



Safety Data Sheet

Aries 359

Section 1. Identification

Product Identifier Aries 359
Synonyms N/A
Manufacturer Stock Numbers N/A

Recommended use N/A
Uses advised against N/A

Manufacturer Contact

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Section 2. Hazards Identification

Classification

EYE DAMAGE/IRRITATION - Category 1
SPECIFIC TARGET ORGAN TOXICITY (Repeated Exposure) - Category 2
SPECIFIC TARGET ORGAN TOXICITY (Single Exposure) - Category 2

Signal Word

Danger

Pictogram



Hazard Statements	Causes serious eye damage May cause damage to organs through prolonged or repeated exposure. May cause damage to organs.
Precautionary Statements	
Response	Get medical advice/attention if you feel unwell. If exposed or concerned: Call a poison center/doctor. IF IN EYES: Rinse cautiously with water for several minutes, including under eyelids. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately seek medical attention. IF INHALED: Remove to fresh air and keep comfortable for breathing. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Seek medical attention if you feel unwell. IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing and wash before reuse. If skin irritation or rash occurs, get medical advice/attention. IF SWALLOWED: Do NOT induce vomiting. Rinse mouth with water. Immediately call a poison center or doctor.
Prevention	Do not breathe dust/fume/gas/mist/vapors/spray. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection.
Storage	Store locked up.
Disposal	Dispose of contents/container in accordance with local/regional/national /international regulations.
Ingredients of unknown toxicity	0%
Hazards not Otherwise Classified	No Data Available

Section 3. Ingredients

CAS	Ingredient Name	Weight %
13477-34-4	Calcium nitrate tetrahydrate	60% - 72%

This product may be regulated, have exposure limits, or other information identified as the following: Water Dissociable Nitrate Compounds.

This product has been evaluated using criteria specified in 29 CFR 1910.1200 (Hazard Communication Standard) and the Canadian Controlled Product Regulations. This product is considered hazardous under the criteria specified in 29 CFR 1910.1200 (Hazard Communication Standard) and the Canadian Workplace Hazardous Materials Information System (WHMIS).

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First-Aid Measures

Eye	IF IN EYES: Immediately flush eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally to ensure complete rinsing. Remove contact lenses if present and easy to do, then resume rinsing. Get medical attention immediately.
Skin	IF ON SKIN: Wash with soap and water. Take off contaminated clothing and shoes immediately. Get medical attention if irritation develops or persists.
Ingestion	IF SWALLOWED, do NOT induce vomiting. Rinse mouth and then drink plenty of water. Call a physician or poison control center immediately. Never give anything by mouth to an unconscious person.
Inhalation	IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if you feel unwell.
Note to health care provider	Treat symptomatically.
Additional Information	Most important symptoms and effects: Causes skin and eye irritation. May cause respiratory irritation.

Section 5. Fire Fighting Measures

Suitable Extinguishing Media	Non-combustible. As appropriate for surrounding fire. Incompatibility: Avoid contact with incompatible materials. These include flammable and combustible materials, strong reducing agents, and finely powdered metals. This product can act to initiate and sustain combustion.
Unsuitable Extinguishing Media	If evaporated to dryness, this product is an oxidizer and can sustain combustion. Avoid contact with extreme heat and incompatible materials.
Fire fighting instructions	N/A
Special hazards	As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Water runoff can cause environmental damage. Dike and collect water used to fight fire.
Additional Information	This product is an aqueous solution which will not burn. However, if evaporated to dryness this product is an oxidizer and can sustain combustion. Decomposition products: Decomposition may yield calcium compounds and oxides of nitrogen.

Section 6. Accidental Release Measures

Personal Precautions	Wear appropriate personal protective equipment. (See Section 8). Evacuate the area of all non-essential personnel.
Containment	Prevent further leakage or spillage if safe to do so. Dike large spills.
Clean-up	Dike and absorb spill area with inert material (e.g., dry sand or earth), then place in a DOT approved chemical waste container for disposal.
Collect	Contain spilled liquid with sand or earth. DO NOT use combustible materials such as sawdust.

Section 7. Handling and Storage

Handling	Open container slowly. Contents may develop pressure caused by temperature
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variations upon prolonged storage. Do not get in eyes, on skin or clothing. Do not breathe (vapor, mist). Use with adequate ventilation. Wash thoroughly after handling. Empty containers retain product residue and can be hazardous. Do not reuse this container.

Storage

Store in a cool, well-ventilated area away from direct sunlight. Store away from heat. Store in original container kept tightly closed. Keep from freezing. Keep away from heat, sparks, and flame. Do not allow product to dry out.

Section 8. Exposure Controls/Personal Protection

Occupational Exposure Limits	Ingredient Name	ACGIH TLV	OSHA PEL	STEL
	Calcium nitrate tetrahydrate	N/A	N/A	N/A
Personal Protective Equipment	Goggles, Gloves, Apron			
Engineering controls	Observe published airborne exposure limits. Use mechanical ventilation such as dilution and local exhaust. Ensure adequate ventilation. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.			
Eye protection	Chemical goggles or safety glasses with side shields.			
Hand/skin protection	Wear chemical resistant gloves and impermeable protective clothing.			
Respiratory protection	If exposures exceed the PEL or TLV, use NIOSH/MSHA approved respirator in accordance with OSHA Respiratory Protection Requirements under 29 CFR 1910.134. If there are no applicable or established exposure limit requirements or guidelines, general ventilation should be sufficient.			

