

SAFETY DATA SHEET

Creation Date 26-Sep-2009

Revision Date 28-Mar-2024

Revision Number 3

1. Identification

Product Name Diethyl phthalate

Cat No. : L04085

CAS No 84-66-2
Synonyms Ethyl phthalate

Recommended Use Laboratory chemicals.
Uses advised against Food, drug, pesticide or biocidal product use.

Details of the supplier of the safety data sheet

Company

Thermo Fisher Scientific Chemicals, Inc.
30 Bond Street
Ward Hill, MA 01835-8099
Tel: 800-343-0660
Fax: 800-322-4757

Emergency Telephone Number

For information **US** call: 001-800-227-6701 / **Europe** call: +32 14 57 52 11
Emergency Number **US**:001-201-796-7100 / **Europe**: +32 14 57 52 99
CHEMTREC Tel. No. **US**:001-800-424-9300 / **Europe**:001-703-527-3887

2. Hazard(s) identification

Classification

Classification under 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

This chemical is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Label Elements

None required

Hazards not otherwise classified (HNOC)

None identified

3. Composition/Information on Ingredients

Component	CAS No	Weight %
Diethyl phthalate	84-66-2	>95

4. First-aid measures

Eye Contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention.
Skin Contact	Wash off immediately with plenty of water for at least 15 minutes. Get medical attention.
Inhalation	Remove from exposure, lie down. Remove to fresh air. If not breathing, give artificial respiration. Get medical attention.
Ingestion	Do NOT induce vomiting. Clean mouth with water. Get medical attention.
Most important symptoms and effects	. Central nervous system disorders
Notes to Physician	Treat symptomatically

5. Fire-fighting measures

Suitable Extinguishing Media	Water spray. Carbon dioxide (CO ₂). Dry chemical. Water mist may be used to cool closed containers. Chemical foam.
Unsuitable Extinguishing Media	No information available
Flash Point	156 °C / 312.8 °F
Method -	No information available
Autoignition Temperature	430 °C / 806 °F
Explosion Limits	
Upper	No data available
Lower	.75%
Sensitivity to Mechanical Impact	No information available
Sensitivity to Static Discharge	No information available

Specific Hazards Arising from the Chemical

Keep product and empty container away from heat and sources of ignition.

Hazardous Combustion Products

Carbon monoxide (CO). Carbon dioxide (CO₂).

Protective Equipment and Precautions for Firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

NFPA

Health
0

Flammability
1

Instability
0

Physical hazards
N/A

6. Accidental release measures

Personal Precautions	Ensure adequate ventilation. Use personal protective equipment as required.
Environmental Precautions	See Section 12 for additional Ecological Information. Do not flush into surface water or sanitary sewer system.

Methods for Containment and Clean Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder,

Up sawdust). Prevent product from entering drains. Keep in suitable, closed containers for disposal. Do not flush into surface water or sanitary sewer system.

7. Handling and storage

Handling Avoid contact with skin and eyes. Do not breathe mist/vapors/spray. Take precautionary measures against static discharges. Wash hands before breaks and immediately after handling the product.

Storage. Keep in a dry, cool and well-ventilated place. Keep container tightly closed. Incompatible Materials. Acids. Strong bases. Strong reducing agents. Oxidizing agent.

8. Exposure controls / personal protection

Exposure Guidelines

Component	ACGIH TLV	OSHA PEL	NIOSH	Mexico OEL (TWA)
Diethyl phthalate	TWA: 5 mg/m ³	(Vacated) TWA: 5 mg/m ³	TWA: 5 mg/m ³	TWA: 5 mg/m ³

Legend

ACGIH - American Conference of Governmental Industrial Hygienists

OSHA - Occupational Safety and Health Administration

NIOSH: NIOSH - National Institute for Occupational Safety and Health

Engineering Measures None under normal use conditions.

Personal Protective Equipment

Eye/face Protection Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin and body protection Wear appropriate protective gloves and clothing to prevent skin exposure.

Respiratory Protection No protective equipment is needed under normal use conditions.

Recommended Filter type: Particle filter.

Hygiene Measures Handle in accordance with good industrial hygiene and safety practice.

