



# Safety Data Sheet

## Section 01 - Identification

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<b>Product Identifier</b>	Sodium Aluminate
<b>Other Means of Identification</b>	Han Flocc 45
<b>Product Use and Restrictions on Use</b>	Water treatment, paper manufacturing, and petroleum exploration.
<b>Initial Supplier Identifier</b>	ClearTech Industries Inc. 1500 Quebec Avenue Saskatoon, SK. Canada S7K 1V7
<b>Prepared By</b>	ClearTech Industries Inc. Technical Writer Phone: 1 (800) 387-7503
<b>24-Hour Emergency Phone</b>	Phone: 1 (306) 664 – 2522

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## Section 02 - Hazard Identification

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### GHS-Classification

<b>Skin Corrosion/Irritation</b>	Category 1A
<b>Serious Eye Damage/Irritation</b>	Category 1

### Physical Hazards

<b>Corrosive to Metals</b>	Category 1
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### **Danger**

### **Hazards Statements**

H314 – Causes severe skin burns and eye damage.  
H290 – May be corrosive to metals.

### **Pictograms**



### **Precautionary Statements**

P405 – Store locked up.  
P234 – Keep only in original container.  
P260 – Do not breathe mist, vapours or spray.  
P280 – Wear protective gloves, protective clothing, eye protection, and face protection.  
P301 + P330 + P331 – IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.  
P303 + P361 + P353 – IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin.  
P363 – Wash contaminated clothing before reuse.  
P304 + P340 – IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

P310 – Immediately call a POISON CENTER or doctor/physician.

P305 + P351 + P338 – IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P390 – Absorb spillage to prevent material damage.

P501 – Dispose of contents/container in accordance with all federal, provincial, and/or local regulations including the Canadian Environmental Protection Act.

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## Section 03 - Composition / Information on Ingredients

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Chemical Name	CAS Number	Weight %	Unique Identifiers
Sodium Aluminate	1302-42-7	45%	
Water	7732-18-5	55%	

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## Section 04 - First Aid Measures

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<b>Inhalation</b>	Remove victim to fresh air. Give artificial respiration only if breathing has stopped. If breathing is difficult, give oxygen. Seek immediate medical attention.
<b>Skin Contact / Absorption</b>	Remove contaminated clothing. Wash affected area with soap and water. Seek medical attention if irritation occurs or persists.
<b>Eye Contact</b>	Flush immediately with water for at least 30 minutes. Forcibly hold eyelids apart to ensure complete irrigation of eye tissue. If a contact lens is present, remove only if easy to do so. Seek immediate medical attention.
<b>Ingestion</b>	Immediately rinse mouth out with water. Do not induce vomiting. Give large amounts of water or milk. Seek immediate medical attention.
<b>Additional Information</b>	In all cases you must act rapidly. After first aid measures, consult a physician except in minor cases of inhalation or skin contact.

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## Section 05 - Fire Fighting Measures

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<b>Suitable Extinguishing Media</b>	Product does not burn. Use appropriate extinguishing media for material that is supplying the fuel to the fire.
<b>Unsuitable Extinguishing Media</b>	Not Available
<b>Specific Hazards Arising From the Chemical</b>	Hydrogen chloride and oxides of aluminum, carbon, nitrogen, ammonia.
<b>Special Protective Equipment and Precautions for Fire-Fighters</b>	Wear NIOSH-approved self-contained breathing apparatus and protective clothing.
<b>Further Information</b>	Do not release runoff from fire control methods to sewers or waterways.

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## Section 06 - Accidental Release Measures

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<b>Personal Precautions / Protective Equipment / Emergency Procedures</b>	Wear appropriate personal protective equipment. Ventilate area. Only enter area with PPE. Stop or reduce leak if safe to do so. Flush with water to remove any residue.
<b>Environmental Precautions</b>	Prevent material from entering sewers.
<b>Methods and Materials for Containment and Cleaning Up</b>	Neutralize with sodium carbonate, caution should be taken as carbon dioxide may form. Absorb spill with inert material like dry sand or earth, then place in a chemical waste container.

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## Section 07 - Handling and Storage

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<b>Precautions for Safe Handling</b>	Use proper equipment for lifting and transporting all containers. Use sensible industrial hygiene and housekeeping practices. Wash thoroughly after handling. Avoid all situations that could lead to harmful exposure.
<b>Conditions for Safe Storage</b>	Store in a well ventilated area at temperatures above 10°C and below 35°C. Store away from incompatible materials. Keep separate from populated work areas. Do not store in containers made of aluminum, tin or zinc or alloys of these.
<b>Incompatibilities</b>	Do not mix with strong acids without preliminary dilution and agitation to prevent violent or explosive reaction. Product can react explosively with aldehydes and many other organic chemicals. Aluminium, tin, zinc and alloys containing these metals corrode in contact with the product.

