Safety Data Sheet

Malonic Acid

CAROLINA®
www.carolina.com

Section 1 Product Description

Product Name:	Malonic Acid
Recommended Use:	Science education applications
Synonyms:	Propanedioic Acid, Methanedicarboxylic Acid
Distributor:	Carolina Biological Supply Company 2700 York Road, Burlington, NC 27215 1-800-227-1150
Chemical Information:	800-227-1150 (8am-5pm (ET) M-F)
Chemtrec:	800-424-9300 (Transportation Spill Response 24 hours)

Section 2 Hazard Identification

Classification of the chemical in accordance with paragraph (d) of §1910.1200;

DANGER

Causes serious eye damage.

GHS Classification:
Serious Eye Damage/Eye Irritation Category 1, Acute Toxicity - Oral Category 5

Acute Toxicity Dermal Contains	100 % of the mixture consists of ingredient(s) of unknown toxicity
Acute Toxicity Inhalation Gas Contains	100 % of the mixture consists of ingredient(s) of unknown toxicity
Acute Toxicity Inhalation Vapor Contains	100 % of the mixture consists of ingredient(s) of unknown toxicity
Acute Toxicity Inhalation Dust/Mist Contains	100 % of the mixture consists of ingredient(s) of unknown toxicity

Section 3 Composition / Information on Ingredients

Chemical Name	CAS #	%
Malonic Acid	141-82-2	100

Section 4 First Aid Measures

Emergency and First Aid Procedures

Inhalation:	In case of accident by inhalation: remove casualty to fresh air and keep at rest.
Eyes:	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Skin Contact:	After contact with skin, wash immediately with plenty of water.
Ingestion:	If swallowed, do not induce vomiting: seek medical advice immediately and show this container or label.

Section 5 Firefighting Procedures

Extinguishing Media:	Use alcohol resistant foam, carbon dioxide, dry chemical, or water spray when fighting fires. Water or foam may cause frothing if liquid is burning but it still may be a useful extinguishing agent if carefully applied to the fire. Do not direct a water stream directly into the hot burning liquid.

Fire Fighting Methods and Protection: Firefighters should wear full protective equipment and NIOSH approved self-contained breathing apparatus.
Fire and/or Explosion Hazards: None
Hazardous Combustion Products: Carbon dioxide, Carbon monoxide

Section 6 Spill or Leak Procedures

Steps to Take in Case Material Is Released or Spilled: Exposure to the spilled material may be irritating or harmful. Follow personal protective equipment recommendations found in Section 8 of this SDS. Additional precautions may be necessary based on special circumstances created by the spill including; the material spilled, the quantity of the spill, the area in which the spill occurred. Also consider the expertise of employees in the area responding to the spill. Avoid contact with clothing. Avoid contact with material. Avoid creating and inhaling spray or mist.
Ventilate the area by opening door and/or turning on fans and blowers. Absorb spill with inert material (e.g., dry sand or earth), then place in a chemical waste container Contain the discharged material. Do not flush spill to drain.

Section 7 Handling and Storage

Handling: Wear protective gloves/protective clothing/eye protection/face protection. Avoid creating and inhaling dust. Do not ingest or take internally. Avoid direct sunlight and heat. Keep locked up and out of the reach of children.
Storage: Suitable for any general chemical storage.
Storage Code: Green - general chemical storage

Section 8 Protection Information

	ACGIH		OSHA PEL	
Chemical Name	**(TWA)**	**(STEL)**	**(TWA)**	**(STEL)**
No data available	N/A	N/A	N/A	N/A

Control Parameters
Engineering Measures: No exposure limits exist for the constituents of this product. General room ventilation might be required to maintain operator comfort under normal conditions of use.
Personal Protective Equipment (PPE): Lab coat, apron, eye wash, safety shower.
Respiratory Protection: No respiratory protection required under normal conditions of use.
Eye Protection: Wear chemical splash goggles when handling this product. Have an eye wash station available.
Skin Protection: Avoid skin contact by wearing chemically resistant gloves, an apron and other protective equipment depending upon conditions of use. Inspect gloves for chemical break-through and replace at regular intervals. Clean protective equipment regularly. Wash hands and other exposed areas with mild soap and water before eating, drinking, and when leaving work.
Gloves: Nitrile