9. Physical and chemical properties

Physical State	Liquid
Appearance	Colorless
Odor	Odorless
Odor Threshold	No information available
pH	No information available
Melting Point/Range	No data available
Boiling Point/Range	298 - 299 °C / 568.4 - 570.2 °F @ 760 mmHg
Flash Point	156 °C / 312.8 °F
Evaporation Rate	No information available
Flammability (solid,gas)	Not applicable
Flammability or explosive limits	
Upper	No data available
Lower	.75%
Vapor Pressure	No information available
Vapor Density	No information available
Specific Gravity	1.118
Solubility	1 g/l (20°C)

Partition coefficient; n-octanol/water	No data available
Autoignition Temperature	430 °C / 806 °F
Decomposition Temperature	No information available
Viscosity	No information available
Molecular Formula	C12 H14 O4
Molecular Weight	222.24

10. Stability and reactivity

Reactive Hazard	None known, based on information available
Stability	Stable under normal conditions.
Conditions to Avoid	Incompatible products.
Incompatible Materials	Acids, Strong bases, Strong reducing agents, Oxidizing agent
Hazardous Decomposition Products	Carbon monoxide (CO), Carbon dioxide (CO ₂)
Hazardous Polymerization	Hazardous polymerization does not occur.
Hazardous Reactions	None under normal processing.

11. Toxicological information

Acute Toxicity

Product Information Component Information

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Diethyl phthalate	LD50 = 8600 mg/kg (Rat)	LD50 > 11200 mg/kg (Rat)	LC50 > 4.64 mg/L (Rat) 6 h

Toxicologically Synergistic Products	No information available
--------------------------------------	--------------------------

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Irritation	May cause irritation
Sensitization	No information available
Carcinogenicity	The table below indicates whether each agency has listed any ingredient as a carcinogen.

Component	CAS No	IARC	NTP	ACGIH	OSHA	Mexico
Diethyl phthalate	84-66-2	Not listed	Not listed	Not listed	Not listed	Not listed

Mutagenic Effects	Not mutagenic in AMES Test
-------------------	----------------------------

Reproductive Effects	No information available.
----------------------	---------------------------

Developmental Effects	No information available.
-----------------------	---------------------------

Teratogenicity	No information available.
----------------	---------------------------

STOT - single exposure	None known
STOT - repeated exposure	None known

Aspiration hazard	No information available
-------------------	--------------------------

Symptoms / effects, both acute and delayed	Central nervous system disorders
--	----------------------------------

Endocrine Disruptor Information

Component	EU - Endocrine Disruptors Candidate List	EU - Endocrine Disruptors - Evaluated Substances	Japan - Endocrine Disruptor Information
Diethyl phthalate	Group III Chemical	Not applicable	Not applicable

Other Adverse Effects The toxicological properties have not been fully investigated.

12. Ecological information

Ecotoxicity

Do not flush into surface water or sanitary sewer system. Do not allow material to contaminate ground water system. Contains a substance which is: Harmful to aquatic organisms. The product contains following substances which are hazardous for the environment.

Component	Freshwater Algae	Freshwater Fish	Microtox	Water Flea
Diethyl phthalate	EC50: 2.11 - 4.29 mg/L, 96h static (Pseudokirchneriella subcapitata) EC50: 42 - 255 mg/L, 72h (Pseudokirchneriella subcapitata) EC50: = 21 mg/L, 96h static (Desmodesmus subspicatus) EC50: = 21 mg/L, 96h (Desmodesmus subspicatus) EC50: = 23 mg/L, 72h static (Desmodesmus subspicatus) EC50: = 23 mg/L, 72h (Desmodesmus subspicatus)	LC50: = 17 mg/L, 96h flow-through (Pimephales promelas) LC50: = 22 mg/L, 96h flow-through (Lepomis macrochirus) LC50: = 16.7 mg/L, 96h static (Lepomis macrochirus) LC50: = 12 mg/L, 96h flow-through (Oncorhynchus mykiss) LC50: = 16.8 mg/L, 96h static (Pimephales promelas)	EC50 = 112 mg/L 30 min EC50 = 114 mg/L 15 min EC50 = 114 mg/L 5 min	EC50: = 86 mg/L, 48h Static (Daphnia magna) EC50: 36 - 74 mg/L, 48h (Daphnia magna)

Persistence and Degradability Persistence is unlikely

Bioaccumulation/ Accumulation No information available.

