## Section I: Name

**Product:** Malachite Green Oxalate

**Chemical Synonyms:** Basic Green 4; C.I. No. 42000

**Formula:** $C_{25}H_{34}N_{4}O_{12}$

**Unit Size:** up to 2.5 Kg.

**C.A.S. No.:** 2437-29-8

## Section II: Ingredients of Mixtures

<table>
<thead>
<tr>
<th>Principal Component(s)</th>
<th>%</th>
<th>TLV Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Malachite green oxalate, biological stain</td>
<td>100%</td>
<td>None established.</td>
</tr>
</tbody>
</table>

**WARNING!**

**Harmful if inhaled or swallowed. Causes skin and eye irritation.**

## Section III: Physical Data

**Melting Point (°F):** 164°C (327°F) dec.

**Boiling Point (°F):** Decomposes.

**Vapor Pressure (mm Hg):** Negligible as solid.

**Vapor Density (Air=1):** Data not listed.

**Solubility in Water:** Soluble.

**Appearance & Odor:** Green crystalline powder with metallic luster; no odor.

## Section IV: Fire and Explosion Hazard Data

**Flash Point (Method Used):** Non-flammable.

**Flammable Limits in Air:** % by Volume

<table>
<thead>
<tr>
<th>Flammable Limits</th>
<th>Lower</th>
<th>Upper</th>
</tr>
</thead>
<tbody>
<tr>
<td>N/A</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Extinguisher Media:** Water spray; carbon dioxide; dry chemical.

## Special Firefighting Procedures

In fire conditions, wear a NIOSH/MSHA-approved self-contained breathing apparatus and protective clothing.

## UNUSUAL Fire and Explosion Hazards

Not considered to be an explosion hazard.

## Section V: Health Hazard Data

**Threshold Limited Value:**

- **TWA:** None established by (ACGIH 2001).
- **Oral-rat:** 275 mg/kg.
- **TWA for Oxalic acid [CAS No. 144-62-7]:** 1 mg/m³.

**Effects of Overexposure:**

- Inhalation of dust is irritating to the mucous membranes and upper respiratory tract. Causes severe eye irritation. May cause skin irritation. To the best of our knowledge, the chemical, physical and toxicological properties have not been thoroughly investigated. Exercise appropriate procedures to minimize potential hazards. Target organs: Skin, eyes.

**Emergency and First Aid Procedures**

**INGESTION:** Call physician or Poison Control Center immediately. Induce vomiting only if advised by appropriate medical personnel. Never give anything by mouth to an unconscious person. **EYES:** Check for and remove contact lenses. Flush thoroughly with water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get immediate medical attention. **SKIN:** Remove contaminated clothing. Flush thoroughly with mild soap and water. If irritation occurs, get medical attention. **INHALATION:** Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

## Section VI: Reactivity Data

**Stability:** Unstable

**Conditions to Avoid:** X

**Incompatibility (Materials to Avoid):** Strong oxidizing materials and reducing agents.

**Hazardous Decomposition Products:** When heated to decomposition, emits toxic fumes of oxides of nitrogen and oxides of carbon.

**Hazardous Polymerization:** Conditions to Avoid

Not applicable.

**Steps to be taken in case material is released or spilled:** Ventilate area. Wearing suitable protective clothing, avoid making dust. Recover for use if not contaminated. Sweep material onto paper. Place in a suitable container for disposal by incineration. Wash spill area with soap and water.

## Waste Disposal Method

Discharge, treatment, or disposal may be subject to Federal, State or Local laws. These disposal guidelines are intended for the disposal of catalog-size quantities only. Dispose of in an approved incinerator equipped with an afterburner and scrubber or contract with a licensed waste disposal service.

## Section VII: Spill or Leak Procedures

**Waste Disposal Method:** Damen, treatment, or disposal may be subject to Federal, State or Local laws. These disposal guidelines are intended for the disposal of catalog-size quantities only. Dispose of in an approved incinerator equipped with an afterburner and scrubber or contract with a licensed waste disposal service.

**Steps to be taken in case material is released or spilled:** Ventilate area. Wearing suitable protective clothing, avoid making dust. Recover for use if not contaminated. Sweep material onto paper. Place in a suitable container for disposal by incineration. Wash spill area with soap and water.

## Section VIII: Special Protection Information

**Respiration Protection (Specify Type):** None should be needed in normal laboratory handling. If dusty conditions prevail, work in ventilation hood or wear a NIOSH/MSHA-approved dust mask or respirator.

**Ventilation:**

- **Local Exhaust:** Recommended. Special No.
- **Mechanical (General):** Recommended. Other No.

**Protective Gloves:** Rubber, Eye Protection

**Chemical safety glasses.**

**Other Protective Equipment:** Lab coat, apron, ventilation hood, proper gloves, eye wash station.

## Section IX: Special Precautions

**Precautions to be Taken in Handling & Storing:**

- Store in a cool, dry place away from oxidizing materials and protect from light. Wash thoroughly after handling.

**Other Precautions:**

- Do not get in eyes, on skin, on clothing. Avoid breathing dust. Strong dye. Use with adequate ventilation. Remove and wash contaminated clothing.

**Revision No. 6**

<table>
<thead>
<tr>
<th>Date</th>
<th>Approved</th>
<th>Chemical Safety Coordinator</th>
</tr>
</thead>
<tbody>
<tr>
<td>01/12/07</td>
<td>James A. Bertsch</td>
<td>JAB</td>
</tr>
</tbody>
</table>

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