

Material Safety Data Sheet

Thallium (III) Nitrate Trihydrate, 99.5%

ACC# 54369

Section 1 - Chemical Product and Company Identification

MSDS Name: Thallium (III) Nitrate Trihydrate, 99.5%

Catalog Numbers: AC172280000, AC172280250, AC172281000

Synonyms: Thallous Nitrate

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 |
|------------|-----------------------------------|---------|---------------|
| 13453-38-8 | Thallium (III) Nitrate Trihydrate | 99.5 | unlisted |

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Appearance: colorless to white solid.

Danger! Oxidizer. Contact with other material may cause fire. May cause eye and skin irritation. May cause respiratory and digestive tract irritation. May cause methemoglobinemia.

Target Organs: Blood, kidneys, liver, cardiovascular system, eyes, nervous system, skin.

Potential Health Effects

Eye: May cause eye irritation.

Skin: May cause skin irritation. Excessive drying of the skin may result from repeated or prolonged contact.

Ingestion: May cause gastrointestinal irritation with nausea, vomiting and diarrhea. Methemoglobinemia is characterized by dizziness, drowsiness, headache, shortness of breath, cyanosis (bluish discoloration of skin due to deficient oxygenation of the blood), rapid heart rate and chocolate-brown colored blood. May cause alopecia (loss of hair). Ingestion of nitrate containing compounds can lead to methemoglobinemia. Ingested thallium compounds are extremely toxic, causing convulsions, coma, conjunctivitis, runny nose, polyneuritis, motor and sensory peripheral neuropathy, encephalopathy, arterial hypertension, rapid heart rate, and skin eruptions.

Inhalation: May cause severe irritation of the respiratory tract with sore throat, coughing, shortness of breath and delayed lung edema.

Chronic: No information found.

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.

Ingestion: If victim is conscious and alert, give 2-4 cupfuls of milk or water. Never give anything by mouth to an unconscious person. Get medical aid immediately.

Inhalation: Get medical aid immediately. Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.

Notes to Physician: For methemoglobinemia, administer oxygen alone or with Methylene Blue depending on the methemoglobin concentration in the blood.

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. Substance is noncombustible. Use water with caution and in flooding amounts.

Extinguishing Media: Use water only! Use extinguishing media most appropriate for the surrounding fire. Contact professional fire-fighters immediately.

Flash Point: Not available.

Autoignition Temperature: Not available.

Explosion Limits, Lower: Not available.

Upper: Not available.

NFPA Rating: Not published.

Section 6 - Accidental Release Measures

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

Spills/Leaks: Sweep up or absorb material, then place into a suitable clean, dry, closed container for disposal.

Section 7 - Handling and Storage

Handling: Wash thoroughly after handling. Use only in a well-ventilated area. Avoid contact with eyes, skin, and clothing. Keep container tightly closed. Avoid ingestion and inhalation.

Storage: Store in a cool, dry place. Store in a tightly closed container.

Section 8 - Exposure Controls, Personal Protection

Engineering Controls: Use adequate ventilation to keep airborne concentrations low.

Exposure Limits

| Chemical Name | ACGIH | NIOSH | OSHA - Final PELs |
|-----------------------------------|-------------|-------------|-------------------|
| Thallium (III) Nitrate Trihydrate | none listed | none listed | none listed |

OSHA Vacated PELs: Thallium (III) Nitrate Trihydrate: 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 to prevent skin exposure.

Clothing: Wear appropriate protective clothing to prevent skin exposure.

Respirators: Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

Section 9 - Physical and Chemical Properties

Physical State: Solid

Appearance: colorless to white

Odor: Not available.

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: 102 - 105 deg C

Decomposition Temperature: Not available.

Solubility: 95 G/L WATER (20°C)

Specific Gravity/Density: Not available.

Molecular Formula: N3O9Tl.3H2O

Molecular Weight: 444.42

Section 10 - Stability and Reactivity

Chemical Stability: Stable under normal temperatures and pressures.

Conditions to Avoid: Ignition sources, combustible materials.

Incompatibilities with Other Materials: Strong reducing agents, strong acids.

Hazardous Decomposition Products: Nitrogen oxides, thallium fumes.

Hazardous Polymerization: Has not been reported.

Section 11 - Toxicological Information

RTECS#:

CAS# 13453-38-8 unlisted.

LD50/LC50:

Not available.

Carcinogenicity:

CAS# 13453-38-8: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

Epidemiology: No data available.

Teratogenicity: No data available.

Reproductive Effects: No data available.

Mutagenicity: No data available.

Neurotoxicity: No data available.

Other Studies:

Section 12 - Ecological Information

No information available.

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: | THALLIUM NITRATE | THALLIUM NITRATE |
| Hazard Class: | 6.1 | 6.1(5.1) |
| UN Number: | UN2727 | UN2727 |
| Packing Group: | II | II |

Section 15 - Regulatory Information

US FEDERAL

TSCA

CAS# 13453-38-8 is not listed on the TSCA inventory. It is for research and development use only.

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 Thallium (III) Nitrate Trihydrate (listed as Water Dissociable Nitrate Compounds), 99.5%, (CAS# 13453-38-8) which is subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR

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# 13453-38-8 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:

T+

Risk Phrases:

R 26/28 Very toxic by inhalation and if swallowed.

R 33 Danger of cumulative effects.

Safety Phrases:

S 13 Keep away from food, drink and animal feeding stuffs.

S 45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

S 28A After contact with skin, wash immediately with plenty of water

WGK (Water Danger/Protection)

CAS# 13453-38-8: No information available.

Canada - DSL/NDSL

None of the chemicals in this product are listed on the DSL or 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# 13453-38-8 is not listed on the Canadian Ingredient Disclosure List.

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| Section 16 - Additional Information |
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MSDS Creation Date: 9/02/1997

Revision #3 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.