

MATERIAL SAFETY DATA SHEET

MALEIC ACID (For Synthesis) MSDS CAS : 110-16-7

Section 1: Chemical Product and Company Identification

Section 1: Chemical Product

Product Name : MALEIC ACID

CAS#: 110-16-7

C.I. No.: Not available.

Synonym : Not available.

Chemical Name: Not available.

Chemical Formula: Not available.

Brand: OXFORD

Details Of The Supplier Of The Safety Data Sheet:

**Company identification: OXFORD LAB FINE CHEM LLP
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Mumbai, Maharashtra, INDIA.
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Section 2: Composition and Information on Ingredients

Composition:

| Name | CAS # | % by Weight |
|-------------|----------|-------------|
| MALEIC ACID | 110-16-7 | 100 |

Section 3: Hazards Identification

Classification of the substance or mixture

Classification according to Regulation (EC) No 1999/45

Classification : Xn; R22
Xi; R36/37/38

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

Health hazards : Specific Target Organ Toxicity - Single exposure - Respiratory tract irritation - Category 3 - Warning (CLP : STOT SE 3) H335
Skin irritation - Category 2 - Warning (CLP : Skin Corr. 2) H315
Acute toxicity, Oral - Category 4 - Warning (CLP : Acute Tox. 4) H302
Skin sensitisation - Category 1 - Warning (CLP : Skin Sens. 1) H317
Eye irritation - Category 2A - Warning (CLP : Eye Irrit. 2) H319

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.

Section 4: First Aid Measures

Description of first aid measures

Inhalation

Remove to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor if you feel unwell.

Skin contact

If skin irritation or rash occurs : Wash contaminated clothing before reuse. Wash with plenty of soap and water. Specific treatment (see on this label). Get medical advice.

Eye contact

Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists : Get medical advice.

Ingestion : Obtain emergency medical attention. Do NOT induce vomiting. Rinse mouth.

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. Causes serious eye irritation. Causes skin irritation. May cause an allergic skin reaction. May cause respiratory irritation.

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).

Section 5: Fire and Explosion Data

Extinguishing media

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.

Special hazards arising from the substance or mixture

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

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.

Section 6: Accidental Release Measures

Personal precautions, protective equipment and emergency procedures

For emergency responders : Equip cleanup crew with proper protection.
Ventilate area.

For non-emergency personnel : Evacuate unnecessary personnel.

Environmental precautions

Environmental precautions : Prevent entry to sewers and public waters. Notify authorities if product enters sewers or public waters.

Methods and materials 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.

Reference to other sections

See section 8. Exposure controls/personal protection

Section 7: Handling and Storage

Precautions for safe handling

Handling : Contaminated work clothing should not be allowed out of the workplace. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Wash contaminated clothing before reuse. Avoid breathing dust, fume, gas, mist, vapours, spray. Use only outdoors or in a well-ventilated area. Wash thoroughly after handling. Wash thoroughly after handling.

Technical protective measures : Provide good ventilation in process area to prevent formation of vapour.

Conditions for safe storage, including any incompatibilities

Storage : Keep only in the original container in a cool, well ventilated place. Keep container tightly closed.

Storage - away from : Strong bases. Strong acids. Sources of ignition. Direct sunlight.

Specific end uses

Specific end use(s) : None.

Section 8: Exposure Controls/Personal Protection

Personal protection : Avoid all unnecessary exposure.

- **Respiratory protection** : Wear approved mask.
- **Hand protection** : Wear protective gloves.
- **Skin protection** : Wear suitable protective clothing.
- **Eye protection** : Chemical goggles or safety glasses.
- **Others** : When using, do not eat, drink or smoke.

Control parameters

Occupational Exposure Limits : No data available.

Section 9: Physical and Chemical Properties

Information on basic physical and chemical properties

Physical state at 20 °C : Solid

Colour : White crystalline

Odour : Faint, acidulous odor

Odour threshold : No data available.

