

## 化 学 品 安 全 技 术 说 明 书

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### MSDS标题

P-TERPHENYL MSDS报告

### 产品标题

二苯基苯;联三苯;1,4-二苯基苯

### CAS号

92-94-4

### 化学品及企业标识

## PRODUCT NAME

P-TERPHENYL

## NFPA

Flammability	1
Toxicity	2
Body Contact	2
Reactivity	1
Chronic	2

SCALE: Min/Nil=0 Low=1 Moderate=2 High=3 Extreme=4

## PRODUCT USE

Hydrocarbon solid. Copolymerised for use in plastic phosphors, lazer dye. Single crystals are used in scintillation counters.

## SYNONYMS

C<sub>18</sub>H<sub>14</sub>, "para terphenyl", paraterphenyl, p-triphenyl, p-triphenyl, paratriphenyl, "1, 4-diphenylbenzene", "1, 4-diphenylbenzene", "4-phenyl biphenyl", "4-phenyl biphenyl", p-diphenylbenzene, p-diphenylbenzene, 4-phenylbiphenyl, 4-phenylbiphenyl, 4-phenyldiphenyl, 4-phenyldiphenyl, "Santowax P"

## CANADIAN WHMIS SYMBOLS

None

## EMERGENCY OVERVIEW

### RISK

Harmful if swallowed.

Irritating to eyes.

Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

### POTENTIAL HEALTH EFFECTS

### ACUTE HEALTH EFFECTS

#### SWALLOWED

Accidental ingestion of the material may be harmful; animal experiments indicate that ingestion of less than 150 gram may be fatal or may produce serious damage to the health of the individual. In a 14-day dietary study young rats fed 0.2% of the various isomers of terphenyl showed increased plasma cholesterol, depressed body weight (o-, and m- isomers), liver hypertrophy (m-isomer) and adrenal hypertrophy (o-isomer).

#### EYE

This material can cause eye irritation and damage in some persons. Application of terphenyl to rabbit eye caused extreme conjunctival irritation.

#### SKIN

There is some evidence to suggest that this material can cause inflammation of the skin on contact in some persons. Topical application of terphenyl to rabbit skin produced mild irritation. Intradermal injection into guinea pig skin was highly damaging (necrosis and evidence of sensitisation). Individual isomers produced similar scarring and necrosis. A wheal and flare response developed after intradermal injection of a 1% terphenyl mixture. Eosinophilic infiltration was indicative of the development of sensitisation. Open cuts,

abraded or irritated skin should not be exposed to this material. Entry into the blood-stream, through, for example, cuts, abrasions or lesions, may produce systemic injury with harmful effects. Examine the skin prior to the use of the material and ensure that any external damage is suitably protected.

## **INHALED**

Inhalation of vapours may cause drowsiness and dizziness. This may be accompanied by narcosis, reduced alertness, loss of reflexes, lack of coordination and vertigo. Inhalation of vapors or aerosols (mists, fumes), generated by the material during the course of normal handling, may be damaging to the health of the individual. There is some evidence to suggest that the material can cause respiratory irritation in some persons. The body's response to such irritation can cause further lung damage. Inhalation hazard is increased at higher temperatures. Persons with impaired respiratory function, airway diseases and conditions such as emphysema or chronic bronchitis, may incur further disability if excessive concentrations of particulate are inhaled. Inhalation of high concentrations of gas/vapor causes lung irritation with coughing and nausea, central nervous depression with headache and dizziness, slowing of reflexes, fatigue and incoordination. Central nervous system (CNS) depression may include general discomfort, symptoms of giddiness, headache, dizziness, nausea, anaesthetic effects, slowed reaction time, slurred speech and may progress to unconsciousness. Serious poisonings may result in respiratory depression and may be fatal. Terphenyl concentrations above 10 mg/m<sup>3</sup> have been associated with ocular and respiratory tract irritation in exposed workers. Inhalation of 66 to 3390 mg/m<sup>3</sup> of mixed or single isomers for 1 to 14 hours by rats caused respiratory irritation. Higher concentrations were lethal. Changes in the respiratory tract included acute tracheal necrosis, acute tracheobronchitis, pulmonary oedema, bronchopneumonia, atelectasis and petechial haemorrhage.

## **CHRONIC HEALTH EFFECTS**

Limited evidence suggests that repeated or long-term occupational exposure may produce cumulative health effects involving organs or biochemical systems. Long term exposure to high dust concentrations may cause changes in lung function i.e. pneumoconiosis; caused by particles less than 0.5 micron penetrating and remaining in the lung. Prime symptom is breathlessness; lung shadows show on X-ray. Workers repeatedly exposed to 0.01 to 0.94 ppm terphenyl developed non-specific readily reversible skin rash. Feeding trials in rats confirmed the potential nephrotoxicity of unirradiated mixtures of the isomers of terphenyl. Ingestion of 350 mg/kg/day for 188 days produced loss of body weight, reduced haemoglobin values, degenerative kidney (nephron) changes and interstitial nephritis with fibrosis. After ingestion of 31 mg/kg/day (Santowax OM) for 235 days, unidentified golden-yellow granules accumulated in the renal tubular cells.