MATERIAL SAFETY DATA SHEET

TCS-673 Coagulant

Section 1 - Chemical Product & Company Identification

Manufacturer TCS Environmental Compliance
13445 Floyd Circle
Dallas, TX 75243-1595 USA
(214) 263-1240

Emergency Phone 800-424-9300 or +1-703-527-3887 Chemtrec

Product / Chemical Name: TCS-673 Coagulant
Chemical Formula: Blend
Alternate Names:

Section 2 - Composition / Information on Ingredients

Material	CAS #	Quantity	Hazard	OSHA PEL	ACGIH TLV (TWA)	ACGIH TLV (STEL)
Sodium Aluminum Oxide	1302-42-7	< 50%	Corrosive to skin and eyes	2.0 mg/m³	2.0 mg/m³	
Sodium hydroxide	1310-73-2	< 20%	Corrisive to skin and eyes	2 mg/m³		2 mg/m³

Section 3 - Hazards Identification

Acute Health Effects

Inhalation: This product can cause severe irritation or burning to the respiratory system in mist form.

Eye Contact: Contact can cause severe irritation and burning of eyes, including permanent damage.

Skin Contact: Contact can cause irritation or burning of skin.

Skin Absorption:

Ingestion: E²-623 can cause severe damage to gastrointestinal tract if swallowed.

Chronic Health Effects

Carcinogenicity:

Chronic Effects:

Conditions Aggravated by Exposure:
Contact may aggravate disorders of the eyes, skin, gastrointestinal tract, and respiratory
system.

HMIS Codes (* Indicates Chronic Effects)

3 Health	0 Flammability	0 Reactivity	E Personal Protection

Section 4 - First Aid Measures

Inhalation: Move victim to fresh air. Seek medical attention if any symptoms occur.

Eye Contact: Immediately flush eyes with generous amounts of water for at least 15 minutes while holding eyelids apart. Washing within one minute is essential. Seek medical attention.

Skin Contact: Flush exposed area with large amounts of water for 15 minutes. Remove contaminated clothing. If irritation persists, seek medical attention.

Ingestion: Do not induce vomiting. Give 1 or 2 glasses of water. Never give anything by mouth unless instructed to do so by medical personnel. Seek medical attention immediately.

Note to Physicians:

Section 5 - Fire Fighting Measures

Flash Point:
Flash Point Method:
Explosion Lower Limit: Not est.
Explosion Upper Limit: Not est.
Flammability Classification[1]:
[1] 29 CFR 1910.1200
Extinguishing Media: Use whatever is appropriate for surrounding fire
Unusual Fire Or Explosion Hazard:
Fire Fighting Equipment: Firefighters should wear proper protective gear and self-contained breathing apparatus with full facepiece operated in a positive pressure mode. Move exposed containers from fire area if it can be done without risk.
Fire Fighting Instructions: E²-623 is not combustible or flammable. However, closed containers exposed to heat may explode.

ERG Fire Fighting Instructions: Small Fires:
Dry chemical, CO2 or water spray.
Large Fires:
Dry chemical, CO2, alcohol-resistant foam or water spray. Move containers from fire area if you can do it without risk. Dike fire control water for later disposal; do not scatter the material.
Fire involving Tanks or Car/Trailer Loads:
Fight fire from maximum distance or use unmanned hose holders or monitor nozzles. Do not get water inside containers. Cool containers with flooding quantities of water until well after fire is out. Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank. ALWAYS stay away from tanks engulfed in fire.

Section 6 - Accidental Release Measures

Large Spills: Use proper protective equipment. Do not come into contact with spilled material. Contain spill and transfer to containers for reuse. Flush contaminated areas with water and collect for treatment. Avoid runoff into storm sewers and ditches which lead to waterways.

Small Spills: Use proper protective equipment. Do not come into contact with spilled material. Neutralize with sodium bicarbonate or weak acid solution.

Protection for Responders: Wear positive pressure self-contained breathing apparatus (SCBA). Wear chemical protective clothing which is specifically recommended by the manufacturer. It may provide little or no thermal protection. Structural firefighters' protective clothing provides limited protection in fire situations ONLY; it is not effective in spill situations.

Section 7 - Handling & Storage

Handling: Use compatible handling equipment such as polyethylene, polypropylene, PVC, Teflon, rubber, and titanium. Avoid breathing vapors or mists. Avoid contact with eyes and skin. Wash thoroughly after handling E²-623

Storage: Store in a dry, well-ventilated location. Do not store below 45° F for prolonged periods of time, or product may gel.

Section 8 - Exposure Controls / Personal Protection

Respiratory Protection: Use NIOSH/MSHA approved respirator if exposure exceeds occupational exposure limits. Generally, a dust/mist respirator may be used worn in areas where the TLV is exceeded up to 10 times.

