Alpha Resources Inc.

Safety Data Sheet (SDS) SDS #: 21

Revision Date: March 30, 2015

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Alpha Dri (Magnesium Perchlorate, Anhydrone)

AR171, AR171D, AR174

This product is intended for laboratory use.

Alpha Resources Inc. 3090 Johnson Rd. Stevensville, MI 49127 (269)465-5559

CHEMTREC Emergency Phone Number: (800) 424-9300 **Signal Word: DANGER**

SECTION 2— HAZARDS IDENTIFICATION

Hazard class: Oxidizing solids (Category 2), Skin irritation (Category 2), Eye irritation (Category 2A), and Specific target organ toxicity-single exposure (Category 3).

Hazard statement: May intensify fire; oxidizer (H272), causes skin irritation (H315), causes serious eye irritation (H319), and may cause respiratory irritation (H335).

Precautionary statement: Keep away from heat (P210), keep/store away from cloth/combustible materials (P220), take any precaution to avoid mixing with combustibles (P221), avoid breathing dust/fume/gas/mist/vapor/spray (P261), wash kin thoroughly after handling (P264), use only outdoors or in a well-ventilated area (P271), wear protective gloves/eye protection/face protection (P280), If On Skin: wash with plenty of soap and water (P302+P352), if inhaled: remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a poison center or doctor/physician if you feel unwell (P304+P340+P312), if In Eyes: rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing (P332+313), if eye irritation persists: get medical advice/attention (P337+P313), take off contaminated clothing and wash before reuse (P362), In case of fire: use dry sand, dry chemical, or alcohol-resistant foam for extinction (P370+P378), store in a well-ventilated place. Keep container tightly closed (P403+P233), Store locked up (P405), dispose of contents/container to an approved waste disposal plant (P501).

SECTION 3— COMPOSITION, INFORMATION ON INGREDIENTS

Hazardous substance required for disclosure.

Component	CAS #	Common %
Magnesium Perchlorate	10034-81-8	100

SECTION 4— FIRST AID MEASURES

If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing (P304+P340). If breathing is difficult qualified personnel may administer Oxygen. If not breathing give artificial respiration when qualified.
If on skin: Wash with plenty of water. (P302+P352). Wash contaminated clothing before reuse (P363). Consult physician.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing (P305+P351+P338). **If eye irritation persists:** Get medical advice or attention (P337+P313).
If swallowed: Rinse mouth. Call a poison center or physician.

SECTION 5 — FIRE FIGHTING MEASURES

Extinguishing media: use water spray, alcohol-resistant foam, and dry chemical or carbon dioxide.
Special hazards arising from substance or mixture: Hydrogen Chloride gas and Magnesium Oxide.
Advice for Firefighters: Wear self-contained breathing apparatus for firefighting when necessary. Use water spray to cool unopened containers, exposed to heat.

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Personal precautions: Use the proper personal protective equipment that is available. Be careful to not generate any dust. Avoid breathing vapors, mist, or gas. Be sure to work under proper ventilation. Evacuate personnel to areas not affected. Avoid breathing any fine particles.
Methods: This material can be swept up and placed in a sealed vessel for disposal. An electrically protected vacuum cleaner can be used to remove spill. Make sure to not stir up the dust because it can be harmful when inhaled. Wash the area with wet cloth after being swept up completely.

SECTION 7 — HANDLING AND STORAGE

Handling: Keep sealed and don't breathe dust if produced. Wear appropriate clothing for protection. Where no ventilation is available a respirator will be required. Further processing of solid materials may result in the creation of combustible dust. The possibility for combustible dust formation needs to be taken into consideration before any further processing should take place.

Storage: This product should be stored in a cool, dry well ventilated place and kept sealed (P233) when not in use. Handle and store under inert gas. This product reacts violently with water, strongly hygroscopic. Storage class TRGS 510: strongly oxidizing hazardous materials.

SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Exposure Limit Values: contains no substance with occupational exposure limit values.

Engineering Controls: This material should be handled in accordance to good lab practices in regards to safety and hygiene. Wash hands before breaks and at end of workday.

Personal Protection: Respiratory protection could be required if adequate ventilation has not been achieved. A full-face respirator type N100 or type P3 respirator cartridges as a backup to ventilation controls. If there is no ventilation in place, a full-face supplied air respirator is required. Use of government standard respirators or components should be used when necessary.

Hand Protection: Glove suitability will differ depending on the end use of product. Chemical resistant gloves can provide an excellent barrier of protection. Gloves should be inspected before use and proper glove removal techniques should be performed to avoid any contact with this material. Wash and dry hands after use.

Eye protection: Safety glasses with side shields are necessary if splashing is possible.

Skin and Body Protection: Chemical and oil resistant clothing are recommended for extended periods of contact.

Hygiene: Wash hands and areas of possible exposure after handling material especially before eating, drinking, and smoking. The work clothing should also be washed regularly to remove any contaminants. Dispose of contaminated clothing that can't be deemed safe.

Environmental: DO NOT! Let product enter water ways or sewers.

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

Note: Physical and chemical properties are provided for safety, health, and environmental considerations only and may not represent the products specifications. Contact supplier for additional information.

