SAFETY DATA SHEET

1. Identification

Product Name: Nitrilotriacetic acid
Cat No.: AC415740000; AC415740010; AC415740050; AC415740051; AC415742500
Synonyms: NTA; Triglycine
Recommended Use: Laboratory chemicals.
Uses advised against: No Information available

Company:
Fisher Scientific
One Reagent Lane
Fair Lawn, NJ 07410
Tel: (201) 796-7100

Entity / Business Name:
Acros Organics
One Reagent Lane
Fair Lawn, NJ 07410

Emergency Telephone Number:
For information US call: 001-800-ACROS-01
Europe call: +32 14 57 52 11
Emergency Number US:001-201-796-7100 /
Europe: +32 14 57 52 99
CHEMTREC Tel. No.US:001-800-424-9300 /
Europe:001-703-527-3887

2. Hazard(s) identification

Classification
This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

<table>
<thead>
<tr>
<th>Hazard</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Serious Eye Damage/Eye Irritation</td>
<td>Category 2</td>
</tr>
<tr>
<td>Carcinogenicity</td>
<td>Category 1B</td>
</tr>
</tbody>
</table>

Label Elements

Signal Word
Danger

Hazard Statements
Causes serious eye irritation
May cause cancer

Precautionary Statements
Prevention
Obtain special instructions before use
Do not handle until all safety precautions have been read and understood
Use personal protective equipment as required
Wash face, hands and any exposed skin thoroughly after handling
Wear eye/face protection

Response
IF exposed or concerned: Get medical attention/advice

Eyes
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
IF eye irritation persists: Get medical advice/attention

Storage
Store locked up

Disposal
Dispose of contents/container to an approved waste disposal plant

Hazard not otherwise classified (HNOC)
May form combustible dust concentrations in air
WARNING! This product contains a chemical known in the State of California to cause cancer.

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No</th>
<th>Weight %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nitrilotriacetic acid (NTA)</td>
<td>139-13-9</td>
<td>&gt;95</td>
</tr>
</tbody>
</table>

4. First-aid measures

General Advice
If symptoms persist, call a physician.

Eye Contact
Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Obtain medical attention.

Skin Contact
Obtain medical attention. Wash off immediately with plenty of water for at least 15 minutes.

Inhalation
Move to fresh air. Obtain medical attention. If not breathing, give artificial respiration.

Ingestion
Clean mouth with water and drink afterwards plenty of water. Get medical attention if symptoms occur.

Most important symptoms/effects
None reasonably foreseeable.

Notes to Physician
Treat symptomatically

5. Fire-fighting measures

Suitable Extinguishing Media
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Unsuitable Extinguishing Media
No information available

Flash Point
No information available

Method -
No information available

Autoignition Temperature
Not applicable

Explosion Limits

Upper
No data available

Lower
No data available

Sensitivity to Mechanical Impact
No information available

Sensitivity to Static Discharge
No information available

Specific Hazards Arising from the Chemical
Dust can form an explosive mixture in air. Non-combustible.

Hazardous Combustion Products
Carbon monoxide (CO)  Carbon dioxide (CO₂)  Nitrogen oxides (NOx)

**Protective Equipment and Precautions for Firefighters**
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

<table>
<thead>
<tr>
<th>NFPA</th>
<th>Health</th>
<th>Flammability</th>
<th>Instability</th>
<th>Physical hazards</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.</td>
<td></td>
<td>1</td>
<td>0</td>
<td>N/A</td>
</tr>
</tbody>
</table>

### 6. Accidental release measures

**Personal Precautions**
Use personal protective equipment. Ensure adequate ventilation. Avoid dust formation.

**Environmental Precautions**
Should not be released into the environment. See Section 12 for additional ecological information.

**Methods for Containment and Clean Up**
Sweep up or vacuum up spillage and collect in suitable container for disposal. Keep in suitable, closed containers for disposal.

### 7. Handling and storage

**Handling**
Use only under a chemical fume hood. Do not get in eyes, on skin, or on clothing. Wear personal protective equipment. Ensure adequate ventilation. Avoid ingestion and inhalation. Avoid dust formation.

**Storage**
Keep containers tightly closed in a dry, cool and well-ventilated place.

### 8. Exposure controls / personal protection

**Exposure Guidelines**
This product does not contain any known or suspected reproductive hazards

**Engineering Measures**
Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations and safety showers are close to the workstation location.

**Personal Protective Equipment**

- **Eye/face Protection**
  Tightly fitting safety goggles.

- **Skin and body protection**
  Long sleeved clothing.

- **Respiratory Protection**
  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.

