Material Safety Data Sheet
Dimethylglyoxime

ACC# 07225

Section 1 - Chemical Product and Company Identification

**MSDS Name:** Dimethylglyoxime  
**Catalog Numbers:** AC172000000, AC172001000, AC172005000, AC408330000, AC408330025, AC408330250, AC408331000, AC408335000, D62-100  
**Synonyms:** 2,3-Butanedione dioxime.  
**Company Identification:**  
Fisher Scientific  
1 Reagent Lane  
Fair Lawn, NJ 07410  
For information, call: 201-796-7100  
Emergency Number: 201-796-7100  
For CHEMTREC assistance, call: 800-424-9300  
For International CHEMTREC assistance, call: 703-527-3887

Section 2 - Composition, Information on Ingredients

<table>
<thead>
<tr>
<th>CAS#</th>
<th>Chemical Name</th>
<th>Percent</th>
<th>EINECS/ELINCS</th>
</tr>
</thead>
<tbody>
<tr>
<td>95-45-4</td>
<td>Dimethylglyoxime</td>
<td>99+</td>
<td>202-420-1</td>
</tr>
</tbody>
</table>

Section 3 - Hazards Identification

**EMERGENCY OVERVIEW**

Appearance: white powder.  
**Danger!** Flammable solid. Harmful if swallowed, inhaled, or absorbed through the skin. May cause eye, skin, and respiratory tract irritation.  
**Target Organs:** None known.

**Potential Health Effects**

**Eye:** May cause eye irritation.  
**Skin:** May cause skin irritation. Harmful if absorbed through the skin.  
**Ingestion:** Harmful if swallowed. May cause irritation of the digestive tract.  
**Inhalation:** Harmful if inhaled. May cause respiratory tract irritation.  
**Chronic:** Laboratory experiments have resulted in mutagenic effects.

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:** Do not induce vomiting. Get medical aid immediately. Call a poison control center.

**Inhalation:** Get medical aid immediately. Remove from exposure and move to fresh air immediately. If breathing is difficult, give oxygen. 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.

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**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. Will burn if involved in a fire. Containers may explode in the heat of a fire. Flammable solid.

**Extinguishing Media:** Use water spray to cool fire-exposed containers. Use water spray, dry chemical, carbon dioxide, or appropriate foam.

**Flash Point:** Not applicable.

**Autoignition Temperature:** Not applicable.

**Explosion Limits, Lower:** Not available.

**Upper:** Not available.

**NFPA Rating:** (estimated) Health: 2; Flammability: 3; Instability: 0

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**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. Wear a self contained breathing apparatus and appropriate personal protection. (See Exposure Controls, Personal Protection section). Avoid generating dusty conditions. Remove all sources of ignition. Use a spark-proof tool. Do not let this chemical enter the environment.

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**Section 7 - Handling and Storage**

**Handling:** Use spark-proof tools and explosion proof equipment. Do not get in eyes, on skin, or on clothing. Take precautionary measures against static discharges. Keep away from heat, sparks and flame. Do not ingest or inhale. Use only in a chemical fume hood.

**Storage:** Keep away from sources of ignition. Store in a cool, dry place. Store in a tightly closed container. Flammables-area.

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**Section 8 - Exposure Controls, Personal Protection**

http://fscimage.fishersci.com/msds/07225.htm
**Engineering Controls:** Use explosion-proof ventilation equipment. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use only under a chemical fume hood.

**Exposure Limits**

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>ACGIH</th>
<th>NIOSH</th>
<th>OSHA - Final PELs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dimethylglyoxime</td>
<td>none listed</td>
<td>none listed</td>
<td>none listed</td>
</tr>
</tbody>
</table>

**OSHA Vacated PELs:** Dimethylglyoxime: 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:** 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.

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**Section 9 - Physical and Chemical Properties**

**Physical State:** Powder

**Appearance:** white

**Odor:** perceptible odor

**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:** 239 - 242 deg C (decom)

**Decomposition Temperature:** Not available.

**Solubility:** Slightly soluble.

**Specific Gravity/Density:** Not available.

**Molecular Formula:** C₄H₈N₂O₂

**Molecular Weight:** 116.12

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**Section 10 - Stability and Reactivity**

**Chemical Stability:** Stable under normal temperatures and pressures.

**Conditions to Avoid:** Incompatible materials, ignition sources, dust generation, temperatures above 65°C.

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

**Hazardous Decomposition Products:** Nitrogen oxides, carbon monoxide, carbon dioxide.

**Hazardous Polymerization:** Will not occur.

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**Section 11 - Toxicological Information**
RTECS#: CAS# 95-45-4: EK2975000
LD50/LC50: Not available.
Oral, rat: LDLo = 250
Carcinogenicity: CAS# 95-45-4: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

Epidemiology: No information available.
Teratogenicity: No information available.
Reproductive Effects: No information available.
Mutagenicity: Mutagenic effects have occurred in experimental animals.
Neurotoxicity: No information available.
Other Studies:

Section 12 - Ecological Information

Ecotoxicity: No data available. No information available.
Environmental: No information available.
Physical: No information available.
Other: Do not empty into drains.

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

<table>
<thead>
<tr>
<th></th>
<th>US DOT</th>
<th>Canada TDG</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shipping Name:</td>
<td>FLAMMABLE SOLID, ORGANIC, N.O.S.</td>
<td>FLAMMABLE SOLID, ORGANIC, N.O.S.</td>
</tr>
<tr>
<td>Hazard Class:</td>
<td>4.1</td>
<td>4.1</td>
</tr>
<tr>
<td>UN Number:</td>
<td>UN1325</td>
<td>UN1325</td>
</tr>
<tr>
<td>Packing Group:</td>
<td>III</td>
<td>III</td>
</tr>
</tbody>
</table>

Section 15 - Regulatory Information

US FEDERAL
TSCA
   CAS# 95-45-4 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.

SARA Codes
   CAS # 95-45-4: reactive.

Section 313
   No chemicals are reportable under Section 313.

Clean Air Act:
   This material does not contain any hazardous air pollutants.
   This material does not contain any Class 1 Ozone depletors.
   This material does not contain any Class 2 Ozone depletors.

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# 95-45-4 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:
   XN F

Risk Phrases:
   R 11 Highly flammable.
   R 20/21/22 Harmful by inhalation, in contact with skin and if swallowed.

Safety Phrases:
   S 16 Keep away from sources of ignition - No smoking.
   S 36/37 Wear suitable protective clothing and gloves.

WGK (Water Danger/Protection)
   CAS# 95-45-4: No information available.

Canada - DSL/NDSL
   CAS# 95-45-4 is listed on Canada's DSL List.

Canada - WHMIS
   This product has a WHMIS classification of D1B.
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**

**Section 16 - Additional Information**

**MSDS Creation Date:** 3/12/1999  
**Revision #5 Date:** 6/19/2008

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.