

Material Safety Data Sheet

Date Printed: 26/JUL/2007
Date Updated: 07/MAR/2006
Version 1.6
Regulation (EC) No 1907/2006

1 - Product and Company Information

Product Name PHENYL ETHER
Product Number 42730

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2 - Hazards Identification

SPECIAL INDICATION OF HAZARDS TO HUMANS AND THE ENVIRONMENT
Irritating to eyes and skin. Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

3 - Composition/Information on Ingredients

Product Name	CAS #	EC no	Annex I Index Number
DIPHENYL ETHER (DIPHENYL OXIDE)	101-84-8	202-981-2	None

Formula C12H10O
Molecular Weight 170.21 AMU
Synonyms Benzene, 1,1'-oxybis- (9CI) * Benzene, phenoxy-
* Biphenyl oxide * Chemcryl JK-EB * Diphenyl
ether * Diphenyl oxide * Geranium crystals *
Oxybisbenzene * Oxydiphenyl * Phenoxybenzene *
Phenyl ether (ACGIH:OSHA) * Phenyl oxide

4 - First Aid Measures

AFTER INHALATION

If inhaled, remove to fresh air. If not breathing give artificial respiration. If breathing is difficult, give oxygen.

AFTER SKIN CONTACT

In case of contact, immediately wash skin with soap and copious amounts of water.

AFTER EYE CONTACT

In case of contact, immediately flush eyes with copious amounts of water for at least 15 minutes.

AFTER INGESTION

If swallowed, wash out mouth with water provided person is conscious. Call a physician.

5 - Fire Fighting Measures

EXTINGUISHING MEDIA

Suitable: Dry chemical powder. Carbon dioxide.
Unsuitable: Water or foam may cause frothing.

SPECIAL RISKS

Specific Hazard(s): Emits toxic fumes under fire conditions.

SPECIAL PROTECTIVE EQUIPMENT FOR FIREFIGHTERS

Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

6 - Accidental Release Measures

PROCEDURE(S) OF PERSONAL PRECAUTION(S)

Wear respirator, chemical safety goggles, rubber boots, and heavy rubber gloves.

METHODS FOR CLEANING UP

Sweep up, place in a bag and hold for waste disposal. Avoid raising dust. Ventilate area and wash spill site after material pickup is complete.

7 - Handling and Storage

HANDLING

Directions for Safe Handling: Do not breathe dust. Avoid contact with eyes, skin, and clothing. Avoid prolonged or repeated exposure.

STORAGE

Conditions of Storage: Keep tightly closed.

8 - Exposure Controls / Personal Protection

ENGINEERING CONTROLS

Safety shower and eye bath. Mechanical exhaust required.

GENERAL HYGIENE MEASURES

Wash thoroughly after handling.

EXPOSURE LIMITS

Country	Source	Type	Value
Poland		NDS	7 MG/M3
Poland		NDSCh	14 MG/M3
Poland		NDSP	-

EXPOSURE LIMITS - DENMARK

Source	Type	Value
OEL	TWA	7 mg/m3 1 ppm

EXPOSURE LIMITS - GERMANY

Source	Type	Value
TRGS 900	OEL	7 mg/m3 1 ppm

EXPOSURE LIMITS - NORWAY

Source	Type	Value
	OEL	7 mg/m3 1 ppm

EXPOSURE LIMITS - SWITZERLAND

Source	Type	Value
OEL	OEL	7 mg/m3 1 ppm

EXPOSURE LIMITS - UNITED KINGDOM

Source	Type	Value
OEL	OEL	7.1 mg/m3 1 ppm

PERSONAL PROTECTIVE EQUIPMENT

Respiratory Protection: Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). Where risk assessment shows air-purifying respirators are appropriate use a dust mask type N95 (US) or type P1 (EN 143) respirator.

Hand Protection: Compatible chemical-resistant gloves.

Eye Protection: Chemical safety goggles.

9 - Physical and Chemical Properties

Appearance	Physical State: Solid Color: White Form: Solidified mass or fragments Odor: Unpleasant odor.	
Property	Value	At Temperature or Pressure
pH	N/A	
BP/BP Range	259 °C	760 mmHg
MP/MP Range	26 °C	
Flash Point	115 °C	Method: closed cup
Flammability	N/A	
Autoignition Temp	618 °C	
Oxidizing Properties	N/A	
Explosive Properties	N/A	
Explosion Limits	Lower: 0.8 % Upper: 1.5 %	
Vapor Pressure	< 1 mmHg	20 °C
SG/Density	1.073 g/cm3	
Partition Coefficient	Log Kow: 4.2	
Viscosity	N/A	
Vapor Density	> 5.86 g/l	25 °C
Saturated Vapor Conc.	N/A	
Evaporation Rate	N/A	
Bulk Density	N/A	
Decomposition Temp.	N/A	
Solvent Content	N/A	
Water Content	N/A	
Surface Tension	N/A	
Conductivity	N/A	
Miscellaneous Data	N/A	
Solubility	N/A	

10 - Stability and Reactivity

STABILITY

Stable: Stable.