Section 9. Physical and Chemical Properties

Physical State	Liquid
Color	Colorless
Odor	None
Odor Threshold	Not Applicable
Solubility	Complete
Partition coefficient Water/n-octanol	No data available
VOC%	N/A
Viscosity	No data available
Specific Gravity	1.40-1.50 @ 15 C/59 F
Density lbs/Gal	N/A
Pounds per Cubic Foot	N/A
Flash Point	No data available
FP Method	No data available
pH	3.0-8.0
Melting Point	No data available
Boiling Point	212 deg F (100 deg C)
Boiling Range	No data available
LEL	N/A
UEL	N/A
Evaporation Rate	No data available

Flammability	No data available
Decomposition Temperature	No data available
Auto-ignition Temperature	No data available
Vapor Pressure	No data available
Vapor Density	No data available

Section 10. Stability and Reactivity

Chemical stability	Stable under normal conditions.
Hazardous polymerization	Hazardous polymerization will not occur under normal storage and handling.
Flammable Properties	Material is easily ignited if allowed to dry.
Additional Information	<p>Incompatibility: Avoid contact with incompatible materials. These include flammable and combustible materials, strong reducing agents, and finely powdered metals. This product can act to initiate and sustain combustion.</p> <p>If evaporated to dryness, this product is an oxidizer and can sustain combustion. Avoid contact with extreme heat and incompatible materials.</p> <p>Hazardous decomposition may yield calcium compounds and oxides of nitrogen.</p>

Section 11. Toxicological Information

Likely routes of exposure	Eyes, skin, inhalation, ingestion
Eye contact	Contact with eyes can cause moderate irritation. Symptoms may include discomfort or pain and redness. Severe over-exposure can result in swelling of the conjunctiva along with tissue damage which may lead to blindness.
Inhalation	This product will cause irritation to the respiratory system. Inhalation of vapors or mists can cause sneezing, coughing, and difficulty breathing.
Ingestion	This product may be harmful or fatal if swallowed. If ingested, this product will immediately cause burns to the mouth, throat, esophagus and possibly the digestive tract. Ingestion can cause gastrointestinal irritation, nausea, vomiting, and diarrhea. This product may cause methemoglobinemia upon ingestion characterized by cyanosis, headache, dizziness, fatigue, nausea, vomiting, drowsiness, stupor, coma, and rarely death.
Skin contact	This product will cause skin irritation. Depending on the duration of contact, symptoms may include reddening, discomfort, irritation, and possible tissue damage.
Carcinogenicity	No components have been identified as carcinogenic by OSHA, NTP, or IARC.
Specific target organ toxicity - repeat exposure	No information available.
Specific target organ toxicity - single exposure	No information available.
Additional Information	Acute toxicity: This product may be harmful or fatal if swallowed. This product is irritating to the eyes, respiratory system, and skin. The nitrate component of this product may cause methemoglobinemia upon ingestion characterized by

cyanosis, headache, dizziness, fatigue, nausea, vomiting, drowsiness, stupor, coma, and rarely death.

Immediate effects: Eye irritation and respiratory irritation

Delayed effects: Repeated skin contact with this material may produce dermatitis.

Medical conditions aggravated by exposure: Pre-existing eye, skin and /or respiratory tracts conditions.

Section 12. Ecological Information

Bioaccumulative potential This product is not expected to bioaccumulate

Additional Information In high concentrations, this product may be harmful to both terrestrial and aquatic plant life.

No ecotoxicity data are available for this product's components.

Section 13. Disposal

Disposal Dispose of in accordance with federal, state and local federal regulations.

RCRA status Not a hazardous waste under RCRA (40 CFR 261).

Section 14. Transport Information

UN Number N/A

UN Proper Shipping Name Not classified as dangerous in the meaning of transport regulations

DOT Classification N/A

Packing Group N/A

Section 15. Regulatory Information

California Proposition 65 This product does not contain any ingredients known to the State of California to cause cancer and/or reproductive harm.

TSCA The ingredients of this product are either listed on or exempt from listing on the Toxic Substances Control Act (TSCA) Chemical Substances Inventory.

DSL Ingredients in this product are listed not not required to be listed on the Canadian Domestic Substances List (DSL).

Additional Information SARA Section 313 (40 CFR 372.65):
Calcium nitrate tetrahydrate (CAS 13477-34-4): Form R reporting required for 1.0% de minimis concentration. Chemical Category N511 (related to Water Dissociable Nitrate Compounds)
WHMIS Classification: D2B - Toxic material at $\geq 1.0\%$
TSCA and DSL: Calcium Nitrate Tetrahydrate is a hydrate of an anhydrous form that is on the US TSCA and Canadian DSL inventories, and can be referenced under the parent compound name.

Section 16. Other Information

Revision Date	11/6/2023
Version Number	2
Reason for Revision	Updated Section 2 (GHS Hazards). Updated Section 4 (First Aid). Updated Section 5: Fire Fighting Measures Updated Section 6 (Release).
Reasons for Revision	Updated Section 10 (Stability and Reactivity)
Reason for Revision	Updated Section 15: Regulatory Information.
Disclaimer	While Aries Chemical Inc. believes the data set forth herein is accurate as of the date hereof, Aries Chemical makes no warranty with respect thereto and expressly disclaims all liability for refinance thereon of such data and is offered solely for your consideration, investigation and verification.