Section 9: Physical and Chemical Properties(Continued)

| | |
|---|-----------------------------|
| pH value | : Not applicable. |
| Melting point [°C] | : 137 - 140 °C |
| Decomposition point [°C] | : N/A |
| Critical temperature [°C] | : N/A |
| Auto-ignition temperature [°C] | : N/A |
| Flammability (solid, gas) | : N/A |
| Flash point [°C] | : 127 °C |
| Boiling point [°C] | : 160 °C |
| 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/cm³] | : 1.58 |
| Relative density, gas (air=1) | : N/A |
| Relative density, liquid (water=1) | : N/A |
| Solubility in water [% weight] | : 788 g/l at 20 °C |
| Solubility in water | : N/A |
| Log Pow octanol / water at 20°C | : No data available. |
| Solubility | : <7 |
| Viscosity at 40°C [mm²/s] | : N/A |

Other information

| | |
|-------------------------------------|-----------------------------|
| Explosive properties | : N/A |
| Explosion limits - upper [%] | : N/A |
| Explosion limits - lower [%] | : 2,70% |
| Oxidising properties | : No data available. |

Section 10: Stability and Reactivity Data

Reactivity

Reactivity : Not established.

Chemical stability

Section 10: Stability and Reactivity Data (Continued)

Chemical stability : Stable under recommended storage conditions.

Possibility of hazardous reactions

Hazardous reactions : Not established.

Conditions to avoid

Conditions to avoid : Direct sunlight. Extremely high or low temperatures.

Incompatible materials

Materials to avoid : Strong acids. Strong bases.

Hazardous decomposition products

Hazardous decomposition products : Fumes. Carbon monoxide. Carbon dioxide.

Section 11: Toxicological Information

Information on toxicological effects

Acute toxicity

- **Inhalation** : Based on available data, the classification criteria are not met.
- **Dermal** : Based on available data, the classification criteria are not met.
- **Ingestion** : Harmful if swallowed.
- **Corrosion** : Based on available data, the classification criteria are not met.
- **Irritation** : Causes serious eye irritation.
: Causes skin irritation.
: May cause respiratory irritation.

Sensitization

- **Sensitization** : May cause an allergic skin reaction.

Mutagenicity

- **Mutagenicity** : Based on available data, the classification criteria are not met.

Carcinogenicity

- **Carcinogenicity** : Based on available data, the classification criteria are not met.

Toxic for reproduction

- **Toxic for reproduction** : Based on available data, the classification criteria are not met.

STOT-single exposure

- **STOT-single exposure** : Based on available data, the classification criteria are not met.

STOT-repeated exposure

- **STOT-repeated exposure** : Based on available data, the classification criteria are not met.

Aspiration hazard

- **Aspiration hazard** : Based on available data, the classification criteria are not met.

Section 12: Ecological Information

Toxicity

Toxicity information : Not established.

Persistence – degradability

Persistence - degradability : Biodegradable.

Bioaccumulative potential

Bioaccumulative potential : Not established.

Mobility in soil

Mobility in soil : Not established.

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.

Other adverse effects

Environmental precautions : Avoid release to the environment.

Section 13: Disposal Considerations

Waste treatment methods

General : Avoid release to the environment. Dispose in a safe manner in accordance with local/national regulations.

Section 14: Transport Information

Land transport (ADR-RID)

| | |
|-----------------------|--|
| Proper shipping name | : CORROSIVE SOLID, ACIDIC, ORGANIC, N.O.S. |
| UN N° | : 3261 |
| H.I. nr | : 80 |
| ADR - Class | : 8 |
| Labelling - Transport | : 8 : Corrosive substance. |
| ADR - Group : III | |

Sea transport (IMDG) [English only]

| | |
|------------------------------|--|
| Proper shipping name | : CORROSIVE SOLID, ACIDIC, ORGANIC, N.O.S. |
| UN N° | : 3261 |
| IMO-IMDG - Class or division | : 8 : Corrosive substance. |
| IMO-IMDG - Packing group | : III |

Air transport (ICAO-IATA) [English only]

| | |
|--------------------------|--|
| Proper shipping name | : CORROSIVE SOLID, ACIDIC, ORGANIC, N.O.S. |
| UN N° | : 3261 |
| IATA - Class or division | : 8 : Corrosive substance. |
| IATA - Packing group | : III |

Section 15: Other Regulatory Information

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

Safety, health and environmental : Ensure all national/local regulations are observed.
regulations/legislation specific for
the substance or mixture

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.

Chemical Safety Assessment

Chemical Safety Assessment : It has not been carried out.

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Section 16 - Additional Information

References: Not available.

Other Special Considerations: Not available.

Disclaimer:

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