

Safety Data Sheet

#31953402 · Full 16-section SDS

According to Regulation (EC) No 1907/2006

According to Regulation (EC) No 2020/878

PRODUCT	CAS NUMBER	FORMULA	VERSION	REVISION DATE
Diethyl phthalate	84-66-2	C12H14O4	10	13 Aug 2026

SECTION 1

Identification

Product name	Diethyl phthalate
CAS number	84-66-2
Chemical formula	C12H14O4
Molecular weight	222.24
SMILES	CCOC(=O)C1=CC=CC=C1C(=O)OCC
EC / EINECS number	201-550-6
Recommended use & restrictions	For research and development. Laboratory chemicals. Manufacture of substances. Not suitable for human or veterinary purposes.
Emergency telephone	0344 892 0111 — National Poisons Information Service (NPIS) (United Kingdom — for healthcare professionals (via TOXBASE))

SECTION 2

Hazard identification

NONE

CODE	PRECAUTIONARY STATEMENT
P280	Wear protective gloves/protective clothing/eye protection/face protection
P308+313	IF exposed or concerned: Get medical advice/attention

Other hazards (e.g. PBT / vPvB, not classified)	This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher. This product does not contain any known or suspected Endocrine disruptors.
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SECTION 3

Composition / information on ingredients

Purity / concentration	~100.0%
Impurities / stabilising additives	<i>Not applicable</i>

SECTION 4

First-aid measures

Inhalation	Fresh air.
Skin contact	Take off immediately all contaminated clothing. Rinse skin with water/shower.
Eye contact	Rinse out with plenty of water. Remove contact lenses.
Ingestion	Caution if victim vomits. Risk of aspiration! Keep airways free. Pulmonary failure possible after aspiration of vomit. Call a physician immediately.
Symptoms / effects & medical attention	Vomiting, diarrhoea, gastric pain. Treat symptomatically.

SECTION 5

Fire-fighting measures

Suitable extinguishing media	Water, Foam, Carbon dioxide (CO ₂), Dry powder
Unsuitable extinguishing media	For this substance/mixture no limitations of extinguishing agents are given.
Special hazards	Combustible. Carbon monoxide (CO) Carbon dioxide (CO ₂) Vapours are heavier than air and may spread along floors. Forms explosive mixtures with air on intense heating. Development of hazardous combustion gases or vapours possible in the event of fire.
Advice for firefighters	In the event of fire, wear self-contained breathing apparatus. As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Prevent fire extinguishing water from contaminating surface water or the ground water system.

SECTION 6

Accidental release measures

Personal precautions & PPE	Do not breathe vapours, aerosols. Evacuate the danger area, observe emergency procedures, consult an expert.
Environmental precautions	Do not let product enter drains.
Containment & clean-up methods	Cover drains. Collect, bind, and pump off spills. Take up with liquid-absorbent material. Dispose of properly. Clean up affected area.

For specific precautions, see Section 8 and Section 13.

SECTION 7

Handling & storage

Storage temperature	Ambient
Precautions for safe handling	Change contaminated clothing. Wash hands after working with substance. Observe good chemical hygiene practices. Keep away from food, drink and animal feeding stuffs. Wash contaminated skin thoroughly after handling. Do not eat, drink or smoke when using this product. Remove contaminated clothing and launder thoroughly before re-use.
Conditions for safe storage (incompatibilities)	Tightly closed.

Exposure controls / personal protection**Occupational exposure limits
(OEL / WEL)**

UK:
TWA 5 mg/m³ (8hours)
STEL 10 mg/m³ (15mins)

Ireland:
TWA 5 mg/m³ (8hours)
STEL 10 mg/m³ (15mins)

DNEC/PNEC data

Chronic systemic (Dermal): DNEL = 15mg/kg bw/day
Chronic systemic (Inhalation): DNEL = 10.56mg/m³

PNEC:
Freshwater: PNEC = 12µg/L
Freshwater sediment: PNEC = 137µg/kg sediment dw
Water Intermittent: PNEC = 120µg/L
Microorganisms in sewage treatment: PNEC = 2000µg/L
Soil (Agriculture): PNEC = 137µg/kg soil dw
Marine water: PNEC = 1.2µg/L
Marine water sediment: PNEC = 13.7µg/kg sediment dw
Food chain: PNEC = 33mg/kg food

Eye / face protection

Safety glasses
Wear eye/face protection as recommended. All eye/face protection should comply with EN ISO 16321-1:2022.

Skin / hand protection

Nitrile gloves Thickness: 0.11mm. Breakthrough time: 480mins.

Respiratory protection

Half-mask with filter
Keep self-contained breathing apparatus readily available for emergency use. Provide adequate ventilation. If ventilation is insufficient, suitable respiratory protection must be provided. Respiratory equipment: Reusable Air-Purifying Respirator (APR). Filter type: ABEK. Standard: EN 14387.

