

Diethyl ethoxymethylenemalonate	
Identification	
Name	Diethyl ethoxymethylenemalonate
Synonyms	(Ethoxymethylene)-propanedioic acid diethyl ester
Molecular Formula	C ₁₀ H ₁₆ O ₅
Molecular Weight	216.23
CAS Registry Number	87-13-8
EINECS	201-725-7
Tariff code	2915509000
Properties	
Density	1.08
Boiling point	279-281 °C
Refractive index	1.461-1.463
Flash point	144 °C
Water solubility	insoluble
Safety Data	
Hazard class	No
Package	No
Transport information	Shipped as non-dangerous chemicals
MSDS	<i>Available</i>
Specification	
Purity	99.0%min
Ethanol content	0.30%max
Water content	0.10%max
Package	1.0kg/bottle,170kg/drum

**** SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION ****

MSDS Name: DIETHYL ETHOXYMETHYLENEMALONATE, 99+%

**** SECTION 2 - COMPOSITION, INFORMATION ON INGREDIENTS ****

CAS# Chemical Name % EINECS# Haz

Symbols

Risk

Phrases

87-13-8 DIETHYL ETHOXYMETHYLENEMALONATE 99+ 201-725-7 Xn 42/43

**** SECTION 3 - HAZARDS IDENTIFICATION ****

EMERGENCY OVERVIEW

May cause sensitization by inhalation and skin contact.

Potential Health Effects

The toxicological properties of this material have not been investigated. Use appropriate procedures to prevent opportunities for direct contact with the skin or eyes and to prevent inhalation.

**** SECTION 4 - FIRST AID MEASURES ****

Eyes:

Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids.

Skin:

Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.

Ingestion:

Do NOT induce vomiting. If conscious and alert, rinse mouth and drink 2-4 cupfuls of milk or water.

Inhalation:

Remove from exposure and move to fresh air immediately.

Notes to Physician:

**** SECTION 5 - FIRE FIGHTING MEASURES ****

General Information:

As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion.

Extinguishing Media:

In case of fire, use water, dry chemical, chemical foam, or alcohol-resistant foam.

**** SECTION 6 - ACCIDENTAL RELEASE MEASURES ****

General Information: Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks:

Absorb spill with inert material (e.g. vermiculite, sand or earth), then place in suitable container. Clean up spills immediately, observing precautions in the Protective Equipment section.

**** SECTION 7 - HANDLING and STORAGE ****

Handling:

Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Avoid contact with eyes, skin, and clothing. Avoid ingestion and inhalation.

Storage:

Store in a cool, dry place. Keep container closed when not in use.

**** SECTION 8 - EXPOSURE CONTROLS, PERSONAL PROTECTION ****

Engineering Controls:

Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits. Use process enclosure, local exhaust ventilation, or other engineering controls to control airborne levels.

Personal Protective Equipment

Eyes:

Wear safety glasses and chemical goggles if splashing is possible.

Skin:

Wear appropriate protective gloves and clothing to prevent skin exposure.

Clothing:

Wear appropriate protective clothing to minimize contact with skin.

Respirators:

Wear a NIOSH/MSHA or European Standard EN 149 approved full-facepiece airline respirator in the positive pressure mode with emergency escape provisions.

**** SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES ****

Physical State: Clear liquid

Color: colorless - light yellow

Odor: Not available.

pH: Not available.

Vapor Pressure: Not available.

Viscosity: Not available.

Boiling Point: 279.0 - 281.0 deg C @ 760.00mm

Freezing/Melting Point: 0 deg C

Autoignition Temperature: Not available.

Flash Point: 144 deg C (291.20 deg F)

Explosion Limits, lower: Not available.

Explosion Limits, upper: Not available.

Decomposition Temperature: >279 deg C

Solubility in water: insoluble

Specific Gravity/Density: 1.0800g/cm³

Molecular Formula: C₁₀H₁₆O₅

Molecular Weight: 216.23

**** SECTION 10 - STABILITY AND REACTIVITY ****

Chemical Stability:

Stable under normal temperatures and pressures.

Conditions to Avoid:

Incompatible materials, strong oxidants.

Incompatibilities with Other Materials:

Oxidizing agents, reducing agents, acids, bases.

Hazardous Decomposition Products:

Carbon monoxide, irritating and toxic fumes and gases, carbon dioxide.

Hazardous Polymerization: Has not been reported.

**** SECTION 11 - TOXICOLOGICAL INFORMATION ****

RTECS#:

CAS# 87-13-8: 001100000

LD50/LC50:

CAS# 87-13-8: Draize test, rabbit, skin: 500 mg/24H Moderate; Oral, mouse: LD50 = 2227 mg/kg; Oral, rat: LD50 = 925 mg/kg.

Carcinogenicity:

DIETHYL ETHOXYMETHYLENEMALONATE, 99+% -

Not listed by ACGIH, IARC, NIOSH, NTP, or OSHA.

See actual entry in RTECS for complete information.

**** SECTION 12 - ECOLOGICAL INFORMATION ****

Not available

**** SECTION 13 - DISPOSAL CONSIDERATIONS ****

Dispose of in a manner consistent with federal, state, and local regulations.

**** SECTION 14 - TRANSPORT INFORMATION ****

IATA

No information available.

IMO

No information available.

RID/ADR

No information available.

**** SECTION 15 - REGULATORY INFORMATION ****

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols: XN

Risk Phrases:

R 42/43 May cause sensitization by inhalation and skin contact.

Safety Phrases:

S 24/25 Avoid contact with skin and eyes.

S 27 Take off immediately all contaminated clothing

WGK (Water Danger/Protection)

CAS# 87-13-8: 1

United Kingdom Occupational Exposure Limits

United Kingdom Maximum Exposure Limits

Canada

CAS# 87-13-8 is listed on Canada's NDSL List.

CAS# 87-13-8 is not listed on Canada's Ingredient Disclosure List.

Exposure Limits

US FEDERAL

TSCA

CAS# 87-13-8 is listed on the TSCA inventory.