Solid white granular/powder	Odorless	Relative Density: 2.21 g/cm^3
Melting Point: 250ºC	pH in (aq): 5-8	Vapor Density: N/A
Refractive index: N/A	Soluble (water): Very soluble with evolution of heat.	

Flash point: N/A Auto-Ignition Temperature: N/A

SECTION 10 — STABILITY AND REACTIVITY

Stable material at normal laboratory conditions.

Avoid: Don't create dust or powder. These fine particles can be harmful and reactive. Avoid heat and contact with compatible materials.

Incompatible: Strong acids, combustible materials, and avoid dispersal of dust into the air. Dry of this product on clothing or combustible materials may cause fire.

Hazardous Decomposition: Hydrogen Chloride is the product. **Hazardous Polymerization**: N/A

Incompatible Materials: Strong acids, combustible materials, and reducing agents. Organic materials exothermic reaction on contact with water will release heat and steam.

SECTION 11 — TOXICOLOGICAL INFORMATION

Points of entry: inhalation, skin contact, and ingestion

Inhalation: breathing of dusts may cause respiratory irritation.

Skin contact: No adverse effects due to skin contact are expected.

Eye contact: Causes serious eye irritation and dust in the eyes will cause irritation.

Ingestion: There is expected to be a low hazard due to ingestion.

Symptoms after Exposure: Severe eye irritation. Some symptoms might include stinging, tearing, redness, swelling and blurred vision. Upper respiratory tract irritation.

Toxicological effects:

Acute toxicity (target organ)-may cause respiratory irritation Dermal: N/A

LD50 Intraperitoneal, Mouse, 1500mg/kg

Skin corrosion/irritation-prolonged skin contact may cause temporary irritation.

Serious eye damage/irritation-causes serious eye irritation.

Carcinogenicity: No component of this product present at levels greater than or equal to 0.1% is identified as carcinogen or potential carcinogen by OSHA.

Chronic toxicity: The perchlorate ion competes with iodide in the mechanism that governs uptake into the thyroid gland for growth hormone production. This effect is routinely countered by ensuring sufficient dietary intake of iodine, as perchlorate doesn't accumulate in the body. Studies on workers in plants were perchlorates are manufactured have shown no thyroid abnormalities; various clinical studies are ongoing. Perchlorates occur naturally in trace amounts in the environment, and are not classified as carcinogenic.

SECTION 12 — ECOLOGICAL INFORMATION

This product shouldn't be released without the proper paperwork.
Eco-toxicity Data: This material is not expected to be harmful to aquatic life.
Mobility in the soil: N/A

Persistence and degradability: N/A

SECTION 13 — DISPOSAL CONSIDERATIONS

Waste disposal: Collect product and reclaim or dispose in sealed containers at a licensed waste disposal site. Dilute waste in large quantities of water and flush into sewer connected to wastewater treatment system in compliance with applicable laws and regulations. Dispose of contents/container in accordance with local, regional, national, and international regulations.
Hazardous Waste code: The waste code should be assigned in discussion with the user, the producer, and the waste disposal company. Dispose in accordance with all applicable regulations.
Waste from residues: Dispose of in accordance with local regulations. Empty all containers or liners that may retain residues. This material and its container must be disposed of in a safe manner.

Contaminated packaging: Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied. Offer rinsed packaging material to local recycling facilities.

SECTION 14 — TRANSPORT INFORMATION

DOT UN number: UN1475	Class: 5.1	Packing group: II	Proper shipping name: Magnesium Perchlorate
Special Provisions: IB6, IP2, T3, TP33		Packaging exceptions: 152	Packaging non-bulk: 212
Packaging bulk: 242			
IMDG UN number: UN1475	Class: 5.1	Packing group: II	Proper shipping name: Magnesium Perchlorate
Marine pollutant: No	EmS: F-H, S-Q		
IATA UN number: UN1475	Class: 5.1	Packing group: II	Proper shipping name: Magnesium Perchlorate
Environmental hazard: No	ERG Code 5L		

SECTION 15 — REGULATORY INFORMATION

This material is considered hazardous according to OSHA HazCom 2012, 29CFR 1910.1200

U.S. Federal Regulations

TSCA Status: On Toxic Substance Control Act Inventory List.

CERCLA Reportable Quantity: N/A

SARA 302 Components: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components: This material doesn't contain any chemical components with known CAS numbers that exceed the threshold reporting levels established by SARA Title III, Section 313.

Massachusetts Right to know components: Magnesium perchlorate CAS# 10034-81-8 Revision Date: 4/24/93

Pennsylvania Right to know components: Magnesium perchlorate CAS# 10034-81-8 Revision Date: 4/24/93

New Jersey Right to know components: Magnesium perchlorate CAS# 10034-81-8 Revision Date: 4/24/93

California Prop. 65 Components: This product doesn't contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

Canadian Regulations

WHMIS: D-2A

SECTION 16 — OTHER INFORMATION

The data and information as stated was furnished by the manufacturer/vendor/supplier of this product. Alpha Resources Inc. cannot warrant the accuracy of this information and shall not be responsible or liable for any damage that may result, should any of the information be erroneous.