MATERIAL SAFETY DATA SHEET
Yttrium(III) oxide

Section 1 - Chemical Product and Company Identification

**MSDS Name:** Yttrium(III) oxide

**Catalog Numbers:** 19448-0000, 19448-0020, 19448-0100, 19461-0000, 19461-0100, 19461-0500

**Synonyms:**

**Company Identification:**

Acros Organics BVBA
Janssen Pharmaceuticaalaaan 3a
2440 Geel, Belgium

**Company Identification: (USA)**

Acros Organics
One Reagent Lane
Fair Lawn, NJ 07410

For information in the US, call: 800-ACROS-01
For information in Europe, call: +32 14 57 52 11
Emergency Number, Europe: +32 14 57 52 99
Emergency Number US: 201-796-7100
CHEMTREC Phone Number, US: 800-424-9300
CHEMTREC Phone Number, Europe: 703-527-3887

Section 2 - Composition, Information on Ingredients

<table>
<thead>
<tr>
<th>CAS#</th>
<th>Chemical Name:</th>
<th>%</th>
<th>EINECS#</th>
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<tbody>
<tr>
<td>1314-36-9</td>
<td>Yttrium(III) oxide</td>
<td>&gt;99.99%</td>
<td>215-233-5</td>
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</tbody>
</table>

**Hazard Symbols:** XI

**Risk Phrases:** 36/37/38

Section 3 - Hazards Identification

**EMERGENCY OVERVIEW**

*Irritating to eyes, respiratory system and skin.*

**Potential Health Effects**

**Eye:** Causes eye irritation.

**Skin:** Causes skin irritation. May be harmful if absorbed through the skin.

**Ingestion:** May cause irritation of the digestive tract. May be harmful if swallowed.

**Inhalation:** Causes respiratory tract irritation. May be harmful if inhaled.

Section 4 - First Aid Measures
**Eyes:** Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid.

**Skin:** Get medical aid. Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.

**Ingestion:** Get medical aid. Wash mouth out with water.

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

**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.

**Extinguishing Media:** Use water spray, dry chemical, carbon dioxide, or chemical foam.

### Section 6 - Accidental Release Measures

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

**Spills/Leaks:** Vacuum or sweep up material and place into a suitable disposal container. Avoid generating dusty conditions. Do not let this chemical enter the environment.

### Section 7 - Handling and Storage

**Handling:** Avoid breathing dust, vapor, mist, or gas. Avoid contact with skin and eyes. 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:** 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**

- **CAS# 1314-36-9:**
  - Belgium - TWA: (yttrium compounds): 1 mg/m3 VLE (as Y)
  - Malaysia: (yttrium compounds): 1 mg/m3 TWA (as Y)
  - Netherlands: (yttrium compounds): 1 mg/m3 MAC (as Y)
  - Spain: (yttrium compounds): 1 mg/m3 VLA-ED (as Y)

**Personal Protective Equipment**

- **Eyes:** Wear chemical splash goggles.
- **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:** Powder
- **Color:** white
- **Odor:** Not available
pH: Not available
Vapor Pressure: Not available
Viscosity: Not available
Boiling Point: Not available
Freezing/Melting Point: 2410 deg C (4,370.00°F)
Autoignition Temperature: Not available
Flash Point: Not available
Explosion Limits: Lower: Not available
Explosion Limits: Upper: Not available
Decomposition Temperature: Not available
Solubility in water: Insoluble
Specific Gravity/Density: Not available.
Molecular Formula: O3Y2
Molecular Weight: 225.81

Section 10 - Stability and Reactivity

Chemical Stability: Stable under normal temperatures and pressures. Hygroscopic: absorbs moisture or water from the air.
Conditions to Avoid: Incompatible materials, exposure to moist air or water.
Incompatibilities with Other Materials: Strong oxidizing agents, strong acids.
Hazardous Decomposition Products: Not available
Hazardous Polymerization: Will not occur.

Section 11 - Toxicological Information

RTECS#: CAS# 1314-36-9: ZG3850000
LD50/LC50: RTECS: Not available.
Carcinogenicity: Yttrium(III) oxide - Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.
Other: The toxicological properties have not been fully investigated. See actual entry in RTECS for complete information.

Section 12 - Ecological Information

Other: Do not empty into drains.

Section 13 - Disposal Considerations

Dispose of in a manner consistent with federal, state, and local regulations.

Section 14 - Transport Information

<table>
<thead>
<tr>
<th>Shipping Name:</th>
<th>IATA</th>
<th>IMO</th>
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<td>Not regulated as a hazardous material</td>
<td>Not regulated as a hazardous material</td>
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<tr>
<td>UN Number:</td>
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<td>Packing Group:</td>
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Section 15 - Regulatory Information

European/International Regulations
European Labeling in Accordance with EC Directives

Hazard Symbols: XI

Risk Phrases:
  R 36/37/38 Irritating to eyes, respiratory system and skin.

Safety Phrases:
  S 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
  S 37/39 Wear suitable gloves and eye/face protection.

WGK (Water Danger/Protection)
  CAS# 1314-36-9: Not available

Canada
  CAS# 1314-36-9 is listed on Canada's DSL List

US Federal
  TSCA
  CAS# 1314-36-9 is listed on the TSCA Inventory.

Section 16 - Other Information

<table>
<thead>
<tr>
<th>MSDS Creation Date:</th>
<th>7/16/1996</th>
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<tr>
<td>Revision #1 Date</td>
<td>9/21/2005</td>
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<tr>
<td>Revisions were made in Sections:</td>
<td>General revision.</td>
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