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## MATERIAL SAFETY DATA SHEET (MSDS)

### DIMETHYL GLYOXIME AR (2,3-BUTANEDION DIOXIME)

#### 1. Identification of the substance/mixture and of the company/undertaking

##### 1.1. Product identifier

Trade name : DIMETHYL GLYOXIME AR (2,3-BUTANEDION DIOXIME)

Product code : D0085800500

Identification of the product : DIMETHYL GLYOXIME AR 99%  
 CAS No :95-45-4

##### 1.2. Relevant identified uses of the substance or mixture and uses advised against

Use : Industrial. For professional use only.

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

Company identification : SUVCHEM  
 Chaitanya Tower, 2nd Floor, Office # 206,  
 Siddharth Nagar, S.V. Road,  
 Goregaon (West), Mumbai - 400062,  
 Maharashtra, India.  
 Contact: +91 22 28725393 / 94 / 95  
 Email ID: info@suvchem.com/care@suvchem.com

##### 1.4. Emergency telephone number

Phone no. : + 91 22 28725393 / 94 / 95 (9:00am - 6:00 pm) [ Office hours ]

#### 2. Hazards identification -DSD

##### 2.1. Classification of the substance or mixture

##### Classification EC 67/548 or EC 1999/45

Classification : F; R11  
 T; R25

##### Hazard Class and Category Code(s), Regulation (EC) No 1272/2008 (CLP)

Health hazards : Acute toxicity, Oral - Category 3 - Danger (CLP : Acute Tox. 3) H301

Physical hazards : Flammable solids - Category 1 - Danger (CLP : Flam. Sol. 1) H228

##### 2.2. Label elements

##### Labelling EC 67/548 or EC 1999/45

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**DIMETHYL GLYOXIME AR (2,3-BUTANEDION DIOXIME)**
**2. Hazards identification -DSD (continued)**
**Symbol(s)**

**Symbol(s)**

 : F : Highly flammable  
 : T : Toxic

**R Phrase(s)**

 : R11 : Highly flammable.  
 : R25 : Toxic if swallowed.

**S Phrase(s)**

: S45 : In case of accident or if you feel unwell, seek medical advice immediately (show the label when possible).

**Labelling Regulation EC 1272/2008 (CLP)**
**Hazard pictograms**

**Signal words**

: Danger

**Hazard statements**

 : H228 : Flammable solid.  
 : H301 : Toxic if swallowed.

**Precautionary statements**
**• Prevention**

 : P240: Ground/bond container and receiving equipment.  
 : P241: Use explosion-proof electrical, ventilating, lighting, ..., equipment.  
 : P210: Keep away from heat, sparks, open flames or hot surfaces. - No smoking.  
 : P280: Wear protective gloves, protective clothing, eye protection, face protection.  
 : P264: Wash thoroughly after handling.  
 : P270: Do not eat, drink or smoke when using this product.

**• Response**

 : P301+P310: IF SWALLOWED : Immediately call a POISON CENTER or doctor.  
 : P370+P378: In case of fire: Use for extinction.

**• Storage**

: P405: Store locked up.

**• Disposal considerations**

: P501: Dispose of this material and its container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

**2.3. Other hazards**
**Other hazards**

: The substance does not fulfil the criteria to be identified as PBT substance or vPvB substance according to Annex XIII of Regulation REACH.

**3. Composition/information on ingredients**
**Substance / Preparation**

 : DIMETHYL GLYOXIME AR 99%  
 : CAS No :95-45-4  
 : Substance.

## MATERIAL SAFETY DATA SHEET (MSDS)

### DIMETHYL GLYOXIME AR (2,3-BUTANEDION DIOXIME)

#### 3. Composition/information on ingredients (continued)

Contains no other components or impurities which will influence the classification of the product.

