Fisher Scientific

Part of Thermo Fisher Scientific

# SAFETY DATA SHEET

**Creation Date** 15-Feb-2010 **Revision Date** 09-Jul-2014 **Revision Number** 1

## 1. Identification

**Product Name** **Dimethylglyoxime (Certified ACS)**

**Cat No. :** **D62-100**

**Synonyms** 2,3-Butanedione dioxime (Crystalline/Certified ACS)

**Recommended Use** Laboratory chemicals.

**Uses advised against** No Information available

**Details of the supplier of the safety data sheet**

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

**Emergency Telephone Number**
CHEMTREC®, Inside the USA: 800-424-9300
CHEMTREC®, Outside the USA: 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)

| | |
|---|---|
| Flammable solids | Category 2 |
| Acute oral toxicity | Category 3 |
| Combustible dust | Yes |

**Label Elements**

**Signal Word**
Danger

**Hazard Statements**
Flammable solid May form combustible dust concentrations in air
Toxic if swallowed

**Precautionary Statements**

**Prevention**
Wash face, hands and any exposed skin thoroughly after handling
Do not eat, drink or smoke when using this product
Keep away from heat/sparks/open flames/hot surfaces. - No smoking
Ground/bond container and receiving equipment
Use explosion-proof electrical/ventilating/lighting/equipment
Wear protective gloves/protective clothing/eye protection/face protection
**Ingestion**
IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician
Rinse mouth
**Fire**
In case of fire: Use CO2, dry chemical, or foam for extinction
**Storage**
Store locked up
**Disposal**
Dispose of contents/container to an approved waste disposal plant
**Hazards not otherwise classified (HNOC)**
May form combustible dust concentrations in air

## 3. Composition / information on ingredients

| Component | CAS-No | Weight % |
|---|---|---|
| 2,3-Butanedione, dioxime | 95-45-4 | >95 |

## 4. First-aid measures

**General Advice** Show this safety data sheet to the doctor in attendance. Immediate medical attention is required.

**Eye Contact** In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

**Skin Contact** Wash off immediately with plenty of water for at least 15 minutes. Immediate medical attention is required.

**Inhalation** Move to fresh air. If breathing is difficult, give oxygen. Do not use mouth-to-mouth resuscitation if victim ingested or inhaled the substance; induce artificial respiration with a respiratory medical device. Immediate medical attention is required.

**Ingestion** Do not induce vomiting. Call a physician or Poison Control Center immediately.

**Most important symptoms/effects** No information available.
**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**
**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**
Flammable. Risk of ignition. Dust can form an explosive mixture in air. Containers may explode when heated. Thermal decomposition can lead to release of irritating gases and vapors. Keep product and empty container away from heat and sources of ignition.

**Hazardous Combustion Products**
Carbon monoxide (CO) Carbon dioxide ($CO_2$) 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. Thermal decomposition can lead to release of irritating gases and vapors.

**NFPA**

| Health | Flammability | Instability | Physical hazards |
|---|---|---|---|
| 2 | 3 | 0 | N/A |

## 6. Accidental release measures

**Personal Precautions** Use personal protective equipment. Avoid dust formation. Ensure adequate ventilation. Keep people away from and upwind of spill/leak. Evacuate personnel to safe areas.

**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. Avoid dust formation.

## 7. Handling and storage

**Handling** Use only under a chemical fume hood. Wear personal protective equipment. Do not get in eyes, on skin, or on clothing. Avoid dust formation. Do not breathe vapors/dust. Do not ingest.

**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 hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

**Engineering Measures** Use only under a chemical fume hood. Ensure that eyewash stations and safety showers are close to the workstation location. Use explosion-proof electrical/ventilating/lighting/equipment.

