

**1. Identification of the substances/ mixture and of the company/ undertaking****1.1 Product Identifiers**

Product Code GRM203  
Product Name DL- Malic acid, Free acid

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

Identified uses Laboratory chemicals, Manufacture of substances

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

Produced by HiMedia Laboratories Pvt. Ltd.  
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**1.4 Emergency Tel. No.**

Emergency Tel.No. Please contact the regional HiMedia representation in your country

**2. Hazards Identification****2.1 Classification of the substance or mixture****Classification according to Regulation (EC) No 1272/2008 [EU-GHS/CLP]**

Acute toxicity,oral (Category 4)  
Skin corrosion/irritation (Category 2)  
Serious eye damage/eye irritation (Category 1)  
Specific target organ toxicity, single exposure; Respiratory tract irritation (Category 3)

**Classification according to EU Directives 67/548/EEC or 1999/45/EC**

Harmful if swallowed.  
Irritating to respiratory system and skin  
Risk of serious damage to eyes.

**2.2 Label elements****Labelling according Regulation (EC) No 1272/2008 [CLP]**

Pictogram



Signal word Danger

Hazard Statement(s)

H302 Harmful if swallowed  
H315 Causes skin irritation  
H318 Causes serious eye damage  
H335 May cause respiratory irritation

Precautionary Statement(s)

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.  
P280 Wear protective gloves/protective clothing/eye protection/face protection.  
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

**According to European Directive 67/548/EEC as amended.**

Symbol(s)



**R-Phrase(s)**

R22 Harmful if swallowed.  
 R37/38 Irritating to respiratory system and skin  
 R41 Risk of serious damage to eyes.

**S-Phrase(s)**

S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.  
 S36/39 Wear suitable protective clothing and gloves.

## 2.3 Other hazards - none

**3. Composition/Information on Ingredients****3.1 Substances**

Synonym : (±)-2-Hydroxysuccinic acid; DL-Hydroxybutanedioic acid

Molecular Formula  $C_4 H_6 O_5$

Molecular Weight. 134.09

Component		Concentration
DL- Malic acid, Free acid		
CAS-No.	6915-15-7	
EC-No.	230-022-8	

**4. First Aid Measures****4.1 Description of first aid measures****General advice**

Consult a physician. Show this safety data sheet to the doctor in attendance.

**If inhaled**

If breathed in, move person into fresh air.If not breathing, give artificial respiration. Consult a physician.

**In case of skin contact**

Wash off with soap and plenty of water. Consult a physician.

**In case of eye contact**

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

**If swallowed**

Never give anything by mouth to an unconscious person. Rinse mouth with water. consult a physician.

**4.2 Most important symptoms and effects, both acute and delayed**

No data available

**4.3 Indication of immediate medical attention and special treatment needed**

No data available

**5. Fire Fighting Measures****5.1 Extinguishing media****Suitable extinguishing media**

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

**5.2 Special hazards arising from the substance or mixture**

Carbon oxides

**5.3 Precautions for fire-fighters**

Wear self contained breathing apparatus for fire fighting if necessary.

**5.4 Further information**

No data available

## **6 Accidental Release Measures**

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

Wear respiratory protection. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas.

### **6.2 Environmental precautions**

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

### **6.3 Methods and materials for containment and cleaning up**

Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal.

### **6.4 Reference to other sections**

For disposal see Section 13.

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## **7 Handling and Storage**

### **7.1 Precautions for safe handling**

Avoid contact with skin and eyes. Avoid inhalation of vapour or mist. Normal measures for preventive fire protection.

### **7.3 Conditions for safe storage, including any incompatibilities**

Store in cool place. Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Recommended Storage Temperature : Store below 30°C

### **7.3 Specific end uses**

No data available

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## **8 Exposure Controls/Personal Protection**

### **8.1 Control parameters**

Components with workplace control parameters

### **8.2 Exposure controls**

#### **Appropriate engineering controls**

Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

#### **Personal protective equipment**

##### **Hygiene measure**

Immediately change contaminated clothing. Apply preventive skin protection. Wash hands face after working with the substance

##### **Eye/face protection**

Tightly fitting safety goggles. Faceshield (8-inch minimum). Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

##### **Skin protection**

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (Without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices.

