

## Chemical Safety Data Sheet MSDS / SDS

## o-terphenyl SDS

Revision Date:2024-04-25 Revision Number:1

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**SECTION 1: Identification of the substance/mixture and of the company/undertaking****Product identifier**

Product name: o-terphenyl

CAS: 84-15-1

**Relevant identified uses of the substance or mixture and uses advised against**

Relevant identified uses: For R&amp;D use only. Not for medicinal, household or other use.

Uses advised against: none

**Company Identification**

Company: Chemicalbook.in

Address: 5 vasavi Layout Basaveswara Nilayam Pragathi Nagar Hyderabad, India -500090

Telephone: +91 9550333722

**SECTION 2: Hazards identification****Classification of the substance or mixture**Acute toxicity - Category 4, Oral  
Skin irritation, Category 2

Eye irritation, Category 2  
Specific target organ toxicity - single exposure, Category 3  
Hazardous to the aquatic environment, short-term (Acute) - Category Acute 1

### GHS label elements, including precautionary statements

Pictogram(s)



Signal word

Warning

### Hazard statement(s)

H302 Harmful if swallowed  
H315 Causes skin irritation  
H319 Causes serious eye irritation  
H335 May cause respiratory irritation  
H400 Very toxic to aquatic life

### Precautionary statement(s)

### Prevention

P264 Wash ... thoroughly after handling.  
P270 Do not eat, drink or smoke when using this product.  
P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection/...  
P261 Avoid breathing dust/fume/gas/mist/vapours/spray.  
P271 Use only outdoors or in a well-ventilated area.  
P273 Avoid release to the environment.

### Response

P301+P317 IF SWALLOWED: Get medical help.  
P330 Rinse mouth.  
P302+P352 IF ON SKIN: Wash with plenty of water/...  
P321 Specific treatment (see ... on this label).  
P332+P317 If skin irritation occurs: Get medical help.  
P362+P364 Take off contaminated clothing and wash it before reuse.  
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
P319 Get medical help if you feel unwell.

P391 Collect spillage.

#### **Storage**

P403+P233 Store in a well-ventilated place. Keep container tightly closed.

P405 Store locked up.

#### **Disposal**

P501 Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

#### **Other hazards which do not result in classification**

no data available

### **SECTION 3: Composition/information on ingredients**

#### **Substance**

Chemical name: o-terphenyl

Common names and synonyms: o-terphenyl

CAS number: 84-15-1

EC number: 201-517-6

Concentration: 100%

### **SECTION 4: First aid measures**

#### **Description of necessary first-aid measures**

##### **If inhaled**

Fresh air, rest. Refer for medical attention.

##### **Following skin contact**

Remove contaminated clothes. Rinse and then wash skin with water and soap.

##### **Following eye contact**

First rinse with plenty of water for several minutes (remove contact lenses if easily possible), then refer for medical attention.

#### **Following ingestion**

Rinse mouth. Give one or two glasses of water to drink. Refer for medical attention .

#### **Most important symptoms/effects, acute and delayed**

Exposure Routes: inhalation, ingestion, skin and/or eye contact Symptoms: Irritation eyes, skin, mucous membrane; thermal skin burns; headache; sore throat Target Organs: Eyes, skin, respiratory system, liver, kidneys (NIOSH, 2016)

#### **Indication of immediate medical attention and special treatment needed, if necessary**

#### **Minimum/Potential Fatal Human Dose**

2 to 3. 2= slightly toxic: probable oral lethal dose (human) 5-15 g/kg, between 1 pint & 1 qt for 70 kg person (150 lb). 3= moderately toxic: probable oral lethal dose (human) 0.5-5 g/kg, between 1 oz & 1 pint (or 1 lb) for 70 kg person (150). terphenyl

#### **Absorption, Distribution and Excretion**

An intragastric dose of (14)c labeled o-terphenyl was rapidly absorbed, distributed, and almost completely excreted within 48 hr, in the rat mainly through the bile and in the rabbit mainly through urinary excretion. temporary accum in the liver peaked at 4.5 hr in the mouse and was completely cleared in 1 wk.

## **SECTION 5: Firefighting measures**

#### **Suitable extinguishing media**

Carbon dioxide, dry chemical.

#### **Specific hazards arising from the chemical**

Combustible.

#### **Special protective actions for fire-fighters**

Use water spray, dry powder, carbon dioxide.

## **SECTION 6: Accidental release measures**

### Personal precautions, protective equipment and emergency procedures

Personal protection: particulate filter respirator adapted to the airborne concentration of the substance. Do NOT let this chemical enter the environment. Vacuum spilled material with specialist equipment. If appropriate, moisten first to prevent dusting. Carefully collect remainder. Then store and dispose of according to local regulations.