Materials to Avoid: Strong oxidizing agents.

HAZARDOUS DECOMPOSITION PRODUCTS

Hazardous Decomposition Products: Carbon monoxide, Carbon dioxide.

HAZARDOUS POLYMERIZATION

Hazardous Polymerization: Will not occur

11 - Toxicological Information

RTECS NUMBER: KN8970000

ACUTE TOXICITY

LD50

Oral

Rat

3,370 mg/kg

LD50

Skin

Rabbit

>5000 MG/KG

LD50

Oral

Rat

2450 mg/kg

Remarks: Behavioral:Food intake (animal). Gastrointestinal:Other changes. Behavioral:Muscle weakness.

LD50

Skin

Rabbit

> 7940 mg/kg

Remarks: Behavioral:Somnolence (general depressed activity). Lungs, Thorax, or Respiration:Acute pulmonary edema.

IRRITATION DATA

Skin

Rabbit

24H

Remarks: Moderate irritation effect

Skin

Rabbit

Remarks: Mild irritation effect

Eyes

Rabbit

Remarks: Mild irritation effect

Eyes

Rat

10 ppm

140H

Skin

Rabbit

500 mg

24H

Remarks: Mild irritation effect

Eyes

Rabbit

10 ppm

140H

SENSITIZATION

Sensitization: Will not occur

SIGNS AND SYMPTOMS OF EXPOSURE

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated. Damage to the liver. Dermatitis. Prolonged exposure can cause:

ROUTE OF EXPOSURE

Skin Contact: Causes skin irritation.

Skin Absorption: May be harmful if absorbed through the skin.

Eye Contact: Causes eye irritation.

Inhalation: Harmful if inhaled. Material may be irritating to mucous membranes and upper respiratory tract.

Ingestion: May be harmful if swallowed.

TARGET ORGAN INFORMATION

Thyroid. Spleen. Liver. Kidneys.

12 - Ecological Information

BIOACCUMULATION POTENTIAL: Indication of bioaccumulation.

ECOTOXICOLOGICAL EFFECTS

Test Type: EC50 Daphnia

Species: Daphnia magna

Time: 48 h

Value: 0.67 mg/l

Test Type: EC50 Daphnia

Species: Daphnia magna

Time: 48 h

Value: 1.7 mg/l

Test Type: LC50 Fish

Species: Pimephales promelas (Fathead minnow)

Time: 96 h

Value: 4 mg/l

Test Type: LC0 Fish

Species: Brachydanio rerio

Time: 96 h

Value: 36 mg/l

Test Type: LC50 Fish

Species: Cyprinodon variegatus (Sheepshead minnow)

Time: 96 h

Value: 1.0 - 2.4 mg/l

Test Type: LC50 Fish

Species: Leuciscus idus

Time: 48 h

Value: 3 mg/l

ADDITIONAL ECOLOGICAL INFORMATION

BOD5: 72 %

13 - Disposal Considerations

SUBSTANCE DISPOSAL

Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an

afterburner and scrubber. Observe all federal, state, and local environmental regulations.

14 - Transport Information

RID/ADR

UN#: 3077
Class: 9
PG: III
Proper Shipping Name: Environmentally hazardous substance, solid, n.o.s

IMDG

UN#: 3077
Class: 9
PG: III
Proper Shipping Name: Environmentally hazardous substance, solid, n.o.s
Marine Pollutant: No
Severe Marine Pollutant: No
Technical Name: Required

IATA

UN#: 3077
Class: 9
PG: III
Proper Shipping Name: Environmentally hazardous substance, solid, n.o.s
Inhalation Packing Group I: No
Technical Name: Required

15 - Regulatory Information

CLASSIFICATION AND LABELING ACCORDING TO EU DIRECTIVES

INDICATION OF DANGER: Xi-N
Irritant. Dangerous for the environment.
R-PHRASES: 36/38-51/53
Irritating to eyes and skin. Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
S-PHRASES: 26-61
In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Avoid release to the environment. Refer to special instructions/safety data sheets.

COUNTRY SPECIFIC INFORMATION

Germany

WGK: 2
ID-Number: 88
KBwS-Decision

16 - Other Information

WARRANTY

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. Sigma-Aldrich Inc., shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice

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