Mobility . Will likely be mobile in the environment due to its water solubility.

Component	log Pow
Diethyl phthalate	2.2

13. Disposal considerations

Waste Disposal Methods Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

Component	RCRA - U Series Wastes	RCRA - P Series Wastes
Diethyl phthalate - 84-66-2	U088	-

14. Transport information

DOT Not regulated
TDG Not regulated
IATA Not regulated
IMDG/IMO Not regulated

15. Regulatory information

United States of America Inventory

Component	CAS No	TSCA	TSCA Inventory notification - Active-Inactive	TSCA - EPA Regulatory Flags
-----------	--------	------	---	-----------------------------

Diethyl phthalate	84-66-2	X	ACTIVE	-
-------------------	---------	---	--------	---

Legend:

TSCA US EPA (TSCA) - Toxic Substances Control Act, (40 CFR Part 710)

X - Listed

- - Not Listed

TSCA - Per 40 CFR 751, Regulation of Certain Chemical Substances & Mixtures, Under TSCA Section 6(h) (PBT)

Not applicable

TSCA 12(b) - Notices of Export

Not applicable

International Inventories

Canada (DSL/NDL), Europe (EINECS/ELINCS/NLP), Philippines (PICCS), Japan (ENCS), Japan (ISHL), Australia (AICS), China (IECSC), Korea (KECL).

Component	CAS No	DSL	NDL	EINECS	PICCS	ENCS	ISHL	AICS	IECSC	KECL
Diethyl phthalate	84-66-2	X	-	201-550-6	X	X	X	X	X	KE-02216

KECL - NIER number or KE number (<http://ncis.nier.go.kr/en/main.do>)**U.S. Federal Regulations****SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

SARA 311/312 Hazard Categories

Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications.

CWA (Clean Water Act)

Component	CWA - Hazardous Substances	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants
Diethyl phthalate	-	-	X	X

Clean Air Act

Not applicable

OSHA - Occupational Safety and Health Administration

Not applicable

CERCLA

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355).

Component	Hazardous Substances RQs	CERCLA Extremely Hazardous Substances RQs	SARA Reportable Quantity (RQ)
Diethyl phthalate	1000 lb	-	1000 lb 454 kg

California Proposition 65

This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

Component	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
Diethyl phthalate	X	X	X	-	X

U.S. Department of Transportation

Reportable Quantity (RQ): Y
 DOT Marine Pollutant N
 DOT Severe Marine Pollutant N

U.S. Department of Homeland Security

This product does not contain any DHS chemicals.

Other International Regulations

Mexico - Grade No information available

Authorisation/Restrictions according to EU REACH

Not applicable

Component	CAS No	REACH (1907/2006) - Annex XIV - Substances Subject to Authorization	REACH (1907/2006) - Annex XVII - Restrictions on Certain Dangerous Substances	REACH Regulation (EC 1907/2006) article 59 - Candidate List of Substances of Very High Concern (SVHC)
Diethyl phthalate	84-66-2	-	-	-

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

Component	CAS No	OECD HPV	Persistent Organic Pollutant	Ozone Depletion Potential	Restriction of Hazardous Substances (RoHS)
Diethyl phthalate	84-66-2	Listed	Not applicable	Not applicable	Not applicable

Contains component(s) that meet a 'definition' of per & poly fluoroalkyl substance (PFAS)?

Not applicable

Other International Regulations

Component	CAS No	Seveso III Directive (2012/18/EC) - Qualifying Quantities for Major Accident Notification	Seveso III Directive (2012/18/EC) - Qualifying Quantities for Safety Report Requirements	Rotterdam Convention (PIC)	Basel Convention (Hazardous Waste)
Diethyl phthalate	84-66-2	Not applicable	Not applicable	Not applicable	Not applicable

16. Other information

Prepared By

Health, Safety and Environmental Department
 Email: chem.techinfo@thermofisher.com
 www.thermofisher.com

Creation Date

26-Sep-2009

Revision Date

28-Mar-2024

Print Date

28-Mar-2024

Revision Summary

New emergency telephone response service provider.

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other

materials or in any process, unless specified in the text

End of SDS