西亚试剂® Xiya Reagent 说明书

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化 学 品 安 全 技 术 说 明 书

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MSDS标题

O-TOLUIDINE MSDS报告

产品标题

2-氨基甲苯;邻氨基甲苯;邻胺;2-甲基苯胺;邻甲基苯胺

CAS号

95-53-4

化学品及企业标识

PRODUCT NAME

O-TOLUIDINE

NFPA

Flammability	1
Toxicity	3
Body Contact	2
Reactivity	1
Chronic	3

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

PRODUCT USE

Manufacture of dye- stuffs; printing textiles blue black and making certain colours fast to acids. Fragrance

SYNONYMS

C7-H9-N, 2-aminotoluene, 2-aminotoluene, o-methylaniline, o-methylaniline, 1-amino-2-methylbenzene, 1-amino-2-methylbenzene, 2-amino-1-methylbenzene, 2-amino-1-methylbenzene, o-aminotoluene, o-aminotoluene, "2-methyl aniline", "2-methyl aniline", "2-methyl benzeneamine", "2-methyl benzeneamine", "ortho toluidine", "C.I. 37077", 1-methyl-2-aminobenzene, 1-methyl-2-aminobenzene, 2-methyl-1-aminobenzene, 2-methyl-1-aminobenzene, 2-methylaniline, 2-methylaniline, o-methylbenzeneamine, o-methylbenzeneamine, 2-methylbenzeneamine, 2-methylbenzeneamine, 2-toluidine, 2-toluidine, o-tolylamine, o-tolylamine

CANADIAN WHMIS SYMBOLS

EMERGENCY OVERVIEW

RISK

Irritating to eyes.
May cause CANCER.
Toxic by inhalation and if swallowed.
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. Signs of intoxication in humans exposed to o-toluidine include methaemoglobinaemia, haematuria, marked renal and bladder irritation and physiological and psychological disturbances. Daily gastric intubation of 225 mg o-toluidine/kg body weight to rats for 20 days produced cyanosis, splenic congestion with haemosiderosis and extramedullary haematopoiesis,

hypercellularity in the bone marrow and mortalities. Rats given 35 mg/kg body weight daily for 2.5 months developed methaemoglobinaemia, erythropenia and reticulocytosis. A synthetic diet of a 7.5% solution in peanut oil (initial dose of 2 gm/rat reduced after 64 days to 1 gm/rat) produced bladder epithelial keratosis, metaplasia and a low incidence of papillomas. In a 7-week study, renal, hepatic and splenic pigmentation were observed in rats receiving 12500 ppm.

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 damage the health of the individual; systemic effects may result following absorption. There is some evidence to suggest that the material may cause mild but significant 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. 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 aerosols (mists, fumes), generated by the material during the course of normal handling, may produce toxic effects; these may be fatal. The material is not thought to produce respiratory irritation (as classified using animal models). Nevertheless inhalation of vapors, fumes or aerosols, especially for prolonged periods, may produce respiratory discomfort and occasionally, distress. 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 p-toluidine, in air, cause ocular and upper respiratory tract irritation in rats.

CHRONIC HEALTH EFFECTS

There is ample evidence that this material can be regarded as being able to cause cancer in humans based on experiments and other information. Limited evidence suggests that repeated or long-term occupational exposure may produce cumulative health effects involving organs or biochemical systems. Absorption across the placenta has produced foetal tumours in experimental animals. Bladder tumors have been produced in animals exposed to the

substance by several routes. When administered in the diet the hydrochloride increased the incidences of hepatocellular carcinomas or adenomas in female mice and haemangiosarcomas and haemangiomas of the abdominal viscera in both sexes of another strain; increased the incidences of sarcomas of multiple organs in rats of both sexes, subcutaneous fibromas and mesotheliomas in male rats, and sarcomas of the spleen, transitional cell papillomas and carcinomas of the urinary bladder, and mammary gland fibroadenomas and adenomas in the female rat. Although an excess of bladder cancers has often been found in workers exposed to varying combinations of dyestuffs and dyestuff intermediates, no population of workers exposed to o-toluidine alone has been described. Most arylamines are powerful poisons to the blood-making system. High chronic doses cause congestion of the spleen and tumor formation.