MSDS 说明书



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#### 化学品安全技术说明书

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#### MSDS标题 P-TOLUIDINE MSDS报告 产品标题 4-氨基甲苯;4-甲基苯胺;对氨基甲苯 CAS号 106-49-0 化学品及企业标识 **PRODUCT NAME P-TOLUIDINE NFPA** Flammability 1 3 Toxicity 3 **Body Contact** Reactivity 1 Chronic 3

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

### **PRODUCT USE**

Manufacture of dyestuffs; reagent for lignin, nitrite, phloroglucin Intermediate

# **SYNONYMS**

C7H9N, 4-toluidine, 4-toluidine, p-aminotoluene, p-aminotoluene, 4-aminotoluene, 4aminotoluene, 4-amino-1-methylbenzene, 4-amino-1-methylbenzene, toylamine, "p-methyl aniline", "p-methyl aniline", 4-methylaniline, 4-methylaniline, p-methylbenzeneamine, pmethylbenzeneamine, 4-methylbenzeneamine, 4-methylbenzeneamine, "para toluidine", ptolylamine, p-tolylamine, "C.I. 37107", "C.I. Azoic Coupling Component 107"

### **CANADIAN WHMIS SYMBOLS**

None

## **EMERGENCY OVERVIEW**

## RISK

Danger of cumulative effects. May cause SENSITIZATION by skin contact. Limited evidence of a carcinogenic effect. Toxic by inhalation, in contact with skin and if swallowed. Irritating to eyes and skin. Very toxic to aquatic organisms.

## **POTENTIAL HEALTH EFFECTS**

# **ACUTE HEALTH EFFECTS**

### **SWALLOWED**

Toxic effects may result from the accidental ingestion of the material; animal experiments indicate that ingestion of less than 40 gram may be fatal or may produce serious damage to the health of the individual. The substance and/or its metabolites may bind to hemoglobin inhibiting normal uptake of oxygen. This condition, known as "methemoglobinemia", is a form of oxygen starvation (anoxia). Symptoms include cyanosis (a bluish discoloration skin and mucous membranes) and breathing difficulties. Symptoms may not be evident until several hours after exposure. At about 15% concentration of blood methemoglobin there is observable cyanosis of the lips, nose and earlobes. Symptoms may be absent although euphoria, flushed face and headache are commonly experienced. At 25-40%, cyanosis is marked but little disability occurs other than that produced on physical exertion. At 40-60%, symptoms include weakness, dizziness, lightheadedness, increasingly severe headache, ataxia, rapid shallow respiration, drowsiness, nausea, vomiting, confusion, lethargy and stupor. Above 60% symptoms include dyspnea, respiratory depression, tachycardia or bradycardia, and convulsions. Levels exceeding 70% may be fatal.

#### EYE

There is evidence that material may produce eye irritation in some persons and produce eye damage 24 hours or more after instillation. Severe inflammation may be expected with pain. There may be damage to the cornea. Unless treatment is prompt and adequate there may be permanent loss of vision. Conjunctivitis can occur following repeated exposure.

#### **SKIN**

Skin contact with the material may produce toxic effects; systemic effectsmay result following absorption. 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. The material may cause moderate inflammation of the skin either following direct contact or after a delay of some time. Repeated exposure can cause contact dermatitis which is characterized by redness, swelling and blistering.

#### **INHALED**

Inhalation of vapors or aerosols (mists, fumes), generated by the material during the course of normal handling, may produce toxic effects. The material is not thought to produce respiratory irritation (as classified using animal models). Nevertheless inhalation of dusts, or fume, especially for prolonged periods, may produce respiratory discomfort and occasionally, distress. 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. Clinical signs of intoxication in humans include methaemoglobinaemia and haematuria. An exposure of 40 ppm of toluidine (all isomers) in air for 60 minutes produces severe intoxication. Prolonged exposure to as little as 10 ppm was reported to cause symptoms of illness. A 1-hour exposure at 640 mg/kg ptoluidine, in air, cause ocular and upper respiratory tract irritation in rats.

#### **CHRONIC HEALTH EFFECTS**

There has been concern that this material can cause cancer or mutations, but there is not enough data to make an assessment. Repeated or long-term occupational exposure is likely to produce cumulative health effects involving organs or biochemical systems. Skin contact with the material is more likely to cause a sensitization reaction in some persons compared to the general population. There is some evidence that human exposure to the material may result in developmental toxicity. This evidence is based on animal studies where effects have been observed in the absence of marked maternal toxicity, or at around the same dose levels as other toxic effects but which are not secondary non-specific consequences of the other toxic effects. 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. p-Toluidine is a hepatic carcinogen in mice after chronic oral administration but the same doses are not carcinogenic in rats. Most arylamines are powerful poisons to the blood-making system. High chronic doses cause congestion of the spleen and tumor formation. Exposure to the material for prolonged periods may cause physical defects in the developing embryo (teratogenesis). p-Toluidine is a hepatic carcinogen in mice after chronic oral administration but the same doses are not carcinogenic in rats.