



The MSDS format adheres to the standards and regulatory requirements of the United States and may not meet regulatory requirements in other countries.

DuPont  
Material Safety Data Sheet

Page 1

DIETHYL MALONATE  
6243CR Revised 30-OCT-1996

CHEMICAL PRODUCT/COMPANY IDENTIFICATION

Material Identification

CAS Number : 105-53-3  
Formula : C<sub>7</sub>H<sub>12</sub>O<sub>4</sub>  
Molecular Weight : 160.17

Tradenames and Synonyms

CARBETHOXYACETIC ESTER  
DICARBETHOXYMETHANE  
DIETHYL MALONATE  
DIETHYL PROPANEDIOATE  
ETHYL MALONATE  
MALONIC ESTER  
METHANEDICARBOXYLIC ACID, DIETHYL ESTER  
PROPANEDIOIC ACID, DIETHYL ESTER  
DEM

Company Identification

MANUFACTURER/DISTRIBUTOR  
DuPont Chemical Solutions Enterprise  
1007 Market Street  
Wilmington, DE 19898

PHONE NUMBERS

Product Information : 1-800-441-7515  
Transport Emergency : CHEMTREC 1-800-424-9300  
Medical Emergency : 1-800-441-3637

COMPOSITION/INFORMATION ON INGREDIENTS

Components

Material	CAS Number	%
DIETHYL MALONATE	105-53-3	98-100

HAZARDS IDENTIFICATION

Potential Health Effects

Skin contact may cause skin irritation with discomfort or rash. In human patch tests, diethyl malonate produced no skin sensitization when tested at 4% in petrolatum.

Eye contact may cause eye irritation with tearing, discomfort or blurring of vision; permanent eye damage is

## (HAZARDS IDENTIFICATION - Continued)

possible.

## Carcinogenicity Information

None of the components present in this material at concentrations equal to or greater than 0.1% are listed by IARC, NTP, OSHA or ACGIH as a carcinogen.

-----  
FIRST AID MEASURES  
-----

## First Aid

## INHALATION

If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician.

## SKIN CONTACT

Flush skin with water after contact. Wash contaminated clothing before reuse.

## EYE CONTACT

In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Call a physician.

## INGESTION

If swallowed, do not induce vomiting. Immediately give 2 glasses of water. Never give anything by mouth to an unconscious person. Call a physician.

-----  
FIRE FIGHTING MEASURES  
-----

## Flammable Properties

Flash Point : 100 C (212 F)  
Method : CC  
Flammable limits in Air, % by Volume  
LEL : ca. 1.4

Heating can release vapors which can be ignited.

Hazardous gases/vapors produced in fire are carbon monoxide.

## Extinguishing Media

Water Spray, Foam, Dry Chemical, CO2.

## (FIRE FIGHTING MEASURES - Continued)

## Fire Fighting Instructions

Keep personnel removed and upwind of fire. Wear self-contained breathing apparatus. Wear full protective equipment. Cool tank/container with water spray.

-----  
ACCIDENTAL RELEASE MEASURES-----  
Safeguards (Personnel)

NOTE: Review FIRE FIGHTING MEASURES and HANDLING (PERSONNEL) sections before proceeding with clean-up. Use appropriate PERSONAL PROTECTIVE EQUIPMENT during clean-up.

## Initial Containment

Dike spill. Prevent material from entering sewers, waterways, or low areas.

## Spill Clean Up

Soak up with sawdust, sand, oil dry or other absorbent material.

-----  
HANDLING AND STORAGE-----  
Handling (Personnel)

Avoid breathing vapors or mist. Avoid contact with skin. Avoid contact with clothing. Do not get in eyes. Wash thoroughly after handling. Wash clothing after use.

## Storage

Keep container in a cool place. Store in a well ventilated place. Store in a cool place. Keep container tightly closed.

Store in a dry place.

-----  
EXPOSURE CONTROLS/PERSONAL PROTECTION-----  
Engineering Controls

Use only with adequate ventilation. Keep container tightly closed.

Keep in a dry place.

## Personal Protective Equipment

## EYE/FACE PROTECTION

Wear coverall chemical splash goggles.

## (EXPOSURE CONTROLS/PERSONAL PROTECTION - Continued)

## RESPIRATORS

Wear NIOSH approved respiratory protection, as appropriate.

## PROTECTIVE CLOTHING

Where there is potential for skin contact have available, and wear as appropriate, impervious gloves, apron, pants, and jacket.

## Exposure Guidelines

## Exposure Limits

## DIETHYL MALONATE

PEL (OSHA)	: None Established
TLV (ACGIH)	: None Established

-----  
PHYSICAL AND CHEMICAL PROPERTIES  
-----

## Physical Data

Boiling Point	: 199 C (390 F) @ 760 mm Hg
Vapor Pressure	: 1 mm Hg @ 40 C (104 F) 0.26 mm Hg @ 20 C (68 F)
Vapor Density	: 5.52 (Air = 1)
Melting Point	: -51 to -50 C (-60 to -58 F)
% Volatiles	: 100 WT%
Solubility in Water	: 1.08 WT% @ 20 C (68 F) Slight
Odor	: Sweet Ester
Form	: Liquid
Color	: Clear, colorless
Specific Gravity	: >1.055 @ 20/20C (68/68F)

-----  
STABILITY AND REACTIVITY  
-----

## Chemical Stability

Stable at normal temperatures and storage conditions.

## Incompatibility with Other Materials

Incompatible with acids, bases, oxidizing agents and reducing agents.

## Decomposition

Hazardous gases/vapors produced are carbon monoxide.

## Polymerization

Polymerization will not occur.

-----  
TOXICOLOGICAL INFORMATION  
-----

## Animal Data

Oral LD50: 14.9 mL/kg in rats  
Dermal LD50: >16 mL/kg in rabbits

Diethyl malonate is a mild skin irritant and in eye testing, caused serious corneal injury in animals. This material has not produced genetic damage in bacterial cell cultures.

-----  
DISPOSAL CONSIDERATIONS  
-----

## Waste Disposal

Treatment, storage, transportation, and disposal must be in accordance with applicable Federal, State/Provincial, and Local regulations. Do not flush to surface water or sanitary sewer system. Incinerate material in accordance with Federal, State/Provincial and Local requirements.

-----  
TRANSPORTATION INFORMATION  
-----

## Shipping Information

Not Regulated as a hazardous material by DOT, IMO, or IATA.

-----  
REGULATORY INFORMATION  
-----

## U.S. Federal Regulations

TSCA Inventory Status : Reported/Included.

TITLE III HAZARD CLASSIFICATIONS SECTIONS 311, 312

Acute : Yes  
Chronic : No  
Fire : Yes  
Reactivity : No  
Pressure : No

-----  
OTHER INFORMATION  
-----

## NFPA, NPCA-HMIS

NFPA Rating  
Health : 3  
Flammability : 1  
Reactivity : 0

(Continued)

-----

The data in this Material Safety Data Sheet relates only to the specific material designated herein and does not relate to use in combination with any other material or in any process.

Responsible for MSDS : MSDS Coordinator  
> : DuPont Chemical Solutions Enterprise  
Address : Wilmington, DE 19898  
Telephone : (302) 441-7515

This information is based upon technical information believed to be reliable. It is subject to revision as additional knowledge and experience is gained.

End of MSDS