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-NITROPHENOL MSDS报告

产品标题

邻硝基苯酚;2-硝基酚;2-羟基硝基苯;2-硝基苯酚

CAS号

88-75-5

化学品及企业标识

PRODUCT NAME

O-NITROPHENOL

NFPA

Flammability	1
Toxicity	2
Body Contact	2
Reactivity	2
Chronic	2

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

PRODUCT USE

The use of a quantity of material in an unventilated or confined space may result in increased exposure and an irritating atmosphere developing.Before starting consider control of exposure by mechanical ventilation. Used in manufacture of many important compounds; as indicator in 2% alcohol solution, pH 5.0 colourless, 7.0 yellow; as reagent for glucose and fungicide for leather. Intermediate

SYNONYMS

C6-H5-N-O3, C6-H5-N-O3, O2NC6H4OH, ortho-nitrophenol, 2-hydroxynitrobenzene, 2-hydroxynitrobenzene, o-hydroxynitrobenzene, o-hydroxynitrobenzene, ortho-hydroxynitrobenzene

CANADIAN WHMIS SYMBOLS

None

EMERGENCY OVERVIEW

RISK

Harmful if swallowed.

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. Breathing in nitrophenols may result in irritation of the lining of the nasal passage, and mouth and poisoning of the bodies nervous system. Poisoning of the bodies central nervous system, reduces the bloods capacity to carry oxygen to the bodies tissues and organs. Flushed face, headache and and a sense of elation are common. Moderate exposure may produce bluish discoloration of the lips, earlobes, and finger nails. A loss of muscle coordination may occur along with difficulty breathing, drowsiness, nausea, vomiting. High concentrations may result in rapid beating of the heart, rapid violent spasms of the bodies muscles and loss of consciousness. 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 some evidence to suggest that this material can causeeye irritation and damage in some persons. Moderate to severe corneal cloudiness, blistered conjunctival tissue, and corneal neovascularisation were observed in rabbits after a single application of 27 mg of solid 4-nitrophenol/kg into the conjunctival sac . Only in one of six rabbits the effects appeared to be reversible during a 21-day observation period.

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 this material can cause inflammation of the skin on contact in some persons. Erythema and edema at the site of application were the most prevalent signs of exposure in rabbits when a saline suspension of 5,000 mg 4-nitrophenol was applied to the abraded dorsal surface for 24 hours. No adverse effects were noticed in the shaved dorsal surface of rabbits after application of 147 mg of dry solid 4-nitrophenol/kg for 4 hours. However, when the solid 4-nitrophenol was applied moistened with saline, skin erythema and oedema were observed. Skin scabbing and scarring were reported in rabbits 14 days after application of 181 mg 4-nitrophenol/kg moistened with saline for 24 hours. Partial recovery was observed by day 21. Application of 4-nitrophenol in daily doses of 50-250 mg 4-nitrophenol/kg to the skin of rats for 120 days resulted in dose-related dermal irritation consisting of erythema, scaling, scabbing, and cracking of the skin. It is possible, however, that the solvent, ethanol, may have contributed to the development of these effects. 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. Toxic effects may result from skin absorption.

INHALED

Inhalation may produce health damage*. Inhalation of vapors, aerosols (mists, fumes) or dusts, 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. 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. Evidence of absorption of 4-nitrophenol by the inhalation route may be inferred from the fact that rats exposed to dusts of 4-nitrophenol (sodium salt) for 2 weeks developed adverse systemic effects. Inhalation of nitrophenols may produce mucous membrane irritation and systemic poisoning. The nitrophenols produce central and peripheral vagus stimulation, central nervous system depression, methaemoglobinaemia, observable cyanosis with blue lips, earlobes and finger nails. Although signs may be absent, flushed face, headache and

euphoria are common. Moderate exposures may produce a marked cyanosis, weakness, dizziness, lightheadedness, increasingly severe headache, ataxia and shallow respiration, drowsiness, nausea, vomiting, confusion, lethargy and stupor. High concentrations may produce tachycardia, convulsions and coma.

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. Exposure over a long period of time to nitrophenols may produce kidney and liver damage. Inflammation of the colon, intestine, liver, stomach, and enlargement of the spleen may occur.