



# Safety Data Sheet

## Section 01 - Product And Company Identification

<b>Product Identifier</b>	Varmint 48
<b>Other Means of Identification</b>	Dry alum, papermaker's alum, dialuminum trisulphate, aluminum sulphate anhydrous, aluminum sulphate octadecahydrate
<b>Product Use and Restrictions on Use</b>	Coagulating agent in water treatment and pulp and paper, production of aluminum chemicals, general purpose food additive, fire extinguisher compounds, soaps, greases, drugs and cosmetics.
<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

## Section 02 - Hazard Identification

### GHS-Classification

**Serious Eye Damage/Eye Irritation** Category 1

### Physical Hazards

No known physical hazards

### **Danger**

### **Hazard Statements**

H318 – Causes serious eye damage.

### **Pictograms**



### **Precautionary Statements**

P280 – Wear protective gloves/protective clothing/eye protection/face protection.

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 or doctor/physician.

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## Section 03 - Composition / Information on Ingredients

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Chemical Name	CAS Number	Weight %	Unique Identifiers
Aluminum Sulphate Anhydrous	10043-01-3	57-60%	Not Available
Water	7732-18-5	40-43%	

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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>	Contact lenses should never be worn when working with this product. Flush immediately with water for at least 30 minutes. Forcibly hold eyelids apart to ensure complete irrigation of eye tissue. Seek immediate medical attention.
<b>Ingestion</b>	Do not induce vomiting. If vomiting occurs, lean victim forward to prevent breathing in vomitus. Rinse mouth thoroughly with water. Give 1-2 glasses of water to the victim to drink. If vomiting occurs naturally, rinse the mouth out again and give another 1-2 glasses of water. Do not give anything by mouth to an unconscious or convulsing person. Seek immediate medical attention.
<b>Additional Information</b>	Advice to physician: treat symptomatically.

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## Section 05 - Fire Fighting Measures

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<b>Suitable Extinguishing Media</b>	Product does not burn. Where fire is involved, use any fire fighting agent appropriate for surrounding material; use water spray to cool fire-exposed surfaces.
<b>Unsuitable Extinguishing Media</b>	Not Available
<b>Specific Hazards Arising From the Chemical</b>	At above 760°C or heated in open flame, sulphur oxide (toxic, corrosive, oxidizer), sulphur trioxide (toxic, corrosive, flammable) and aluminum oxide are released. The remaining residue is caustic.
<b>Special Protective Equipment for Fire-Fighters</b>	Wear NIOSH-approved self-contained breathing apparatus and protective clothing.
<b>Further Information</b>	Not Available

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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. Spray residue with plenty of water.
<b>Environmental Precautions</b>	Prevent material from entering sewers.
<b>Methods and Materials for Containment and Cleaning Up</b>	Collect liquid and/or residue and dispose of in accordance with applicable regulations.

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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.
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**Conditions for Safe Storage** Store in a cool, dry, well-ventilated place. Keep container tightly closed, and away from incompatible materials.

**Incompatibilities** Avoid moist air and strong bases. Incompatible with alkalis and water reactive materials such as oleum, which causes exothermic reactions.

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## **Section 08 - Exposure Controls and Personal Protection**

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### **Exposure Limit(s)**

<b>Component</b>	<b>Regulation</b>	<b>Type of Listing</b>	<b>Value</b>
Aluminum Sulphate	OSHA	PEL-TWA	2mg/m <sup>3</sup>

### **Engineering Control(s)**

**Ventilation Requirements** 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.

**Other** Emergency shower and eyewash must be available and tested in accordance with regulations and be in close proximity.

### **Protective Equipment**

**Eyes/Face** 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.

**Hand Protection** Impervious gloves of chemically resistant material (rubber or PVC) should be worn at all times. Wash contaminated clothing and dry thoroughly before reuse.

**Skin and Body Protection** 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.

**Respiratory Protection** For dusty conditions wear a NIOSH/MSHA-approved dust or mist respirator. A respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2 or applicable federal/provincial requirements must be followed whenever workplace conditions warrant respirator use. NIOSH's "Respirator Decision Logic" may be useful in determining the suitability of various types of respirators.