### Environmental precautions

Personal protection: particulate filter respirator adapted to the airborne concentration of the substance. Do NOT let this chemical enter the environment. Vacuum spilled material with specialist equipment. If appropriate, moisten first to prevent dusting. Carefully collect remainder. Then store and dispose of according to local regulations.

### Methods and materials for containment and cleaning up

1. Remove all ignition sources. 2. Ventilate area of spill or leak. 3. For small quant, sweep onto paper or other suitable material, place in an appropriate container and burn in a safe place (such as a fume hood). Large quant may be reclaimed; however, if this is not practical, use a procedure similar to that for small quant. Terphenyls

## SECTION 7: Handling and storage

### Precautions for safe handling

NO open flames. Handling in a well ventilated place. Wear suitable protective clothing. Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Use non-sparking tools. Prevent fire caused by electrostatic discharge steam.

### Conditions for safe storage, including any incompatibilities

Store the container tightly closed in a dry, cool and well-ventilated place. Store apart from foodstuff containers or incompatible materials.

## SECTION 8: Exposure controls/personal protection

### Control parameters

### Occupational Exposure limit values

Component	o-terphenyl			
CAS No.	84-15-1			
	Limit value - Eight hours		Limit value - Short term	
	ppm	mg/m <sup>3</sup>	ppm	mg/m <sup>3</sup>

Denmark	0,5	5	1	10
Singapore	?	?	0,53	5
	Remarks			

### Biological limit values

no data available

### Appropriate engineering controls

Ensure adequate ventilation. Handle in accordance with good industrial hygiene and safety practice. Set up emergency exits and the risk-elimination area.

### Individual protection measures, such as personal protective equipment (PPE)

#### Eye/face protection

Wear safety goggles or eye protection in combination with breathing protection.

#### Skin protection

Protective gloves.

#### Respiratory protection

Use local exhaust or breathing protection.

#### Thermal hazards

no data available

## SECTION 9: Physical and chemical properties and safety characteristics

**Physical state:** O-terphenyl is a colorless or light-yellow solid. mp: 58-59° C, bp: 337°C. Density: 1.16 g/cm<sup>3</sup>. Insoluble in water. Usually shipped as a solid mixture with its isomers m-terphenyl and p-terphenyl that is used as a heat-transfer fluid.

**Colour:** MONOCLINIC PRISMS FROM METHANOL

**Odour:** no data available

**Melting point/freezing point:** -35°C(lit.)

Boiling point or initial boiling point and boiling range:	332°C(lit.)
Flammability:	Combustible Solid
Lower and upper explosion limit/flammability limit:	no data available
Flash point:	41°C(lit.)
Auto-ignition temperature:	no data available
Decomposition temperature:	no data available
pH:	no data available
Kinematic viscosity:	no data available
Solubility:	Insoluble (NIOSH, 2016)
Partition coefficient n-octanol/water:	5.5
Vapour pressure:	0.09 mm Hg at 200° F (NIOSH, 2016)
Density and/or relative density:	1.1 g/cm <sup>3</sup>
Relative vapour density:	7.95 (AIR= 1)
Particle characteristics:	no data available

## SECTION 10: Stability and reactivity

### Reactivity

On combustion, forms toxic fumes including carbon monoxide.

**Chemical stability**

no data available

**Possibility of hazardous reactions**

FIRE HAZARD: SLIGHT, WHEN EXPOSED TO HEAT OR FLAME. O-TERPHENYL is non-flammable but combustible (flash point 339°F). Extremely stable thermally. Incompatible with strong oxidizing agents but not very reactive at room conditions.

**Conditions to avoid**

no data available

**Incompatible materials**

None reported

**Hazardous decomposition products**

no data available

**SECTION 11: Toxicological information****Acute toxicity**

Oral: no data available

Inhalation: no data available

Dermal: no data available

**Skin corrosion/irritation**

no data available

**Serious eye damage/irritation**

no data available

**Respiratory or skin sensitization**



no data available

**Germ cell mutagenicity**

no data available

**Carcinogenicity**

no data available

**Reproductive toxicity**

no data available

**STOT-single exposure**

The substance is irritating to the eyes and respiratory tract.

**STOT-repeated exposure**

no data available

**Aspiration hazard**

Evaporation at 20°C is negligible; a harmful concentration of airborne particles can, however, be reached quickly when dispersed.

**SECTION 12: Ecological information**

**Toxicity**

Toxicity to fish: no data available

Toxicity to daphnia and other aquatic invertebrates: no data available

Toxicity to algae: no data available

Toxicity to microorganisms: no data available

**Persistence and degradability**

A waste water mixture containing 33% m-terphenyl, 17% o-terphenyl, and 1.5% thermip (a heat exchanger consisting of

naphthalene, methyl naphthalene diphenyl, and alkyl derivatives of naphthalene) was inoculated with a mixture of three bacteria, two Pseudomonas and one Acinetobacter species. After 130 hours aerobic incubation, 100% of the o-terphenyl remained(1).