**Hygiene Measures**
Handle in accordance with good industrial hygiene and safety practice.

### 9. Physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical State</td>
<td>Powder Solid</td>
</tr>
<tr>
<td>Appearance</td>
<td>White</td>
</tr>
<tr>
<td>Odor</td>
<td>Odorless</td>
</tr>
<tr>
<td>Odor Threshold</td>
<td>No information available</td>
</tr>
<tr>
<td>pH</td>
<td>2.3 saturated solution</td>
</tr>
<tr>
<td>Melting Point/Range</td>
<td>245 °C / 473 °F</td>
</tr>
<tr>
<td>Boiling Point/Range</td>
<td>No information available</td>
</tr>
<tr>
<td>Flash Point</td>
<td>No information available</td>
</tr>
<tr>
<td>Evaporation Rate</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Flammability (solid,gas)</td>
<td>No information available</td>
</tr>
<tr>
<td>Flammability or explosive limits</td>
<td></td>
</tr>
<tr>
<td>Upper</td>
<td>No data available</td>
</tr>
<tr>
<td>Lower</td>
<td>No data available</td>
</tr>
</tbody>
</table>
Vapor Pressure: negligible  
Vapor Density: Not applicable  
Specific Gravity: No information available  
Solubility: No information available  
Partition coefficient; n-octanol/water: No data available  
Autoignition Temperature: Not applicable  
Decomposition Temperature: No information available  
Viscosity: Not applicable  
Molecular Formula: C6 H9 N O6  
Molecular Weight: 191.14

### 10. Stability and reactivity

**Reactive Hazard**  
None known, based on information available

**Stability**  
Stable under normal conditions.

**Conditions to Avoid**  

**Incompatible Materials**  
Strong oxidizing agents, strong bases, metals

**Hazardous Decomposition Products**  
Carbon monoxide (CO), Carbon dioxide (CO₂), Nitrogen oxides (NOₓ)

**Hazardous Polymerization**  
Hazardous polymerization does not occur.

**Hazardous Reactions**  
None under normal processing.

### 11. Toxicological information

**Acute Toxicity**

**Product Information**  
No acute toxicity information is available for this product

**Component Information**

<table>
<thead>
<tr>
<th>Component</th>
<th>LD50 Oral (Rat)</th>
<th>LD50 Dermal (Rabbit)</th>
<th>LC50 Inhalation (Rat)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nitrilotriacetic acid (NTA)</td>
<td>1100 mg/kg</td>
<td>&gt; 6.4 g/kg</td>
<td>&gt; 5 mg/L 4h</td>
</tr>
</tbody>
</table>

**Toxicologically Synergistic Products**  
No information available

**Delayed and immediate effects as well as chronic effects from short and long-term exposure**

**Irritation**  
No information available

**Sensitization**  
No information available

**Carcinogenicity**  
The table below indicates whether each agency has listed any ingredient as a carcinogen.

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No</th>
<th>IARC</th>
<th>NTP</th>
<th>ACGIH</th>
<th>OSHA</th>
<th>Mexico</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nitrilotriacetic acid (NTA)</td>
<td>139-13-9</td>
<td>Group 2B</td>
<td>Reasonably</td>
<td>Not listed</td>
<td>X</td>
<td>Not listed</td>
</tr>
</tbody>
</table>

**IARC: (International Agency for Research on Cancer)**

- Group 1 - Carcinogenic to Humans
- Group 2A - Possibly Carcinogenic to Humans

**NTP: (National Toxicity Program)**

- Known - Known Carcinogen
- Reasonably Anticipated - Reasonably Anticipated to be a Human Carcinogen

** Mutagenic Effects**  
No information available

**Reproductive Effects**  
No information available.

**Developmental Effects**  
No information available.
Nitrilotriacetic acid

Revision Date 10-May-2016

Teratogenicity
No information available.

STOT - single exposure
None known

STOT - repeated exposure
None known

Aspiration hazard
No information available

Symptoms / effects, both acute and delayed
No information available

Endocrine Disruptor Information
No information available

Other Adverse Effects
The toxicological properties have not been fully investigated.

12. Ecological information

Ecotoxicity
Do not empty into drains.

<table>
<thead>
<tr>
<th>Component</th>
<th>Freshwater Algae</th>
<th>Freshwater Fish</th>
<th>Microtox</th>
<th>Water Flea</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nitrilotriacetic acid (NTA)</td>
<td>EC50 &gt; 100 mg/L 72h</td>
<td>LC50 &gt; 100 mg/L 96h</td>
<td>Not listed</td>
<td>EC50 &gt; 100 mg/L 96h</td>
</tr>
</tbody>
</table>

Persistence and Degradability
Soluble in water
Persistence is unlikely based on information available.

