

Material Safety Data Sheet

Gallium(iii) nitrate hydrate, 99.9998%,

ACC# 27373

Section 1 - Chemical Product and Company Identification

MSDS Name: Gallium(iii) nitrate hydrate, 99.9998%,
Catalog Numbers: AC212440000, AC212440010, AC212440050
Synonyms: Gallium nitrate; Gallium trinitrate; Nitric acid, gallium (3+) salt
Company Identification:

Acros Organics N.V.
One Reagent Lane
Fair Lawn, NJ 07410

For information in North America, call: 800-ACROS-01
For emergencies in the US, call CHEMTREC: 800-424-9300

Section 2 - Composition, Information on Ingredients

CAS#	Chemical Name	Percent	EINECS/ELINCS
13494-90-1	Gallium(III) nitrate hydrate	99.9998	236-815-5

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Appearance: white crystalline powder.

Danger! Strong oxidizer. Contact with other material may cause a fire. Causes respiratory tract irritation. Causes eye and skin irritation. May cause digestive tract irritation. Hygroscopic (absorbs moisture from the air).

Target Organs: No data found.

Potential Health Effects

Eye: Causes eye irritation. May cause conjunctivitis.

Skin: Causes severe skin irritation.

Ingestion: May cause burns to the gastrointestinal tract. May cause nausea, vomiting, and diarrhea, possibly with blood.

Inhalation: Causes respiratory tract irritation. May cause acute pulmonary edema, asphyxia, chemical pneumonitis, and upper airway obstruction caused by edema.

Chronic: Effects may be delayed.

Section 4 - First Aid Measures

Eyes: Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid immediately.

Skin: Get medical aid immediately. Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse.

Ingestion: Never give anything by mouth to an unconscious person. Get medical aid immediately. Do NOT induce vomiting. If conscious and alert, rinse mouth and drink 2-4 cupfuls of milk or water.

Inhalation: Get medical aid immediately. Remove from exposure and move to fresh air immediately. Do not use mouth-to-mouth resuscitation if victim ingested or inhaled the substance; induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.

Notes to Physician: Treat symptomatically and supportively.

Section 5 - Fire Fighting Measures

General Information: As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Strong oxidizer. Contact with other material may cause fire. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Use water with caution and in flooding amounts. Runoff to sewer may create fire or explosion hazard.

Extinguishing Media: Use water only! Contact professional fire-fighters immediately. Do NOT use dry chemicals, CO₂, Halon or foams.

Flash Point: Not applicable.

Autoignition Temperature: Not applicable.

Explosion Limits, Lower: Not available.

Upper: Not available.

NFPA Rating: (estimated) Health: 2; Flammability: 0; Instability: 0; Special Hazard: OX

Section 6 - Accidental Release Measures

General Information: Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks: Clean up spills immediately, observing precautions in the Protective Equipment section. Avoid generating dusty conditions. Cover with sand, dry lime or soda ash and place in a closed container for disposal. Provide ventilation.

Section 7 - Handling and Storage

Handling: Wash thoroughly after handling. Use with adequate ventilation. Minimize dust generation and accumulation. Keep container tightly closed. Avoid contact with clothing and other combustible materials. Do not get on skin or in eyes. Avoid ingestion and inhalation. Use only in a chemical fume hood. Wash clothing before reuse.

Storage: Keep away from heat, sparks, and flame. Do not store near combustible materials. Store in a tightly closed container. Store under nitrogen. Store in a cool, dry area away from incompatible substances.

Section 8 - Exposure Controls, Personal Protection

Engineering Controls: Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate ventilation to keep airborne concentrations low.

Exposure Limits

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
Gallium(III) nitrate hydrate	none listed	none listed	none listed

OSHA Vacated PELs: Gallium(III) nitrate hydrate: No OSHA Vacated PELs are listed for this chemical.

Personal Protective Equipment

Eyes: Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin: Wear appropriate protective gloves and clothing to prevent skin exposure.

Clothing: Wear appropriate clothing to prevent skin exposure.

Respirators: A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements or European Standard EN 149 must be followed whenever workplace conditions warrant respirator use.

Section 9 - Physical and Chemical Properties

Physical State: Crystalline powder

Appearance: white

Odor: None reported.

pH: Not available.

Vapor Pressure: Not available.

Vapor Density: Not available.

Evaporation Rate: Not available.

Viscosity: Not available.

Boiling Point: Not available.

