

Dibutyl Phthalate



Safety (MSDS) data

This product is from a Valetime Integrated Source

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GENERAL

CAS	84-74-2
EC-Number	201-557-4
Synonyms	Plasticiser DBP, Di-(n-butyl-ether)-ortho-phthalic acid, <i>1,2-Benzenedicarboxylic acid, dibutyl ester</i> , <i>o-Benzenedicarboxylic acid, dibutyl ester</i> , <i>n-Butyl phthalate</i> , <i>Di-n-butyl phthalate</i> , <i>Dibutyl 1,2-benzenedicarboxylate</i> , <i>Phthalic acid dibutyl ester</i> , <i>Phtalate de dibutyle</i>
Molecular formula	C ₁₆ H ₂₂ O ₄
Structural formula	<chem>CH3-(CH2)2-CH2-O-(O=C)-C6H4-C(=O)-O-(CH2)2-CH3</chem>
Use	Plasticization of vinyl resins and other kinds of polymers in production of cable flexible PVC, artificial leather, rubber products, polymeric building materials, linoleum, film and sheet / plate materials, packing films, PVC gaskets, etc.

PHYSICAL DATA

Appearance	Colourless to faint yellow, oily, viscous liquid; odourless or slight aromatic, ester odour
Melting Point	-35°C
Boiling Point	340°C
Specific gravity	1.047 at 20°C
Solubility in Water	Sparingly soluble (11.2 mg/L at 20°C; 13 mg/L at 25°C) (5)
Solubility in other liquids	Very soluble in ethanol, diethyl ether, acetone and benzene (5) and soluble most other organic solvents and oils (6).
Partition Coefficient	Log P (oct) = 4.72 - 5.60 (23)
Vapour Density	9.58 (air=1) (25)
Vapour Pressure	1.3 x 10 ⁻⁶ to 1.8 x 10 ⁻⁶ kPa (1.0 x 10 ⁻⁵ to 1.4 x 10 ⁻⁵ mm Hg) at 25°C (23)
Saturation Vapour Concentration	0.013 - 0.18 ppm at 25°C (calculated)
Evaporation Rate	Extremely low
Critical Temperature	500°C (932 deg F) (25)
Flash point	157°C (closed cup)
Other Properties	VISCOSITY-DYNAMIC: 21 mPa.s (21 centipoises) at 20°C (37) SURFACE TENSION: 34 mN/m (34 dynes/cm) at 20°C (25) CRITICAL PRESSURE: 1722.7 kPa (17 atmospheres) (25)

STABILITY & REACTIVITY

Stability	Normally stable.
Incompatibility	OXIDIZING AGENTS (e.g. nitrates, peroxides) - may react violently, with the risk of fire and explosion.(29,36) STRONG ACIDS or ALKALIS - reaction may be vigorous or violent, generating heat.(29,36) LIQUID CHLORINE - reacts explosively.(28,36)
Conditions to Avoid	Temperatures above 157 °C
Corrosivity to Metals	Not corrosive to steel, stainless steel, cast iron, copper and its alloys, nickel and its alloys and aluminum.(38)

Disclaimer for Specifications

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TOXICOLOGY

Dibutyl phthalate (DBP) does not readily form vapour and inhalation exposures are unlikely to occur unless DBP is misted or heated. Exposure to high aerosol concentrations may result in respiratory tract irritation and mild central nervous system (CNS) depression, with symptoms such as headache, nausea, dizziness and vomiting. DPB is not expected to cause skin irritation. DBP may cause mild eye irritation. Harmful if swallowed. Irritant.

Toxicity data	ORL-RAT LD50 8000 mg kg ⁻¹
	IHL-RAT LC50 7.9 mg/m ³
	IPR-RAT LD50 3050 mg kg ⁻¹
	IVN-MUS LD50 720 mg kg ⁻¹

TRANSPORT INFORMATION

Non-hazardous for air, sea and road freight.

PERSONAL PROTECTION

Minimize contact.

Disclaimer for Specifications

Every effort is made to ensure that technical specifications are accurate. However, technical specifications included herein should be used as a guideline only and not construed as commitment by any company within or supported by the VALETIME Group. All specifications are subject to change without notice.