Wash and dry hands.

The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

##### **Body protection**

Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific work place.

##### **Respiratory protection**

Where risk assessment shows air-purifying respirators are appropriate use a fullface respirator with multi-purpose combination (US) or type ABEK(EN 14387) respirator cartridges as a backup to the engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

##### **Environment exposure controls**

Do not empty into drains

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## **9 Physical and chemical properties**

### **9.1 Information on basic physical and chemical properties**

Appearance	White to almost white crystals or powder or chunks
Odour	No data available
Odour Threshold	No data available
Odour Threshold	No data available
pH	No data available
Melting/freezing point	No data available
Initial boiling point and boiling range	No data available
Flash point	No data available
Upper/lower flammability or explosive limits	No data available
Vapour pressure	No data available
Vapour density	No data available
Relative density	No data available
Water Solubility	No data available
Partition coefficient: n-octanol/Water	No data available
Autoignition Temperature	No data available
Decomposition Temperature	No data available
Viscosity	No data available
Explosive properties	No data available
Oxidizing properties	No data available

## 9.2 Other safety information

No data available

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## 10 Stability and Reactivity

### 10.1 Reactivity

No data available

### 10.2 Chemical stability

No data available

### 10.3 Possibility of hazardous reactions

No data available

### 10.4 Conditions to avoid

No data available

### 10.5 Incompatible materials

Strong oxidizing agents

### 10.6 Hazardous decomposition products

Other decomposition products - No data available

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## 11 Toxicological Information

### 11.1 Information on toxicological effects

#### Acute toxicity

No data available

#### Skin corrosion/irritation

No data available

#### Serious eye damage/eye irritation

No data available

#### Respiratory or skin sensitisation

No data available

#### Germ cell mutagenicity

No data available

#### Carcinogenicity

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

#### Reproductive toxicity

No data available

#### Specific target organ toxicity- single exposure

No data available

#### Aspiration hazard

No data available

### Potential Health Effects

#### Inhalation.

Refer Section 2

**Skin**

Refer Section 2

**Eyes**

Refer Section 2

**Ingestion**

Refer Section 2

**Additional Information**

RTECS : ON7175000

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**12 Ecological Information**

**12.1 Toxicity**

No data available

**12.2 Persistence and degradability**

No data available

**12.3 Bioaccumulative potential**

No data available

**12.4 Mobility in soil**

No data available

**12.5 PBT and vPvB assessment**

No data available

**12.6 Other adverse effects**

No data available

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**13 Disposal Considerations**

**13.1 Waste treatments methods**

**Product**

Offer surplus and non-recyclable solutions to a licenced disposal company. Contact a licenced professional waste disposal service to dispose of this material.

**13.2 Contaminated packaging**

Dispose of as unused product.

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**14 Transport Information**

**14.1 UN-No.**

ADR/RID: -    IMDG: -    IATA: -

**14.2 UN proper shipping name**

ADR/RID            : no dangerous goods

IMDG                : no dangerous goods

IATA                : no dangerous goods

**14.3 Transport hazard class(es)**

ADR/RID: -    IMDG: -    IATA: -

**14.4 Packaging group**

ADR/RID: -    IMDG: -    IATA: -

**14.5 Environmental hazards**

ADR/RID: No    IMDG: Marine Pollutant:No    IATA: No

**14.6 Special precautions for use**

No data available

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**15 Regulatory Information**

This safety datasheet complies with the requirements of Regulation(EC) No.1907/2006

**15.1 Safety health and environment regulations/legislation specific for the substance or mixture**

No data available

**15.2 Chemical Safety Assessment**

No data available

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**16 Other Information**  
**Further information**

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