#### 4. First aid measures

##### 4.1. Description of first aid measures

Inhalation	: Assure fresh air breathing. Allow the victim to rest.
Skin contact	: Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse.
Eye contact	: Rinse immediately with plenty of water. Obtain medical attention if pain, blinking or redness persist.
Ingestion	: Do NOT induce vomiting. Rinse mouth. Immediately call a POISON CENTER or doctor. Specific treatment (see on this label).

##### 4.2. Most important symptoms and effects, both acute and delayed

Symptoms relating to use : Swallowing a small quantity of this material will result in serious health hazard.

##### 4.3. Indication of any immediate medical attention and special treatment needed

General information : Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).

#### 5. Fire-fighting measures

##### 5.1. Extinguishing media

Suitable extinguishing media	: Foam. Dry powder. Carbon dioxide. Water spray. Sand.
Unsuitable extinguishing media	: Do not use a heavy water stream.
Surrounding fires	: Use water spray or fog for cooling exposed containers.

##### 5.2. Special hazards arising from the substance or mixture

Flammable class	: Flammable solid.
Hazardous combustion products	: Under fire conditions, hazardous fumes will be present.

##### 5.3. Advice for fire-fighters

Protection against fire	: Do not enter fire area without proper protective equipment, including respiratory protection.
Special procedures	: Exercise caution when fighting any chemical fire. Avoid (reject) fire-fighting water to enter environment.

## MATERIAL SAFETY DATA SHEET (MSDS)

### DIMETHYL GLYOXIME AR (2,3-BUTANEDION DIOXIME)

#### 6. Accidental release measures

##### 6.1. Personal precautions, protective equipment and emergency procedures

For emergency responders	: Equip cleanup crew with proper protection. Ventilate area.
Technical measures	: Use special care to avoid static electric charges.
Special precautions	: Remove ignition sources. No naked lights. No smoking.
For non-emergency personnel	: Evacuate unnecessary personnel.

##### 6.2. Environmental precautions

Environmental precautions	: Prevent entry to sewers and public waters. Notify authorities if product enters sewers or public waters.
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##### 6.3. Methods and material for containment and cleaning up

Clean up methods	: On land, sweep or shovel into suitable containers. Minimize generation of dust. Store away from other materials.
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##### 6.4. Reference to other sections

See section 8. Exposure controls/personal protection

#### 7. Handling and storage

##### 7.1. Precautions for safe handling

Handling	: Handle empty containers with care because residual vapours are flammable. Do not eat, drink or smoke when using this product. Wash thoroughly after handling.
Technical protective measures	: Provide good ventilation in process area to prevent formation of vapour. Proper grounding procedures to avoid static electricity should be followed. Use explosion-proof electrical, ventilating, lighting, ..., equipment.
Special precautions	: No naked lights. No smoking.

##### 7.2. Conditions for safe storage, including any incompatibilities

Storage	: Keep only in the original container in a cool, well ventilated place. Keep container closed when not in use. Keep in fireproof place. Ground/bond container and receiving equipment.
Storage - away from	: Strong bases. Strong acids. Sources of ignition. Direct sunlight. Heat sources.

##### 7.3. Specific end use(s)

Specific end use(s)	: None.
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**MATERIAL SAFETY DATA SHEET (MSDS)**
**DIMETHYL GLYOXIME AR (2,3-BUTANEDION DIOXIME)**
**8. Exposure controls/personal protection**
**8.1. Exposure controls**

Personal protection	: Avoid all unnecessary exposure.
• Respiratory protection	: Wear approved mask.
• Hand protection	: Wear protective gloves.
• Eye protection	: Chemical goggles or safety glasses.
• Others	: When using, do not eat, drink or smoke.