SECTION 9

Physical & chemical properties

Density (g/mL)	1.12 g/mL DERIVED FROM: LITERATURE
Flash point	170 °C DERIVED FROM: LITERATURE
Acidity	Neutral DERIVED FROM: LITERATURE
Appearance / physical state	Liquid DERIVED FROM: LITERATURE
Colour	light yellow DERIVED FROM: LITERATURE
Odour	Not known DERIVED FROM: LITERATURE
Melting / freezing point	-3 °C DERIVED FROM: LITERATURE
Boiling point	298 - 299 °C DERIVED FROM: LITERATURE
Solubility (water)	0.932 g/l at 20 °C - slightly soluble DERIVED FROM: LITERATURE
pH	<i>No data available</i>
Vapour pressure	19 hPa at 163 °C DERIVED FROM: LITERATURE
Partition coefficient (log Pow)	log Pow: 2.2 at 40 °C DERIVED FROM: LITERATURE
Auto-ignition / decomposition temp	440 °C at 984 hPa DERIVED FROM: LITERATURE

SECTION 10

Stability & reactivity

Chemical stability / reactivity	Chemically stable under standard ambient conditions (room temperature).
Conditions to avoid	Intense heating.
Incompatible materials	Strong oxidizing agents, acids, various plastics, rubber.
Hazardous decomposition products	In the event of fire: see section 5.

Toxicological information

Acute toxicity (LD50 / LC50)	LD50 Oral - Rat - 5,591 mg/kg LC50 Inhalation - Rat - 6 h - >= 4.64 mg/l LD50 Dermal - Rat - > 11,181 mg/kg.
Skin corrosion / irritation	No skin irritation (Rabbit, 24 h).
Eye corrosion / irritation	No eye irritation (Rabbit, 48 h).
Respiratory / skin sensitisation	Negative (Buehler Test - Guinea pig).
Carcinogenicity	<i>No data available</i>
Mutagenicity	Test: In vitro mammalian cell gene mutation test Species: mouse lymphoma cells Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 476 Result: negative Test: Chromosome aberration test in vitro Species: Human lymphocytes Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 473 Result: negative Test: Ames test Species: Escherichia coli/Salmonella typhimurium Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 471 Result: negative
Reproductive toxicity	<i>No data available</i>
STOT (single / repeated exposure)	No data available
Aspiration hazard	Aspiration may cause pulmonary oedema and pneumonitis.
Endocrine disruptors	Does not contain components considered to have endocrine disrupting properties. Repeated dose toxicity - Rat - male and female - Oral - No observed adverse effect level - 150 mg/kg Remarks: (ECHA) RTECS: TI1050000 To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated. Nonphototoxic. Hazardous properties cannot be excluded but are unlikely when the product is handled appropriately. Cannot be excluded: After uptake: Vomiting Diarrhoea gastric pain Handle in accordance with good industrial hygiene and safety practice.

SECTION 12

Ecological information

Aquatic toxicity	LC50 Fish (96h) 12-29 mg/l LC50 Daphnia (48h) 90 mg/ EC50 Algae (72h) 45 mg/l.
Persistence & degradability	Readily biodegradable (94.6% after 28 d).
Bioaccumulative potential	<i>Not applicable</i>
Mobility in soil	<i>Not applicable</i>
PBT / vPvB assessment	Contains no components considered to be PBT or vPvB.

SECTION 13

Disposal considerations

Waste treatment / disposal methods	Dispose of in accordance with local/national regulations
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SECTION 14

Transport information

UN number	<i>Not applicable</i>
Proper shipping name	<i>Not applicable</i>
Class	<i>Not applicable</i>
Packing group	<i>Not applicable</i>
Transport category	<i>Not applicable</i>
Tunnel code	<i>Not applicable</i>
Packing instruction (ADR)	<i>Not applicable</i>
Packing instruction (IMDG)	<i>Not applicable</i>
Environmental hazards	<i>Not applicable</i>
Special precautions for user	<i>Not applicable</i>

SECTION 15

Regulatory information

REACH code	Y113
UFI code	<i>Not applicable</i>
ECHA notification	<i>Not applicable</i>
Chemical safety assessment carried out?	No

SECTION 16

Other information

Revision notes / other information

The information is believed to be correct but is not exhaustive and will be used solely as a guideline.

This MSDS version (10) replaces version 1 (20.02.2019)

This Safety Data Sheet was generated automatically from the data Molekula holds against this product, in the 16-section GHS/CLP format. Fields shown as "No data available" carry no recorded value; fields shown as "Not applicable" were assessed as not relevant to this substance. For queries, contact Molekula at info@molekula.com.