**Personal Protective Equipment**

**Eye/face Protection** 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 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

| | |
|---|---|
| **Physical State** | Solid |
| **Appearance** | White |
| **Odor** | Slight |
| **Odor Threshold** | No information available |
| **pH** | No information available |
| **Melting Point/Range** | 239 - 241 °C / 462.2 - 465.8 °F |
| **Boiling Point/Range** | No information available |
| **Flash Point** | No information available |
| **Evaporation Rate** | Not applicable |
| **Flammability (solid,gas)** | No information available |
| **Flammability or explosive limits** | |
| **Upper** | No data available |
| **Lower** | No data available |
| **Vapor Pressure** | negligible |
| **Vapor Density** | Not applicable |
| **Relative Density** | No information available |
| **Solubility** | Insoluble in water |
| **Partition coefficient; n-octanol/water** | No data available |
| **Autoignition Temperature** | |
| **Decomposition Temperature** | No information available |
| **Viscosity** | Not applicable |
| **Molecular Formula** | C4 H8 N2 O2 |
| **Molecular Weight** | 116.12 |

## 10. Stability and reactivity

**Reactive Hazard** Yes

**Stability** Stable under normal conditions.

**Conditions to Avoid** Incompatible products. Excess heat.

**Incompatible Materials** Strong oxidizing agents

**Hazardous Decomposition Products** Carbon monoxide (CO), Carbon dioxide ($CO_2$), Nitrogen oxides (NOx)

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

**Hazardous Reactions** None under normal processing.

## 11. Toxicological information

**Acute Toxicity**

**Product Information**

**Component Information**

**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.

| Component | CAS-No | IARC | NTP | ACGIH | OSHA | Mexico |
|---|---|---|---|---|---|---|
| 2,3-Butanedione, dioxime | 95-45-4 | Not listed | Not listed | Not listed | Not listed | Not listed |

**Mutagenic Effects** No information available

**Reproductive Effects** No information available.

**Developmental Effects** No information available.

**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** See actual entry in RTECS for complete information. The toxicological properties have not been fully investigated.

## 12. Ecological information

**Ecotoxicity**
No information available.

**Persistence and Degradability** Insoluble in water Persistence is unlikely
**Bioaccumulation/ Accumulation** No information available.

**Mobility** . Is not likely mobile in the environment due its low water solubility.

| Component | log Pow |
|---|---|
| 2,3-Butanedione, dioxime | -0.29 |

## 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**
- **UN-No** UN2926
- **Proper Shipping Name** Flammable solids, toxic, organic, n.o.s.
- **Proper technical name** 2,3-Butanedione, dioxime
- **Hazard Class** 4.1
- **Subsidiary Hazard Class** 6.1
- **Packing Group** III

**TDG**
- **UN-No** UN2926
- **Proper Shipping Name** FLAMMABLE SOLID, TOXIC, ORGANIC, N.O.S.
- **Hazard Class** 4.1
- **Subsidiary Hazard Class** 6.1
- **Packing Group** III

**IATA**
- **UN-No** UN2926
- **Proper Shipping Name** FLAMMABLE SOLID, TOXIC, ORGANIC, N.O.S.
- **Hazard Class** 4.1
- **Subsidiary Hazard Class** 6.1
- **Packing Group** III

**IMDG/IMO**
- **UN-No** UN2926
- **Proper Shipping Name** FLAMMABLE SOLID, TOXIC, ORGANIC, N.O.S.
- **Hazard Class** 4.1

**Subsidiary Hazard Class** 6.1
**Packing Group** III

## 15. Regulatory information

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

**International Inventories**

| Component | TSCA | DSL | NDSL | EINECS | ELINCS | NLP | PICCS | ENCS | AICS | IECSC | KECL |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2,3-Butanedione, dioxime | X | X | - | 202-420-1 | - | | X | X | X | X | X |

**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** Not applicable

**SARA 311/312 Hazardous Categorization**

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

**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 does not contain any Proposition 65 chemicals

**State Right-to-Know** Not applicable

**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** B4 Flammable solid
D1B Toxic materials

## 16. Other information

**Prepared By** Regulatory Affairs
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**Creation Date** 15-Feb-2010
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**Print Date** 09-Jul-2014
**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 on 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 guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as 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 material or in any process, unless specified in the text.**

**End of SDS**