#### **Bioaccumulative potential**

A BCF of 590 for o-terphenyl was measured in goldfish(1). An estimated BCF value of 550 was calculated for o-terphenyl(SRC), using a measured water solubility of 1.24 mg/l(2) and a recommended regression-derived equation(3). According to a recommended classification scheme(4), these BCF values indicate that bioconcentration of o-terphenyl in aquatic organisms should be an important fate process(SRC).

#### **Mobility in soil**

The Koc of o-terphenyl is estimated as approximately 3900(SRC), using an experimental water solubility of 1.24 mg/l(1) and a regression-derived equation(2,SRC). According to a recommended classification scheme(3), this estimated Koc value suggests that o-terphenyl has only slight mobility in soil(SRC).

#### **Other adverse effects**

no data available

### **SECTION 13: Disposal considerations**

#### **Disposal methods**

#### **Product**

The material can be disposed of by removal to a licensed chemical destruction plant or by controlled incineration with flue gas scrubbing. Do not contaminate water, foodstuffs, feed or seed by storage or disposal. Do not discharge to sewer systems.

#### **Contaminated packaging**

Containers can be triply rinsed (or equivalent) and offered for recycling or reconditioning. Alternatively, the packaging can be punctured to make it unusable for other purposes and then be disposed of in a sanitary landfill. Controlled incineration with flue gas scrubbing is possible for combustible packaging materials.

### **SECTION 14: Transport information**

#### **UN Number**

ADR/RID: UN3077 (For reference only, please check.)

IMDG: UN3077 (For reference only, please check.)

IATA: UN3077 (For reference only, please check.)

#### **UN Proper Shipping Name**

ADR/RID: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (For reference only, please check.)

IMDG: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (For reference only, please check.)

IATA: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (For reference only, please check.)

#### **Transport hazard class(es)**

ADR/RID: 9 (For reference only, please check.)

IMDG: 9 (For reference only, please check.)

IATA: 9 (For reference only, please check.)

#### **Packing group, if applicable**

ADR/RID: III (For reference only, please check.)

IMDG: III (For reference only, please check.)

IATA: III (For reference only, please check.)

#### **Environmental hazards**

ADR/RID: Yes

IMDG: Yes

IATA: Yes

#### **Special precautions for user**

no data available

#### **Transport in bulk according to IMO instruments**

no data available

## **SECTION 15: Regulatory information**

**Safety, health and environmental regulations specific for the product in question**

**European Inventory of Existing Commercial Chemical Substances (EINECS)**

Listed.

**EC Inventory**

Listed.

**United States Toxic Substances Control Act (TSCA) Inventory**

Listed.

**China Catalog of Hazardous chemicals 2015**

Not Listed.

**New Zealand Inventory of Chemicals (NZIoC)**

Listed.

**(PICCS)**

Listed.

**Vietnam National Chemical Inventory**

Listed.

**IECSC)**

Listed.

**Korea Existing Chemicals List (KECL)**

Not Listed.

**SECTION 16: Other information**

**Abbreviations and acronyms**

CAS: Chemical Abstracts Service

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road

RID: Regulation concerning the International Carriage of Dangerous Goods by Rail

IMDG: International Maritime Dangerous Goods

IATA: International Air Transportation Association

TWA: Time Weighted Average

STEL: Short term exposure limit

LC50: Lethal Concentration 50%

LD50: Lethal Dose 50%

EC50: Effective Concentration 50%

### References

IPCS - The International Chemical Safety Cards (ICSC), website: <http://www.ilo.org/dyn/icsc/showcard.home>

HSDB - Hazardous Substances Data Bank, website: <https://toxnet.nlm.nih.gov/newtoxnet/hsdb.htm>

IARC - International Agency for Research on Cancer, website: <http://www.iarc.fr/>

eChemPortal - The Global Portal to Information on Chemical Substances by OECD, website:  
[http://www.echemportal.org/echemportal/index?pageID=0&request\\_locale=en](http://www.echemportal.org/echemportal/index?pageID=0&request_locale=en)

CAMEO Chemicals, website: <http://cameochemicals.noaa.gov/search/simple>

ChemIDplus, website: <http://chem.sis.nlm.nih.gov/chemidplus/chemidlite.jsp>

ERG - Emergency Response Guidebook by U.S. Department of Transportation, website:  
<http://www.phmsa.dot.gov/hazmat/library/erg>

Germany GESTIS-database on hazard substance, website: <http://www.dguv.de/ifa/gestis/gestis-stoffdatenbank/index-2.jsp>

ECHA - European Chemicals Agency, website: <https://echa.europa.eu/>

### Other Information

The occupational exposure limit value should not be exceeded during any part of the working exposure.

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. We as supplier shall not be held liable for any