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## Section 08 - Exposure Controls and Personal Protection

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### Exposure Limit(s)

Component	Regulation	Type of Listing	Value
Aluminum	ACGIH	TWA	1mg/m <sup>3</sup>
	OSHA	PEL	15mg/m <sup>3</sup> (total dust)
		PEL	5mg/m <sup>3</sup> (respirable fraction)

### Engineering Control(s)

<b>Ventilation Requirements</b>	Mechanical ventilation (dilution or local exhaust), process or personnel enclosure and control of process conditions must be provided in accordance with all fire codes and regulatory requirements. Supply sufficient replacement air to make up for air removed by exhaust systems.
<b>Other</b>	Emergency shower and eyewash must be available and tested in accordance with regulations and be in close proximity.

### Protective Equipment

<b>Eyes/Face</b>	Chemical goggles, full-face shield, or a full-face respirator is to be worn at all times when product is handled. Contact lenses should not be worn; they may contribute to severe eye injury.
<b>Hand Protection</b>	Impervious gloves of chemically resistant material (rubber or PVC) should be worn at all times. Wash contaminated clothing and dry thoroughly before reuse.
<b>Skin and Body Protection</b>	Body suite, aprons, and/or coveralls of chemical resistant material should be worn at all times. Wash contaminated clothing and dry thoroughly before reuse.  Impervious boots of chemically resistant material should be worn at all times. No special footwear is required other than what is mandated at place of work.
<b>Respiratory Protection</b>	Respiratory protection not normally required under normal use. If mist is being generated, wear NIOSH approved full face, air purifying respirator.
<b>Thermal Hazards</b>	Not Available

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## Section 09 - Physical and Chemical Properties

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### Appearance

<b>Physical State</b>	Liquid
<b>Colour</b>	Clear, straw-coloured

<b>Odour</b>	Odourless
<b>Odour Threshold</b>	Not Applicable
<b><u>Property</u></b>	
<b>pH</b>	12.0 for a 1.0% solution
<b>Melting Point/Freezing Point</b>	1650°C
<b>Initial Boiling Point and Boiling Range</b>	~ 115°C
<b>Flash Point</b>	Not Applicable
<b>Evaporation Rate</b>	Not Available
<b>Flammability</b>	Non-Flammable
<b>Upper Flammable Limit</b>	Not Applicable
<b>Lower Flammable Limit</b>	Not Applicable
<b>Vapour Pressure (mm Hg, 20°C)</b>	Not Available
<b>Vapour Density (Air=1)</b>	1.0
<b>Relative Density</b>	Not Available
<b>Solubility(ies)</b>	Completely miscible
<b>Partition Coefficient: n-octanol/water</b>	Not Available
<b>Auto-ignition Temperature</b>	Not Applicable
<b>Decomposition Temperature</b>	Not Available
<b>Viscosity</b>	Not Available
<b>Explosive Properties</b>	Not Applicable
<b>Specific Gravity (Water=1)</b>	1.52 at 25°C
<b>% Volatiles by Volume</b>	Not Available
<b>Formula</b>	NaAlO <sub>2</sub>
<b>Molecular Weight</b>	81.97

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## **Section 10 - Stability and Reactivity**

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<b>Reactivity</b>	Not Available
<b>Stability</b>	Product is stable
<b>Possibility of Hazardous Reactions</b>	Hazardous polymerization does not occur.

<b>Conditions to Avoid</b>	Contact with strong mineral acids, excessive heat. Do not mix with strong acids without preliminary dilution and agitation to prevent violent or explosive reaction. Product can react explosively with aldehydes and many other organic chemicals. Avoid contact with mineral acids, excessive heat and bases/alkalis.
<b>Incompatible Materials</b>	Do not mix with strong acids without preliminary dilution and agitation to prevent violent or explosive reaction. Product can react explosively with aldehydes and many other organic chemicals. Aluminium, tin, zinc and alloys containing these metals corrode in contact with the product.
<b>Hazardous Decomposition Products</b>	Decomposes to toxic fumes of oxides of sodium (Na <sub>2</sub> O) when a thermal decomposition takes place.

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## Section 11 - Toxicological Information

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### Acute Toxicity

Component	Oral LD <sub>50</sub>	Dermal LD <sub>50</sub>	Inhalation LC <sub>50</sub>
Sodium Aluminate	Not Available	Not Available	Not Available

### Chronic Toxicity – Carcinogenicity

Component	IARC
Sodium Aluminate	Not considered to be carcinogenic by NTP, IARC, and OSHA.