Bioaccumulation/ Accumulation
No information available.

Mobility
Will likely be mobile in the environment due to its water solubility.

<table>
<thead>
<tr>
<th>Component</th>
<th>log Pow</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nitrilotriacetic acid (NTA)</td>
<td>-3.81</td>
</tr>
</tbody>
</table>

13. Disposal considerations

Waste Disposal Methods
Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

14. Transport information

DOT
Not regulated

TDG
Not regulated

IATA
Not regulated

IMDG/IMO
Not regulated

15. Regulatory information

All of the components in the product are on the following Inventory lists: X = listed

International Inventories

<table>
<thead>
<tr>
<th>Component</th>
<th>TSCA</th>
<th>DSL</th>
<th>NDSL</th>
<th>EINECS</th>
<th>ELINCS</th>
<th>NLP</th>
<th>PICCS</th>
<th>ENCS</th>
<th>AICS</th>
<th>IECSC</th>
<th>KECL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nitrilotriacetic acid (NTA)</td>
<td>X</td>
<td>X</td>
<td>-</td>
<td>205-355-7</td>
<td>-</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
</tbody>
</table>

Legend:
X - Listed
E - Indicates a substance that is the subject of a Section 5(e) Consent order under TSCA.
F - Indicates a substance that is the subject of a Section 5(f) Rule under TSCA.
N - Indicates a polymeric substance containing no free-radical initiator in its inventory name but is considered to cover the designated polymer made with any free-radical initiator regardless of the amount used.
P - Indicates a commenced PMN substance
R - Indicates a substance that is the subject of a Section 6 risk management rule under TSCA.
S - Indicates a substance that is identified in a proposed or final Significant New Use Rule
T - Indicates a substance that is the subject of a Section 4 test rule under TSCA.
XU - Indicates a substance exempt from reporting under the Inventory Update Rule, i.e. Partial Updating of the TSCA Inventory Data Base Production and Site Reports (40 CFR 710(B).
Y1 - Indicates an exempt polymer that has a number-average molecular weight of 1,000 or greater.
Y2 - Indicates an exempt polymer that is a polyester and is made only from reactants included in a specified list of low concern reactants that comprises one of the eligibility criteria for the exemption rule.

U.S. Federal Regulations

TSCA 12(b) Not applicable

SARA 313

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No</th>
<th>Weight %</th>
<th>SARA 313 - Threshold Values %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nitrilotriacetic acid (NTA)</td>
<td>139-13-9</td>
<td>&gt;95</td>
<td>0.1</td>
</tr>
</tbody>
</table>

SARA 311/312 Hazard Categories

- Acute Health Hazard: Yes
- Chronic Health Hazard: Yes
- Fire Hazard: Yes
- Sudden Release of Pressure Hazard: No
- Reactive Hazard: No

CWA (Clean Water Act) Not applicable

Clean Air Act Not applicable

OSHA Occupational Safety and Health Administration Not applicable

CERCLA Not applicable

California Proposition 65

This product contains the following proposition 65 chemicals

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No</th>
<th>California Prop. 65</th>
<th>Prop 65 NSRL</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nitrilotriacetic acid (NTA)</td>
<td>139-13-9</td>
<td>Carcinogen</td>
<td>100 µg/day</td>
<td>Carcinogen</td>
</tr>
</tbody>
</table>

U.S. State Right-to-Know Regulations

<table>
<thead>
<tr>
<th>Component</th>
<th>Massachusetts</th>
<th>New Jersey</th>
<th>Pennsylvania</th>
<th>Illinois</th>
<th>Rhode Island</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nitrilotriacetic acid (NTA)</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>-</td>
</tr>
</tbody>
</table>

U.S. Department of Transportation

- Reportable Quantity (RQ): N
- DOT Marine Pollutant: N
- DOT Severe Marine Pollutant: N

U.S. Department of Homeland Security

This product does not contain any DHS chemicals.

Other International Regulations

Mexico - Grade No information available

Canada

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR

WHMIS Hazard Class

D1B Toxic materials
D2A Very toxic materials
B4 Flammable solid
16. Other information

Prepared By  Regulatory Affairs
Thermo Fisher Scientific
Email: EMSDS.RA@thermofisher.com

Creation Date  01-May-2012
Revision Date  10-May-2016
Print Date  10-May-2016
Revision Summary  This document has been updated to comply with the US OSHA HazCom 2012 Standard replacing the current legislation under 29 CFR 1910.1200 to align with the Globally Harmonized System of Classification and Labeling of Chemicals (GHS)

Disclaimer
The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text

End of SDS