Section 9 Physical Data

Formula: C3H4O4
Molecular Weight: 104.06
Appearance: White Powder
Odor: No data available
Odor Threshold: No data available
pH: No data available
Melting Point: 137 C
Boiling Point: No data available
Flash Point: 171 C
Flammable Limits in Air: N/A
Vapor Pressure: N/A
Evaporation Rate (BuAc=1): N/A
Vapor Density (Air=1): N/A
Specific Gravity: 1.67
Solubility in Water: Soluble
Log Pow (calculated): No data available
Autoignition Temperature: 580 C
Decomposition Temperature: No data available
Viscosity: No data available
Percent Volatile by Volume: N/A

Section 10 Reactivity Data

Reactivity: No data available
Chemical Stability: Stable under normal conditions.
Conditions to Avoid: Elevated temperatures
Incompatible Materials: Strong oxidizing agents
Hazardous Polymerization: Will not occur

Section 11 Toxicity Data

Routes of Entry Inhalation, Ingestion, and Skin contact.
Symptoms (Acute): Respiratory disorders,
Delayed Effects: No data available

Acute Toxicity:

Chemical Name	CAS Number	Oral LD50	Dermal LD50	Inhalation LC50
Malonic Acid	141-82-2	Oral LD50 Mouse 4000 mg/kg	Not determined	Not determined

Carcinogenicity:

Chemical Name	CAS Number	IARC	NTP	OSHA
No data available	141-82-2	Not listed	Not listed	Not listed

Chronic Effects:
Mutagenicity: No evidence of a mutagenic effect.
Teratogenicity: No evidence of a teratogenic effect (birth defect).
Sensitization: No evidence of a sensitization effect.
Reproductive: No evidence of negative reproductive effects.
Target Organ Effects:
Acute: See Section 2
Chronic: Reproductive data cited.

Section 12 Ecological Data

Overview: This material is not expected to be harmful to the ecology. Keep out of waterways.
Mobility: No data
Persistence: No data
Bioaccumulation: No data
Degradability: No data
Other Adverse Effects: No data

Chemical Name	CAS Number	Eco Toxicity
N/A	141-82-2	

Section 13 Disposal Information

Disposal Methods: Dispose in accordance with all applicable Federal, State and Local regulations. Always contact a permitted waste disposer (TSD) to assure compliance.
Waste Disposal Code(s): Not Determined

Section 14 Transport Information

Ground - DOT Proper Shipping Name:
Not Regulated for Transport

Air - IATA Proper Shipping Name:
Not regulated for air transport by IATA.

Section 15 Regulatory Information

TSCA Status: All components in this product are on the TSCA Inventory.

Chemical Name	CAS Number	§ 313 Name	§ 304 RQ	CERCLA RQ	§ 302 TPQ	CAA 112(2) TQ
No data available	141-82-2	No	No	No	No	No

Section 16 Additional Information

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The information provided in this (Material) Safety Data Sheet represents a compilation of data drawn directly from various sources available to us. Carolina Biological Supply makes no representation or guarantee as to the suitability of this information to a particular application of the substance covered in the (Material) Safety Data Sheet.

Glossary

ACGIH	American Conference of Governmental Industrial Hygienists
CAS	Chemical Abstract Service Number
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
DOT	U.S. Department of Transportation
IARC	International Agency for Research on Cancer
N/A	Not Available
NTP	National Toxicology Program
OSHA	Occupational Safety and Health Administration
PEL	Permissible Exposure Limit
ppm	Parts per million
RCRA	Resource Conservation and Recovery Act
SARA	Superfund Amendments and Reauthorization Act
TLV	Threshold Limit Value
TSCA	Toxic Substances Control Act
IDLH	Immediately dangerous to life and health