Ventilation: Provide ventilation adequate to maintain PELs. Under normal conditions, E²-623 will not generate mists or vapors, so no special ventilation is recommended.

Gloves: Use impervious rubber gloves to prevent skin contact.

Eye Protection: Use safety glasses with side shields or safety goggles. Contact lenses should not be worn when working with E²-623..

Other Protection: Use impervious rubber footwear to prevent skin contact. Clothing should fully cover arms and legs.

Section 9 - Physical & Chemical Properties

Appearance:	Colorless to Light Amber or Gray	**Solubility in Water:**	Slightly
State:	Liquid	**Specific Gravity / Density:**	1.464
Odor:	Mild	**% VOC:**	
pH:	Approx. 13.00	**Viscosity:**	
Vapor Pressure:		**Evaporation Rate:**	
Vapor Density:	Not Established	**Bulk Density:**	
Boiling Point:	230.0°F (110.0°C)	**% Volatile:**	
Freezing Point:	-4.0°F (-20.0°C)	**Mixture or Pure:**	Mixture

Section 10 - Stability & Reactivity

Chemical Stability: Stable

Conditions To Avoid: Mixing with strong acid can produce considerable heat.

Incompatibility With Other Materials: Incompatible with copper, tin, zinc and their alloys.

Hazardous Decompostion Products: None

Hazardous Polymerization: None

Section 11 - Toxicological Information

No Information Available

Section 12 - Ecological Information

No Information Available

Section 13 - Disposal Considerations

Disposal Methods: Dispose of spilled, neutralized, or waste product contaminated soil and other contaminated materials in accordance with all applicable federal, state, and local environmental regulations

Section 14 - Transportation Information

United States Department of Transportation (US DOT)

Proper Shipping Name: Sodium Aluminate Solution
Hazard Class: 8
ID #: UN1819
Packing Group: II
Emergency Response Guide: 154

Freight Information

Freight Class Or Rate:
National Motor Freight Code:

Section 15 - Regulatory Information

The following is for the individual hazardous components only.

United States Environmental Protection Agency (US EPA)

Material	CAS #	SARA §313	Priority Chem	SARA TPQ	CERCLA RQ	RCRA Waste #	Clean Air	Risk Mgmt	Storm Water
Sodium Aluminum Oxide	1302-42-7								
Sodium hydroxide	1310-73-2		Yes		1,000 lb (453.6 kg)		No	No	

United States Occupational Safety & Health Administration (US OSHA)

Material	CAS #	1910.119	HCS NTP	HCS IARC	HCS Sub Z	HCS ACGIH	ACGIH TLV (TWA)	ACGIH TLV (STEL)	OSHA PEL
Sodium Aluminum Oxide	1302-42-7						2.0 mg/m³		2.0 mg/m³
Sodium hydroxide	1310-73-2				Yes	Yes		2 mg/m³	2 mg/m³

		United States Department of Transportation (US DOT)			**CA Prop 65**		**Canada**	**NFPA**			
Material	CAS #	Table 172.101	Appendix A	Appendix B	Reproductive	Carcinogen	WHMIS	Fire	Health	Reactivity	Flash Point
Sodium Aluminum Oxide	1302-42-7										
Sodium hydroxide	1310-73-2		Table 1				1%	0	3	1	

This information is provided from available data, but the user should consult their own local, state, & federal regulatory laws for complete information.

Section 16 - Other Information

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Additional Information:

---- US EPA Regulations ----
RCRA Hazardous Waste Number (40 CFR 261.33): not listed
RCRA Hazardous Waste Classification (40 CFR 261): not classified
CERCLA Hazardous Substance (40 CFR 302.4) unlisted specific per RCRA, Sec. 3001; CWA, Sec. 311(b)(4); CWA, Sec. 307(a), CAA, Sec. 112
CERCLA Reportable Quantity (RQ), 1000 Pounds (454 Kilograms)
SARA 311/312 Codes: not listed
SARA Toxic Chemical (40 CFR 372.65): not listed
SARA EHS (Extremely Hazardous Substance) (40 CFR 355): not listed, Threshold Planning Quantity (TPQ): not listed
** All chemical ingredients are listed on the USEPA TSCA Inventory List.

---- OSHA/MSHA Regulations ----
Air Contaminant (29 CRF 1910.1000, Table Z-1, Z-1-A): 5mg/M3 TWA-8
MSHA: not listed
OSHA Specifically Regulated Substance (29 CFR 1910): not listed

---- State Regulations ----
Consult state and local authorities for guidance. Components found in this product may contain trace amounts of inherent naturally occurring elements (such as, but not limited to arsenic and cadmium) that may be regulated.

---- Canada ----
Consult state and local authorities for guidance. Components found in this product may contain trace amounts of inherent naturally occurring elements (such as, but not limited to arsenic and cadmium) that may be regulated