Freezing/Melting Point: 110 deg C

Decomposition Temperature: > 110 deg C

Solubility: Soluble.

Specific Gravity/Density: Not available.

Molecular Formula: GaN₃O₉.xH₂O

Molecular Weight: 255.74

Section 10 - Stability and Reactivity

Chemical Stability: Stable under normal temperatures and pressures. Moisture sensitive.

Conditions to Avoid: Incompatible materials, ignition sources, dust generation, excess heat, combustible materials, reducing agents.

Incompatibilities with Other Materials: Strong reducing agents, strong acids, acids, isocyanates, cyanides (e.g. potassium cyanide, sodium cyanide), hypophosphites, moisture, thiocyanates, aluminum powder + water, alkyl esters, phosphinates + heat, heavy metals.

Hazardous Decomposition Products: Nitrogen oxides.

Hazardous Polymerization: Has not been reported.

Section 11 - Toxicological Information

RTECS#:

CAS# 13494-90-1: LW9625000

LD50/LC50:

CAS# 13494-90-1:

Oral, mouse: LD50 = 4360 mg/kg;

Oral, mouse: LD50 = 4400 mg/kg;

Carcinogenicity:

CAS# 13494-90-1: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

Epidemiology: No information available.

Teratogenicity: No information available.

Reproductive Effects: No information available.

Mutagenicity: DNA damage: Mouse leukocyte = 100 umol/L. DNA damage: Mammalian leukocyte (unspecified) = 40 umol/L.

Neurotoxicity: No information available.

Other Studies:

Section 12 - Ecological Information

Ecotoxicity: No data available. No information available.
Environmental: No data available.
Physical: No data available.
Other: None.

Section 13 - Disposal Considerations

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.

RCRA P-Series: None listed.

RCRA U-Series: None listed.

Section 14 - Transport Information

	US DOT	Canada TDG
Shipping Name:	DOT regulated - small quantity provisions apply (see 49CFR173.4)	NITRATES INORGANIC NOS (GALLIUM NITRATE HYDRATE)
Hazard Class:		5.1
UN Number:		UN1477
Packing Group:		II

Section 15 - Regulatory Information

US FEDERAL

TSCA

CAS# 13494-90-1 is listed on the TSCA inventory.

Health & Safety Reporting List

None of the chemicals are on the Health & Safety Reporting List.

Chemical Test Rules

None of the chemicals in this product are under a Chemical Test Rule.

Section 12b

None of the chemicals are listed under TSCA Section 12b.

TSCA Significant New Use Rule

None of the chemicals in this material have a SNUR under TSCA.

CERCLA Hazardous Substances and corresponding RQs

None of the chemicals in this material have an RQ.

SARA Section 302 Extremely Hazardous Substances

None of the chemicals in this product have a TPQ.

Section 313

This material contains Gallium(III) nitrate hydrate (listed as Water Dissociable Nitrate Compounds), 99.9998%, (CAS# 13494-90-1) which is subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR Part 373.

Clean Air Act:

This material does not contain any hazardous air pollutants.

This material does not contain any Class 1 Ozone depleters.

This material does not contain any Class 2 Ozone depleters.

Clean Water Act:

None of the chemicals in this product are listed as Hazardous Substances under the CWA.

None of the chemicals in this product are listed as Priority Pollutants under the CWA.

None of the chemicals in this product are listed as Toxic Pollutants under the CWA.

OSHA:

None of the chemicals in this product are considered highly hazardous by OSHA.

STATE

CAS# 13494-90-1 is not present on state lists from CA, PA, MN, MA, FL, or NJ.

California Prop 65

California No Significant Risk Level: None of the chemicals in this product are listed.

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols:

XI O

Risk Phrases:

R 36/38 Irritating to eyes and skin.

R 8 Contact with combustible material may cause fire.

Safety Phrases:

S 17 Keep away from combustible material.

WGK (Water Danger/Protection)

CAS# 13494-90-1: No information available.

Canada - DSL/NDSL

CAS# 13494-90-1 is listed on Canada's NDSL List.

Canada - WHMIS

not available.

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by those regulations.

Canadian Ingredient Disclosure List

CAS# 13494-90-1 is listed on the Canadian Ingredient Disclosure List.

Section 16 - Additional Information

MSDS Creation Date: 7/21/1999

Revision #4 Date: 10/03/2005

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall Fisher be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if Fisher has been advised of the possibility of such damages.