**8.2. Control parameters**

Occupational Exposure Limits	: No data available.
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**9. Physical and chemical properties**
**9.1. Information on basic physical and chemical properties**

Physical state at 20 °C	: Solid.
Colour	: White crystalline
Odour	: Odorless
Odour threshold	: No data available.
pH value	: Not applicable.
Melting point [°C]	: 240 - 241 °C
Decomposition point [°C]	: N/A
Critical temperature [°C]	: N/A
Auto-ignition temperature [°C]	: N/A
Flammability (solid, gas)	: N/A Flammable solid.
Flash point [°C]	: N/A
Boiling point [°C]	: N/A
Initial boiling point [°C]	: N/A
Final boiling point [°C]	: N/A
Evaporation rate	: N/A
Vapour pressure [20°C]	: N/A
Vapour pressure mm/Hg	: N/A
Vapour density	: N/A
Density [g/cm <sup>3</sup> ]	: N/A
Relative density, gas (air=1)	: N/A
Relative density, liquid (water=1)	: N/A
Solubility in water [% weight]	: Insoluble in water

**MATERIAL SAFETY DATA SHEET (MSDS)**
**DIMETHYL GLYOXIME AR (2,3-BUTANEDION DIOXIME)**
**9. Physical and chemical properties (continued)**

Solubility in water	: N/A
Log Pow octanol / water at 20°C	: No data available.
Solubility	: N/A
Viscosity at 40°C [mm <sup>2</sup> /s]	: N/A

**9.2. Other information**

Explosive properties	: N/A
Explosion limits - upper [%]	: N/A
Explosion limits - lower [%]	: N/A
Oxidising properties	: No data available.

**10. Stability and reactivity**
**10.1. Reactivity**

Reactivity	: Not established.
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**10.2. Chemical stability**

Chemical stability	: Stable under recommended storage conditions.
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**10.3. Possibility of hazardous reactions**

Hazardous reactions	: Not established.
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**10.4. Conditions to avoid**

Conditions to avoid	: Direct sunlight. Extremely high or low temperatures. Open flame. Overheating. Heat. Sparks.
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**10.5. Incompatible materials**

Materials to avoid	: Strong acids. Strong bases.
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**10.6. Hazardous decomposition products**

Hazardous decomposition products	: Fumes. Carbon monoxide. Carbon dioxide. May release flammable gases.
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**11. Toxicological information**
**11.1. Information on toxicological effects**

**MATERIAL SAFETY DATA SHEET (MSDS)**
**DIMETHYL GLYOXIME AR (2,3-BUTANEDION DIOXIME)**
**11. Toxicological information (continued)**

<b>Acute toxicity</b>	
• Inhalation	: Based on available data, the classification criteria are not met.
• Dermal	: Based on available data, the classification criteria are not met.
• Ingestion	: Toxic if swallowed.
<b>Corrosion</b>	: Based on available data, the classification criteria are not met.
<b>Irritation</b>	: Based on available data, the classification criteria are not met.
<b>Sensitization</b>	: Based on available data, the classification criteria are not met.
<b>Mutagenicity</b>	: Based on available data, the classification criteria are not met.
<b>Carcinogenicity</b>	: Based on available data, the classification criteria are not met.
<b>Toxic for reproduction</b>	: Based on available data, the classification criteria are not met.
<b>STOT-single exposure</b>	: Based on available data, the classification criteria are not met.
<b>STOT-repeated exposure</b>	: Based on available data, the classification criteria are not met.
<b>Aspiration hazard</b>	: Based on available data, the classification criteria are not met.

**12. Ecological information**
**12.1. Toxicity**

**Toxicity information** : Not established.

**12.2. Persistence - degradability**

**Persistence - degradability** : Biodegradable.

**12.3. Bioaccumulative potential**

**Bioaccumulative potential** : Not established.

**12.4. Mobility in soil**

**Mobility in soil** : Not established.

**12.5. Results of PBT and vPvB assessment**

**Results of PBT and vPvB assessment** : The substance does not fulfil the criteria to be identified as PBT substance or vPvB substance according to Annex XIII of Regulation REACH.

**12.6. Other adverse effects**

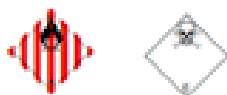
**Environmental precautions** : Avoid release to the environment.

