

Section 1. Product and Company Identification

Product Name Diphenyl Oxide
CAS Number 101-84-8

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Section 2. Hazards Identification

Classification of the substance or mixture
Classification of the substance or mixture
GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Eye irritation (Category 2A), H319
Acute aquatic toxicity (Category 2), H401
Chronic aquatic toxicity (Category 2), H411

GHS Label Elements

Pictograms:



Signal word: WARNING

Hazard and precautionary statements

Hazard Statements

H319 Causes serious eye irritation.
H411 Toxic to aquatic life with long lasting effects.

Precautionary Statements

P264 Wash skin thoroughly after handling.
P273 Avoid release to the environment.
P280 Wear protective gloves/eye protection/face protection
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337 + P313 If eye irritation persists: Get medical advice/attention.
P391 Collect spillage.
P501 Dispose of contents/container to an approved waste disposal plant.



Section 3. Composition / Information on Ingredients

Common Name Diphenyl Oxide
Formula C₁₂H₁₀O
CAS Number 101-84-8

COMPONENT	CAS NUMBER	CONCENTRATION
Diphenyl Oxide	101-84-8	<= 100%

Section 4. First Aid Measures

Description of first-aid measures

General advice: Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

Inhalation: If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

Skin contact: Wash off with soap and plenty of water. Consult a physician.

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

Ingestion: Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

Most important symptoms and effects, both acute and delayed: The most important known symptoms and effects are described in the labeling (see section 2) and/or in section 11.

Indication of any immediate medical attention and special treatment needed: No data available

Section 5. Firefighting Measures

Extinguishing media

Suitable extinguishing media: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Special hazards arising from the substance or mixture: Carbon oxides

Advice for firefighters: Wear self-contained breathing apparatus for firefighting if necessary.

Further information: No data available

Section 6. Accidental Release Measures

Personal precautions, protective equipment, and emergency procedures: Use personal protective equipment. Avoid dust formation. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Avoid breathing dust. For personal protection see section 8.

Environmental precautions: Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

Methods and materials for containment and cleaning up: Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

Reference to other sections: For disposal see section 13.

Section 7. Handling and Storage

Precautions for safe handling: Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed. For precautions see section 2.

Conditions for safe storage, including any incompatibilities: Keep container tightly closed in a dry and well-ventilated place.

Section 8. Exposure Controls / Personal Protection

Control parameters

Components with workplace control parameters

Component	CAS-No.	Value	Control parameters	Basis
Diphenyl ether	101-84-8	TWA	1.000000 ppm	USA. ACGIH Threshold Limit Values (TLV)
	Remarks	Eye & Upper Respiratory Tract Irritation Nausea		
		STEL	2.000000 ppm	USA. ACGIH Threshold Limit Values (TLV)
		Eye & Upper Respiratory Tract Irritation Nausea		
		TWA	1.000000 ppm 7.000000 mg/m ³	USA Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
		The value in mg/m ³ is approximate.		
		TWA	1.000000 ppm 7.000000 mg/m ³	USA. NIOSH Recommended Exposure Limits
		TWA	1.000000 ppm 7.000000 mg/m ³	USA Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
		The value in mg/m ³ is approximate.		
		TWA	1.000000 ppm	USA. ACGIH Threshold Limit Values (TLV)
		Upper Respiratory Tract irritation Eye irritation Nausea		
		STEL	2.000000 ppm	USA. ACGIH Threshold Limit Values (TLV)



		Upper Respiratory Tract irritation		Eye irritation
		TWA	1.000000 ppm 7.000000 mg/m ³	USA. NIOSH Recommended Exposure Limits

Exposure controls

Appropriate engineering controls: Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Personal protective equipment

Eye/face protection: Safety glasses with side-shields conforming to EN166 Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection: Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Full contact

Material: Butyl-rubber
Minimum layer thickness: 0.3 mm
Break through time: 480 min

Splash contact

Material: butyl-rubber
Minimum layer thickness: 0.3 mm
Break through time: 480 min
EN374

If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

Body Protection: Impervious clothing, the type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection: For nuisance exposures use type P95 (US) or type P1 (EU EN 143) particle respirator. For higher level protection use type OV/AG/P99 (US) or type ABEK-P2 (EU EN 143) respirator cartridges. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of environmental exposure: Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

Section 9. Physical and Chemical Properties

Information on basic physical and chemical properties

Appearance: Crystalline

Color: White

Odor: Unpleasant

Odor Threshold: No data available

pH No data available

Melting point/freezing point: No data available

Initial boiling point and boiling range: 259°C (498°F) - lit.

