

## SAFETY DATA SHEET

Creation Date 15-Feb-2010

Revision Date 26-Dec-2021

Revision Number 5

### 1. Identification

**Product Name** Dimethylglyoxime

**Cat No. :** AC408330000; AC408330025; AC408330250; AC408331000;  
AC408335000

**CAS No** 95-45-4  
**Synonyms** 2,3-Butanedione dioxime

**Recommended Use** Laboratory chemicals.  
**Uses advised against** Food, drug, pesticide or biocidal product use.

#### Details of the supplier of the safety data sheet

##### Company

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

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)

|                     |            |
|---------------------|------------|
| 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 CO<sub>2</sub>, dry chemical, or foam for extinction

**Storage**

Store locked up  
Store in a well-ventilated place. Keep container tightly closed

**Disposal**

Dispose of contents/container to an approved waste disposal plant

**Hazards not otherwise classified (HNOC)**

None identified

### 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**

Remove to fresh air. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Immediate medical attention is required. If not breathing, give artificial respiration.

**Ingestion**

Do NOT induce vomiting. Call a physician or poison control center immediately.

**Most important symptoms and effects**

No information available.

**Notes to Physician**

Treat symptomatically

## 5. Fire-fighting measures

**Suitable Extinguishing Media** Water spray, carbon dioxide (CO<sub>2</sub>), dry chemical, alcohol-resistant foam.

**Unsuitable Extinguishing Media** No information available

**Flash Point** No information available

**Method -** No information available

**Autoignition Temperature** No information available

**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 with 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. Fine dust dispersed in air may ignite.

### Hazardous Combustion Products

Carbon monoxide (CO). Carbon dioxide (CO<sub>2</sub>). Nitrogen oxides (NO<sub>x</sub>).

### 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**  
2

**Flammability**  
3

**Instability**  
0

**Physical hazards**  
N/A

## 6. Accidental release measures

**Personal Precautions** Use personal protective equipment as required. 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 and shovel into suitable containers for disposal. Avoid dust formation.

## 7. Handling and storage

**Handling** Use only under a chemical fume hood. Wear personal protective equipment/face protection. Do not get in eyes, on skin, or on clothing. Avoid dust formation. Do not breathe (dust, vapor, mist, gas). Do not ingest. If swallowed then seek immediate medical assistance.

**Storage.** Keep containers tightly closed in a dry, cool and well-ventilated place. Incompatible Materials. Strong oxidizing agents.

## 8. Exposure controls / personal protection

**Exposure Guidelines** This product does not contain any hazardous materials with occupational exposure limit 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**

|                                 |   |
|---------------------------------|---|
| <b>Eye/face Protection</b>      | 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.   |
| <b>Skin and body protection</b> | Wear appropriate protective gloves and clothing to prevent skin exposure.   |
| <b>Respiratory Protection</b>   | 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. |
| <b>Hygiene Measures</b>         | Handle in accordance with good industrial hygiene and safety practice.  |

### **9. Physical and chemical properties**

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

### **10. Stability and reactivity**

|   |   |
|---|---|
| <b>Reactive Hazard</b>                  | Yes   |
| <b>Stability</b>                        | Stable under normal conditions.   |
| <b>Conditions to Avoid</b>              | Incompatible products. Excess heat.   |
| <b>Incompatible Materials</b>           | Strong oxidizing agents   |
| <b>Hazardous Decomposition Products</b> | Carbon monoxide (CO), Carbon dioxide (CO <sub>2</sub> ), Nitrogen oxides (NO <sub>x</sub> ) |
| <b>Hazardous Polymerization</b>         | Hazardous polymerization does not occur.  |
| <b>Hazardous Reactions</b>              | 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** The toxicological properties have not been fully investigated.

## 12. Ecological information

**Ecotoxicity**

No information available.

**Persistence and Degradability** 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.

**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

**United States of America Inventory**

| Component                | CAS No  | TSCA | TSCA Inventory notification -<br>Active-Inactive | TSCA - EPA Regulatory<br>Flags |
|--------------------------|---------|------|--|--------------------------------|
| 2,3-Butanedione, dioxime | 95-45-4 | X    | ACTIVE   | -                              |

**Legend:**

**TSCA** US EPA (TSCA) - Toxic Substances Control Act, (40 CFR Part 710)

X - Listed

'-' - Not Listed

**TSCA 12(b)** - Notices of Export      Not applicable

**International Inventories**

Canada (DSL/NDL), Europe (EINECS/ELINCS/NLP), Philippines (PICCS), Japan (ENCS), Japan (ISHL), Australia (AICS), China (IECSC), Korea (KECL).

| Component                | CAS No  | DSL | NDL | EINECS    | PICCS | ENCS | ISHL | AICS | IECSC | KECL     |
|--------------------------|---------|-----|-----|-----------|-------|------|------|------|-------|----------|
| 2,3-Butanedione, dioxime | 95-45-4 | X   | -   | 202-420-1 | X     | X    | X    | X    | X     | KE-03824 |

KECL - NIER number or KE number (<http://ncis.nier.go.kr/en/main.do>)

**U.S. Federal Regulations**

**SARA 313**      Not applicable

**SARA 311/312 Hazard Categories**      See section 2 for more information

**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 does not contain any Proposition 65 chemicals.

**U.S. State Right-to-Know Regulations** 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

**Authorisation/Restrictions according to EU REACH**

**Safety, health and environmental regulations/legislation specific for the substance or mixture**

| Component                | CAS No  | OECD HPV       | Persistent Organic Pollutant | Ozone Depletion Potential | Restriction of Hazardous Substances (RoHS) |
|--------------------------|---------|----------------|------------------------------|---------------------------|--|
| 2,3-Butanedione, dioxime | 95-45-4 | Not applicable | Not applicable               | Not applicable            | Not applicable                             |

| Component                | CAS No  | Seveso III Directive (2012/18/EC) - Qualifying Quantities for Major Accident Notification | Seveso III Directive (2012/18/EC) - Qualifying Quantities for Safety Report Requirements | Rotterdam Convention (PIC) | Basel Convention (Hazardous Waste) |
|--------------------------|---------|---|--|----------------------------|------------------------------------|
| 2,3-Butanedione, dioxime | 95-45-4 | Not applicable  | Not applicable   | Not applicable             | Not applicable                     |

## 16. Other information

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

**Creation Date** 15-Feb-2010

**Revision Date** 26-Dec-2021

**Print Date** 26-Dec-2021

**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**