**MATERIAL SAFETY DATA SHEET (MSDS)**
**DIMETHYL GLYOXIME AR (2,3-BUTANEDION DIOXIME)**
**13. Disposal considerations**
**13.1. Waste treatment methods**

<b>General</b>	: Avoid release to the environment. Dispose in a safe manner in accordance with local/national regulations. Dispose of this material and its container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.
<b>Special precautions</b>	: Handle empty containers with care because residual vapours are flammable. Hazardous waste due to toxicity.

**14. Transport information**
**14.1. Land transport (ADR-RID)**

<b>Proper shipping name</b>	: FLAMMABLE SOLID, TOXIC, ORGANIC, N.O.S.
<b>UN N°</b>	: 2926
<b>H.I. nr</b>	: 46
<b>ADR - Class</b>	: 4.1
<b>Labelling - Transport</b>	: 4.1 : Flammable solids, self-reactive substances and desensitized explosives. 6.1 : Toxic substances.



<b>ADR - Classification code</b>	: FT1 FT1
<b>ADR - Group</b>	: III
<b>ADR - Packing instructions</b>	: P002 R001
<b>ADR - Limited Quantity</b>	: 5 KG
<b>ADR - Tunnel code</b>	



: E : Passage forbidden through tunnels of category E.

**14.2. Sea transport (IMDG). [English only]**

<b>Proper shipping name</b>	: FLAMMABLE SOLID, TOXIC, ORGANIC, N.O.S.
<b>UN N°</b>	: 2926
<b>IMO-IMDG - Class or division</b>	: 4.1 : Flammable solids, self-reactive substances and desensitized explosives. ( 6.1 : Toxic substances. )



**MATERIAL SAFETY DATA SHEET (MSDS)**
**DIMETHYL GLYOXIME AR (2,3-BUTANEDION DIOXIME)**
**14. Transport information (continued)**

IMO-IMDG - Packing group	: III
IMO- IMDG - Packing instructions	: P002
IMO-IMDG - Limited quantities	: 5 kg
IMO-IMDG - Marine pollution	: No
EMS-Nr	: F-A S-G

**14.3. Air transport (ICAO-IATA).[English only]**

Proper shipping name	: FLAMMABLE SOLID, TOXIC, ORGANIC, N.O.S.
UN N°	: 2926
IATA - Class or division	: 4.1 : Flammable solids, self-reactive substances and desensitized explosives. ( 6.1 : Toxic substances. )
IATA - Packing group	: III
IATA - Passenger and Cargo Aircraft	: ALLOWED
- Passenger and Cargo - Packing instruction	: 446
- Passenger and Cargo - Maximum Quantity/Packing	: 25 kg
IATA - Cargo only	: ALLOWED
- Cargo only - Packing instruction	: 449
- Cargo only - Maximum Quantity/ Packing	: 100 kg
IATA - Limited Quantities	: 10 kg
ERG-Nr	: 3P

**15. Regulatory information**
**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture**

Safety, health and environmental regulations/legislation specific for the substance or mixture	: Ensure all national/local regulations are observed.
REACH Restrictions - Annex XVII	: The components of this product are not subject to restrictions.
REACH Authorisation - Annex XIV	: The components of this product are not subject to authorization.

**15.2. Chemical Safety Assessment**

Chemical Safety Assessment	: It has not been carried out.
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**MATERIAL SAFETY DATA SHEET (MSDS)**  
**DIMETHYL GLYOXIME AR (2,3-BUTANEDION DIOXIME)**

In accordance with REACH Regulation (CE) N° 1907/2006 and with CLP Regulation (CE) N° 1272/2008

**DISCLAIMER:**

- **SUVCHEM** Products are to be used as Lab Chemicals for R&D only. Not for drug, medicinal, household or other uses.
- **SUVCHEM** shall not be responsible for any damage resulting from handling or from contact with the above product.
- **SUVCHEM** provides the information contained herein in good faith but makes no representation as to its comprehensiveness or accuracy. This document is intended only as a guide to the appropriate precautionary handling of the material by a properly trained person using this product.

**End of document**