Flash Point (Closed Cup): 115°C (239°F)

Evaporation rate: No data available

Flammability (solid, gas): No data available

Upper/lower flammability or explosive limits

Upper explosion limit: 1.5% (V)

Lower explosion limit: 0.8% (V)

Vapor pressure

1,013 hPa (760 mmHg) at 257.9°C (496.2°F)

< 1 hPa (< 1 mmHg) at 20°C (68°F)

Vapor density: No data available

Relative density: 1.073 g/mL at 25°C (77°F)

Water solubility: No data available

Partition coefficient (n-Octanol/Water): log Pow: 4.21 at 25°C (77°F)

Auto-ignition temperature: No data available

Decomposition temperature: No data available

Viscosity: No data available

Explosive properties: No data available

Oxidizing properties: No data available

Other safety information: No data available

Section 10. Stability and Reactivity

Reactivity: No data available

Chemical stability: Stable under recommended storage conditions.

Possibility of hazardous reactions: No data available

Conditions to avoid: No data available

Incompatible material: Strong oxidizing agents

Hazardous decomposition products

Other decomposition products: No data available

In the event of fire: see section 5

Section 11. Toxicological Information

Information on toxicological effects

Acute toxicity

LD50 Oral - Rat: 3,370 mg/kg

Inhalation: No data available

LD50 Dermal - Rabbit: > 5,000 mg/kg



Skin corrosion/irritation

Skin - Rabbit

Result: Mild skin irritation - 24 h

Serious eye damage/eye irritation

Eyes - Rabbit

Result: Irritating to eyes.

Respiratory or skin sensitization: No data available

Germ cell mutagenicity: No data available

Carcinogenicity

IARC: No component of this product, present at levels greater than or equal to 0.1%, is identified as probable, possible or confirmed human carcinogen by IARC.

ACGIH: No component of this product, present at levels greater than or equal to 0.1%, is identified as a carcinogen or potential carcinogen by ACGIH.

NTP: No component of this product, present at levels greater than or equal to 0.1%, is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product, present at levels greater than or equal to 0.1%, is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity: No data available

Specific target organ toxicity - single exposure: No data available

Specific target organ toxicity - repeated exposure: No data available

Aspiration hazard: No data available

Additional Information

RTECS: KN8970000

Prolonged or repeated exposure can cause: Dermatitis, Liver injury may occur., To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Stomach - Irregularities - Based on Human Evidence

Section 12. Ecological Information

Toxicity

Toxicity to daphnia and other aquatic invertebrates

N/A

Toxicity to fish

LC50 - Cyprinodon variegatus (sheepshead minnow): 1.0 - 2.4 mg/l (96.0h)

LC50 - Leuciscus idus (Golden orfe): 3.0 mg/l (48.0h)

Persistence and Degradability

Ratio BOD/ThBOD 62%



Bioaccumulative potential

EC50 - Daphnia magna (Water flea): 1.7 mg/l (48 h)
Bioaccumulation Oncorhynchus mykiss (rainbow trout): 7 d (16 µg/L)
Bioconcentration factor (BCF): 470
Indication of bioaccumulation.

Mobility in soil: No data available

Results of PBT and vPvB assessment: PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

Other adverse effects: An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Toxic to aquatic life with long lasting effects.

Section 13. Disposal Considerations

Waste Treatment Methods: Dispose of product and contaminated packaging in accordance with all local, state, and federal environmental control regulations.

Section 14. Transport Information

DOT (US)

Not dangerous goods

IMDG

UN number: 3077

Class: 9

Packing group: III

EMS-No: F-A, S-F

Proper shipping name: Environmentally Hazardous Substance, Solid, N.O.S. (Diphenyl ether)

Marine pollutant: Yes

IATA

UN number: 3077

Class: 9

Packing group: III

Proper shipping name: Environmentally Hazardous Substance, Solid, N.O.S. (Diphenyl ether)

Further information

EHS-Mark required (ADR 2.2.9.1.10, IMDG code 2.10.3) for single packaging's and combination packaging's containing inner packaging's with Dangerous Goods > 5L for liquids or > 5kg for solids.

Section 15. Regulatory Information

SARA 302 Components: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.



SARA 313 Components: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

Massachusetts Right to Know Components

Diphenyl ether (CAS-No.: 101-84-8)

Revision Date: 2007-03-01

Pennsylvania Right to Know Components

Diphenyl ether (CAS-No.: 101-84-8)

Revision Date: 2007-03-01

New Jersey Right to Know Components

Diphenyl ether (CAS-No.: 101-84-8)

Revision Date: 2007-03-01

California Prop. 65 Components: This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other productive harm.

Section 16. Other Information

Disclaimer: The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product.

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