:

Use absorbent material such as sand or soil to contain the spill.

Large Spills:

If the spill occurs on land, use absorbent material such as sand or soil to contain the spill. Remove the contaminated material and dispose of according to local authority regulations. Do not allow the material to enter storm water drains, sewage drains or the aquatic environment. If a spillage enters the aquatic environment, contain the spill before removing using a pump.

Environmental Impact:

When present in high concentrations, this product can be harmful to aquatic organisms and should not be allowed to enter storm water, sewage drains or other bodies of water.

Waste Disposal:

Place contaminated material in disposable containers and dispose of in accordance with Local Authority waste disposal regulations.

Section 7.	Handling and Storage

Precautions for Handling:

- Read label before use.
- This product may be pumped at temperatures between 5 and 90°C.
- Wash hands before eating, drinking and smoking after handling this product.
- Avoid release to the environment.
- Wear protective clothing as detailed in Section 8.

Precautions for Storage:

- Store at temperatures between 5°C and 90°C in plastic or stainless steel containers.
- This product is acidic and will corrode mild steel, aluminum, brass or copper containers, drums, pipes and pumps and valves.
- Do not store with incompatible materials listed in Section 10.

Section 8

Exposure Controls / Personal Protection

WORKPLACE EXPOSURE STANDARDS (provided for guidance only)

Substance	TWA ppm	mg/m³	STEL ppm	mg/m³
Aluminum, as Al soluble salts	-	5 (8 hr TW	A)	

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 2019 11TH EDITION.

Engineering Controls

No data available

Personal Protection Equipment



Eyes	Use safety glasses to prevent contact of the product with the eyes.
Hands and Skin	Wear PVC or other impervious gloves when handling the product to prevent contact of the product with the skin. Wear full length overalls that fully cover the arms and legs to prevent contact of the product with the skin. The overalls must be zipped up. It is advisable to wear a hat to prevent splashes causing burns or irritation to the head. Covered waterproof footwear with slip resistant soles is recommended to prevent contact of the product with the skin. Spillages can be slippery.
Respiratory	Respiratory protection or breathing apparatus are not usually required.

Section 9 Physical and Chemical Properties

Appearance	Transparent liquid
Odour	Not available
Odour Threshold	Not available
pH	2.0 - 4.0
Boiling Point	approx. 100°C
Melting Point	approx. 0°C
Freezing Point	Not available
Flash Point	Not available
Flammability	The product is not flammable.
Upper and Lower	Not available
Explosive Limits	
Vapour Pressure	2.3 kPa (17mm Hg) @ 20°C (Water)
Vapour Density	Not available
Density @25°C	1.0 – 1.1 g/cm ³
Solubilities	Soluble/miscible in all proportions
Partition Coefficient:	Not applicable
N octanol/water	
Auto-ignition	Not applicable
Temperature	
Decomposition	Not applicable
Temperature	
Viscosity @ 25°C	< 20 cSt
Particle Characteristics	Not applicable

Section 10. Stability and Reactivity

Stability of Substance	This product is stable under normal conditions.	
Reactivity	Reaction with oxidizing agents and alkalis can be exothermic	
	and violent. Reactions with steel and aluminum containers can	
	liberate flammable and explosive hydrogen gas.	
Conditions to Avoid	Do not heat above 100°C. Product contains water and open	
	vessels will boil over at temperatures above 100°C. Enclosed	
	vessels will develop hazardous steam pressures when heated	

	above 100°C.	
Incompatible Materials Will corrode mild or carbon steel, aluminum, brass or o		
	Avoid contact with strong oxidizing agents or alkalis.	
Hazardous Decomposition	Will form aluminum oxide and sulphur trioxide at temperatures	
Products	above 650°C.	

Acute Effects:

Swallowed	Not triggered. Oral LD ₅₀ = >9000 mg/kg rat, (49% aluminium sulphate solution) Oral LD ₅₀ = 1930 mg/kg rat, (solid aluminium sulphate) Oral LD ₅₀ = 6207 mg/kg mouse, (solid aluminium sulphate) If ingested in large amounts it can cause pain, nausea, vomiting or gastrointestinal irritations. Ingestion of large quantities can cause burns to the mouth, bleeding stomach, muscle spasms, incoordination and damage to the kidneys, liver and nervous system.
Dermal	Not triggered.
Inhalation	Not triggered however inhalation of mists and aerosols can cause throat and lung irritations.
Eye	Causes serious eye irritation.
Skin	Causes skin irritation. Repeated skin contact can cause skin irritations or dermatitis.

Chronic Effects:

Carcinogenicity	Not triggered.	
Reproductive Toxicity	Not triggered. Causes an increase in chromosomal breaks when tested in rat somatic cells in-vivo and induces sister chromatid exchanges, chromosomal aberrations and micronuclei in human leukocytes under in-vitro conditions.	
Germ Cell	Not triggered. Causes sister chromatid exchanges, chromosomal	
Mutagenicity	aberrations and micronuclei in cultured human leukocytes	
Aspiration	Not triggered.	
STOT/SE	Not triggered.	
STOT/RE	Not triggered.	

Section 12. Ecotoxicological Information

Harmful to aquatic life with long lasting effects.

Toxicity

Aluminum Sulphate	LC50 (12 - 96 hr) = 100mg/L LC50 (96 hr) = 34mg/L LC50 (48 hr) = 38mg/L	(Goldfish) (Pimephales promelas) (Daphnia Magna)	
N			-

Persistence and degradability	No data available
Bioaccumulation	No data available
Mobility in Soil	Completely soluble in water.
Other adverse effects	No data available

Do not allow to enter waterways.

Section 13. Disposal Considerations

Disposal Method:

Dispose of in accordance with local authority regulations. Can also be used in other industries as a water treatment chemical or as an accelerator in concrete. Do not reuse the packaging for containment of drinking water or food products. The container can be recycled through appropriate channels, or disposed of in accordance with local authority regulations.

Disposal methods to avoid: Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 14 Transport Information

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

Section 15 Regulatory Information

EPA Approval Code: Additives, Process Chemicals and Raw Materials (subsidiary) – HSR002503

HSWA & EPA Controls	Trigger Quantity
Certified Handler	Not required
Location Certificate	Not required
Tracking Trigger Quantities	Not required
Signage Trigger Quantities	1000 L
Emergency Response Plan	1000 L
Secondary Containment	1000 L
Restriction of Use	None

Section 16 Oth	ner Information
Glossary	
Cat	Category
EC ₅₀	Median effective concentration.
EEL	Environmental Exposure Limit.
EPA	Environmental Protection Authority
HSNO	Hazardous Substances and New Organisms.
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

This document has been prepared by TCC (NZ) Ltd and serves as the suppliers Safety Data Sheet ('SDS'). It is based on information concerning the product which has been provided to TCC (NZ) Ltd or obtained from third party sources and is believed to represent the current state of knowledge as to the appropriate safety and handling precautions for the product at the time of issue. Further clarification regarding any aspect of the product should be obtained directly from the manufacturer. While TCC (NZ) have taken all due care to include accurate and up-to-date information in this SDS, it does not provide any warranty as to accuracy or completeness. As far as lawfully possible, TCC (NZ) Ltd accept no liability for any loss, injury or damage (including consequential loss) which may be suffered or incurred by any person as a consequence of their reliance on the information contained in this SDS

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