

化 学 品 安 全 技 术 说 明 书

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**MSDS标题**

HYDROXYLAMINE MSDS报告

**产品标题**

羟胺

**CAS号**

7803-49-8

**化学品及企业标识**

**PRODUCT NAME**

HYDROXYLAMINE

**NFPA**

Flammability	1
Toxicity	2
Body Contact	4
Reactivity	2
Chronic	2

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

**PRODUCT USE**

Reducing agent. Intermediate.

## **SYNONYMS**

N3-N-O, N3-N-O, NH2OH, oxammonium

## **CANADIAN WHMIS SYMBOLS**

## **EMERGENCY OVERVIEW**

### **RISK**

Heating may cause an explosion.

Harmful if swallowed.

Risk of serious damage to eyes.

May cause SENSITIZATION by skin contact.

Harmful: danger of serious damage to health by prolonged exposure if swallowed.

Irritating to respiratory system and skin.

Very toxic to aquatic organisms.

## **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. The material can produce chemical burns within the oral cavity and gastrointestinal tract following ingestion. 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. Ingestion of alkaline corrosives may produce burns around the mouth, ulcerations and swellings of the mucous membranes, profuse saliva production, with an inability to speak or swallow. Both the esophagus and stomach may experience burning pain; vomiting and diarrhea may follow. Epiglottal swelling may result in respiratory distress and asphyxia; shock can occur. Narrowing of the esophagus, stomach or stomach valve may occur immediately or after a long delay (weeks to years). Severe exposure can perforate the

esophagus or stomach leading to infections of the chest or abdominal cavity, with low chest pain, abdominal stiffness and fever. All of the above can cause death. Hydroxylamine relaxes the smooth muscle of blood vessels, causing low blood pressure, increased heart rate, circulatory insufficiency and cardiovascular collapse. Large doses produce destruction of blood cells. Bleeding times may be prolonged as platelet clumping is inhibited and there can be purple skin blotches.

## **EYE**

The material can produce chemical burns to the eye following direct contact. Vapors or mists may be extremely irritating. If applied to the eyes, this material causes severe eye damage. Direct eye contact with corrosive bases can cause pain and burns. There may be swelling, epithelium destruction, clouding of the cornea and inflammation of the iris. Mild cases often resolve; severe cases can be prolonged with complications such as persistent swelling, scarring, permanent cloudiness, bulging of the eye, cataracts, eyelids glued to the eyeball and blindness.

## **SKIN**

This material can cause inflammation of the skin oncontact in some persons. The material can produce chemical burns following direct contactwith the skin. Skin contact with the material may damage the health of the individual; systemic effects may result following absorption. 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. The material can produce severe chemical burns following direct contactwith the skin.

## **INHALED**

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. Inhaling corrosive bases may irritate the respiratory tract. Symptoms include cough, choking, pain and damage to the mucous membrane. In severe cases, lung swelling may develop, sometimes after a delay of hours to days. There may be low blood pressure, a weak and rapid pulse, and crackling sounds. The material can cause respiratory irritation in some persons. The body's response to such irritation can cause further lung damage.

## **CHRONIC HEALTH EFFECTS**

Harmful: danger of serious damage to health by prolonged exposure if swallowed. This material can cause serious damage if one is exposed to it for long periods. It can be assumed that it contains a substance which can produce severe defects. This has been demonstrated via both short- and long-

term experimentation. Limited evidence suggests that repeated or long-term occupational exposure may produce cumulative health effects involving organs or biochemical systems. There is some evidence that inhaling this product is more likely to cause a sensitization reaction in some persons compared to the general population. 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. Repeated exposure to hydroxylamine and derivatives may result in respiratory sensitization with asthma-like symptoms.

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