**Thermal Hazards** Not Available

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## **Section 09 - Physical and Chemical Properties**

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### **Appearance**

<b>Physical State</b>	Solid
<b>Colour</b>	White to creamy white
<b>Odour</b>	Odourless
<b>Odour Threshold</b>	Not Applicable

### **Property**

<b>pH</b>	3.5
<b>Melting Point/Freezing Point</b>	Not Applicable

<b>Initial Boiling Point and Boiling Range</b>	-87°C
<b>Flash Point</b>	Not Applicable
<b>Evaporation Rate</b>	Not Applicable
<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 Applicable
<b>Vapour Density (Air=1)</b>	Not Applicable
<b>Relative Density</b>	Not Available
<b>Solubility(ies)</b>	50% w/w at 0°C
<b>Partition Coefficient: n-octanol/water</b>	Not Applicable
<b>Auto-ignition Temperature</b>	Not Applicable
<b>Decomposition Temperature</b>	650-760°C
<b>Viscosity</b>	Not Applicable
<b>Explosive Properties</b>	None
<b>Specific Gravity (Water=1)</b>	1.61
<b>% Volatiles by Volume</b>	Not Available
<b>Formula</b>	$\text{Al}_2(\text{SO}_4)_3 \cdot 14\text{H}_2\text{O}$
<b>Molecular Weight</b>	594

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## Section 10 - Stability and Reactivity

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<b>Reactivity</b>	Not Available
<b>Stability</b>	Stable under normal conditions. Avoid temperatures above 760°C as this can yield toxic and corrosive gases.
<b>Possibility of Hazardous Reactions</b>	Polymerization will not occur.
<b>Conditions to Avoid</b>	Generation of airborne dusts, moisture, high temperatures.
<b>Incompatible Materials</b>	Avoid moist air and strong bases. Incompatible with alkalies and water reactive materials such as oleum, which causes exothermic reactions.
<b>Hazardous Decomposition Products</b>	In contact with moist air and strong bases, this product hydrolyzes readily to form acidic salts. Contact with alkalis and water-reactive materials causes exothermic reactions. May corrode ferrous metals and mild steel in presence of moisture.

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## Section 11 - Toxicological Information

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### Acute Toxicity Estimate

Component	Oral LD <sub>50</sub>	Dermal LD <sub>50</sub>	LC <sub>50</sub>
Aluminum Sulphate (60%)	3216 mg/kg	Not Available	Not Available

### Chronic Toxicity – Carcinogenicity

Component	IARC
Aluminum Sulphate	Not carcinogenic

<b>Skin Corrosion/Irritation</b>	Irritant.
<b>Ingestion</b>	May irritate the gastrointestinal tract and cause nausea, vomiting, and purging. Acute exposure can cause loss of coordination, muscle spasms, and kidney effects.
<b>Inhalation</b>	Dust or mist inhalation may irritate nose, throat, and lungs. Product hydrolyzes in lungs to form sulphuric acid.
<b>Serious Eye Damage/Irritation</b>	Can cause severe irritation and inflammation. Concentrated solutions may cause permanent damage or blindness.
<b>Respiratory or Skin Sensitization</b>	Not a skin or respiratory sensitizer.
<b>Germ Cell Mutagenicity</b>	A solution of Aluminum Sulfate in water produced positive results in cultured human cells (leukocytes), via sister chromatid exchanges, micronuclei and chromosomal aberrations). Negative results have been obtained in bacteria and cultured mammalian cells.
<b>Reproductive Toxicity</b>	In 88 women exposed during pregnancy to excessive Aluminum Sulfate levels in drinking water, the outcome of pregnancy, fetal viability and birth weight parameters were normal compared to unexposed controls. The only significant difference found in the infants of exposed mothers was an increase in skeletal malformations of the foot.
<b>STOT-Single Exposure</b>	Dusts of aluminum sulfate form sulfuric acid when in contact with moisture. Inhalation of dust or mist is irritating to respiratory tract.
<b>STOT-Repeated Exposure</b>	Repeated ingestion may cause phosphate deficiency, which can weaken bones.
<b>Aspiration Hazard</b>	Inhalation of high airborne concentrations may cause constriction of airways and can result in potentially fatal pulmonary edema.
<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
Aluminum sulphate anhydrous	Not Available	LC <sub>50</sub> (Pimephales promelas, 96hr): 26.7-49.4mg/L	EC <sub>50</sub> (Daphnia magna, 15min): 136mg/L
<b>Biodegradability</b>	Not Available		
<b>Bioaccumulation</b>	Not Available		
<b>Mobility</b>	Not Available		
<b>Other Adverse Effects</b>	May be harmful to aquatic life. Toxicity is primarily associated with acidic pH.		

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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>	Not Regulated
<b>UN Proper Shipping Name</b>	Not Regulated
<b>Transport Hazard Class(es)</b>	Not Regulated
<b>Packaging Group</b>	Not Regulated
<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

### 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 5, 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

## **ClearTech Industries Inc. - Locations**

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