<b>Skin Corrosion/Irritation</b>	Corrosive. Capable of producing severe burns, blisters, ulcers and permanent scarring.
<b>Ingestion</b>	Ingestion can cause corrosive burns to the mouth, throat, and esophagus. Small amount of product which enters the lungs during ingestion or vomiting (aspiration) can cause serious lung injury and death.
<b>Inhalation</b>	Damage to the upper respiratory tract and lungs may result from exposure to the mist or dust from this product.
<b>Serious Eye Damage/Irritation</b>	Corrosive. Capable of producing serious eye burns and permanent damage, including blindness.
<b>Respiratory or Skin Sensitization</b>	Product is not a sensitizer
<b>Germ Cell Mutagenicity</b>	Not Available
<b>Reproductive Toxicity</b>	Not a known teratogen.
<b>STOT-Single Exposure</b>	Damage to the upper respiratory tract and lungs may result from exposure to the mist or dust from this product.
<b>STOT-Repeated Exposure</b>	Repeated and prolonged exposure of the skin or eyes to low concentrations of liquid can cause dermatitis and conjunctivitis. Repeated or prolonged inhalation of dust may lead to chronic respiratory irritation.
<b>Aspiration Hazard</b>	Not Available
<b>Synergistic Materials</b>	Not Available

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## Section 12 – Ecological Information

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### Ecotoxicity

Component	Toxicity to Algae	Toxicity to Fish	Toxicity to Daphnia and Other Aquatic Invertebrates
Sodium Aluminate	Not Available	LC <sub>50</sub> (Gambusia affinis, 96hr): 111 mg/L	Not Available

**Biodegradability** When released into the soil, this material is not expected to biodegrade.

<b>Bioaccumulation</b>	Not Available
<b>Mobility</b>	When released into the soil, this material may leach into groundwater.
<b>Other Adverse Effects</b>	Not Available

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## Section 13 – Disposal Considerations

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<b>Waste From Residues/Unused Products</b>	Dispose in accordance with all federal, provincial, and/or local regulations including the Canadian Environmental Protection Act.
<b>Contaminated Packaging</b>	Dispose in accordance with all federal, provincial, and/or local regulations including the Canadian Environmental Protection Act.

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## Section 14 – Transport Information

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<b>UN Number</b>	UN1819						
<b>UN Proper Shipping Name</b>	SODIUM ALUMINATE SOLUTION						
<b>Transport Hazard Class(es)</b>	8						
<b>Packaging Group</b>	II						
<b>Environmental Hazards</b>	Not listed as a marine pollutant under Canadian TDG Regulations, schedule III.						
<b>Special Precautions</b>	Not Available						
<b>Transport in Bulk</b>	Not Available						
<b>Additional Information</b>	<table> <thead> <tr> <th><u>Packing Group</u></th> <th><u>Limited Quantity Index</u></th> </tr> </thead> <tbody> <tr> <td>II</td> <td>1 L</td> </tr> <tr> <td>III</td> <td>5 L</td> </tr> </tbody> </table>	<u>Packing Group</u>	<u>Limited Quantity Index</u>	II	1 L	III	5 L
<u>Packing Group</u>	<u>Limited Quantity Index</u>						
II	1 L						
III	5 L						

### TDG

**Other** Secure containers (full and/or empty) with suitable hold down devices during shipment and ensure all caps, valves, or closures are secured in the closed position.

**TDG PRODUCT CLASSIFICATION:** This product has been classified on the preparation date specified at section 14 of this MSDS / SDS, for transportation in accordance with the requirements of part 2 of the Transportation of Dangerous Goods Regulations. If applicable, testing and/or published test data regarding the classification of this product are listed in the references at section 16 of this MSDS / SDS.

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## Section 15 – Regulatory Information

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**NOTE: THE PRODUCT LISTED ON THIS SDS HAS BEEN CLASSIFIED IN ACCORDANCE WITH THE HAZARD CRITERIA OF THE CANADIAN CONTROLLED PRODUCTS REGULATIONS. THIS SDS CONTAINS ALL INFORMATION REQUIRED BY THOSE REGULATIONS.**

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## Section 16 – Other Information

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**Preparation Date** August 31, 2015

**Note:** The responsibility to provide a safe workplace remains with the user. The user should consider the health hazards and safety information contained herein as a guide and should take those precautions required in an individual operation to instruct employees and develop work practice procedures for a safe work environment. The information contained herein is, to the best of our knowledge and belief, accurate. However, since the conditions of handling and use are beyond our control, we make no guarantee of results, and assume no liability for damages incurred by the use of this material. It is the responsibility of the user to comply with all applicable laws and regulations.

**Attention: Receiver of the chemical goods / SDS coordinator**

As part of our commitment to the Canadian Association of Chemical Distributors (CACD) Responsible Distribution<sup>®</sup> initiative, ClearTech Industries Inc. and its associated companies require, as a condition of sale, that you forward the attached Safety Data

Sheet(s) to all affected employees, customers, and end-users. ClearTech will send any available supplementary handling, health, and safety information to you at your request.

If you have any questions or concerns please call our customer service center.

**References:**

- 1) CHEMINFO
- 2) eChemPortal
- 3) TOXNET
- 4) Transportation of Dangerous Goods Canada
- 5) HSDB
- 6) ECHA

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