

化 学 品 安 全 技 术 说 明 书

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MSDS标题

ZSCHIMMER & SCHWARTZ CUBLEN AC MSDS报告

产品标题

次氮基三(亚甲基)三膦酸

CAS号

6419-19-8

化学品及企业标识

PRODUCT NAME

ZSCHIMMER & SCHWARTZ CUBLEN AC

NFPA

Flammability	0
Toxicity	2
Body Contact	4
Reactivity	1
Chronic	2
SCALE: Min/Nil=0 Low=1 Moderate=2 High=3 Extreme=4	

PRODUCT USE

Used according to manufacturer' s directions.

SYNONYMS

"aqueous solution of an aminophosphonic acid"

CANADIAN WHMIS SYMBOLS

EMERGENCY OVERVIEW

RISK

Causes severe burns.

Risk of serious damage to eyes.

May cause long- term adverse effects in the aquatic environment.

POTENTIAL HEALTH EFFECTS

ACUTE HEALTH EFFECTS

SWALLOWED

The material can produce severe chemical burns within the oral cavity and gastrointestinal tract following ingestion. Ingestion of acidic corrosives may produce burns around and in the mouth, the throat and esophagus. Immediate pain and difficulties in swallowing and speaking may also be evident. Swelling of the epiglottis may make it difficult to breathe which may result in suffocation. More severe exposure may result in vomiting blood and thick mucus, shock, abnormally low blood pressure, fluctuating pulse, shallow respiration and clammy skin, inflammation of stomach wall, and rupture of esophageal tissue. Untreated shock may eventually result in kidney failure. Severe cases may result in perforation of the stomach and abdominal cavity with consequent infection, rigidity and fever. There may be severe narrowing of the esophageal or pyloric sphincters; this may occur immediately or after a delay of weeks to years. There may be coma and convulsions, followed by death due to infection of the abdominal cavity, kidneys or lungs.

EYE

The material can produce severe 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 acid corrosives may produce pain, tears, sensitivity to light and burns. Mild burns of the epithelia generally recover rapidly and completely. Severe burns produce long-lasting and possibly irreversible damage. The appearance of the burn may not be apparent for several weeks after the initial contact. The cornea may ultimately become deeply opaque resulting in blindness. The material may produce severe irritation to the eye causing pronounced inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis.

SKIN

The material can produce severe chemical burns following direct contact with the skin. Skin contact with acidic corrosives may result in pain and burns; these may be deep with distinct edges and may heal slowly with the formation of scar tissue. 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 skin irritation after prolonged or repeated exposure and may produce on contact skin redness, swelling, the production of vesicles, scaling and thickening of the skin.

INHALED

Inhalation may produce health damage*. 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. Not normally a hazard due to non-volatile nature of product. The material can cause respiratory irritation in some persons. The body's response to such irritation can cause further lung damage. Corrosive acids can cause irritation of the respiratory tract, with coughing, choking and mucous membrane damage. There may be dizziness, headache, nausea and weakness. Swelling of the lungs can occur, either immediately or after a delay; symptoms of this include chest tightness, shortness of breath, frothy phlegm and cyanosis. Lack of oxygen can cause death hours after onset. Inhalation of quantities of liquid mist may be extremely hazardous, even lethal due to spasm, extreme irritation of larynx and bronchi, chemical pneumonitis and pulmonary edema. High concentrations cause inflamed airways and watery swelling of the lungs with edema. The material may produce respiratory tract irritation, and result in damage to the lung including reduced lung function.

CHRONIC HEALTH EFFECTS

Repeated or prolonged exposure to acids may result in the erosion of teeth, swelling and or ulceration of mouth lining. Irritation of airways to lung, with cough, and inflammation of lung tissue often occurs. Chronic exposure may inflame the skin or conjunctiva. Asthma-like symptoms may continue for months or even years after exposure to the material ceases. This may be due to a non-allergenic condition known as reactive airways dysfunction syndrome (RADS) which can occur following exposure to high levels of highly irritating compound. Key criteria for the diagnosis of RADS include the absence of preceding respiratory disease, in a non-atopic individual, with abrupt onset of persistent asthma-like symptoms within minutes to hours of a documented exposure to the irritant. A reversible airflow pattern, on spirometry, with the presence of moderate to severe bronchial hyperreactivity on methacholine challenge testing and the lack of minimal lymphocytic inflammation, without eosinophilia, have also been included in the criteria for diagnosis of RADS. RADS (or asthma) following an irritating inhalation is an infrequent disorder with rates related to the concentration of and duration of exposure to the

irritating substance. Industrial bronchitis, on the other hand, is a disorder that occurs as result of exposure due to high concentrations of irritating substance (often particulate in nature) and is completely reversible after exposure ceases. The disorder is characterised by dyspnea, cough and mucus production. Long term exposure to organophosphonate chelating agents may cause adverse effects. Rats fed on aminotri(methylenephosphonic acid) (ATMP), for up to 24 months, exhibited reduced body weight and changes in liver, spleen and kidney weights. No adverse histologic, haematologic, biochemical or urinological effects were seen. The "no-effect" level was 150 mg/kg/day. No significant teratogenic or foetotoxic effects were observed in the off-spring of rats and mice exposed to the neutral sodium salt, by gavage. No maternal toxicity was observed at any level. No adverse treatment related effects or reproductive parameters and no pathological or histopathological lesions were observed in either parental animals or pups following dietary exposure of the solid active acid at various times in the mating and birth cycle for three generations. Rats fed on ethylenediamine(methylenephosphonic acid (EDTMP) (300 mg/kg daily for 10 weeks) before mating and up to the end of the mating period, showed reduced body weights, defects in dental enamel on the incisors and significantly reduced liver weights. In an ongoing study, several rats treated with EDTMP (50-333 mg/kg/day) died during the first twelve months and were seen to have osteosarcomas with metastases. Other adverse effects of EDTMP treatment included increased white blood cell counts in mice, anaemia and reduction in erythrocytes, haemoglobin, haematocrit, serum cholesterol, total serum protein and globulin, in rats. In a one-generation reproductive study the off-spring of rats, fed up to 3000 ppm DTPMPA (diethylenetriaminepentakis(methylenephosphonic acid)), showed no adverse effects although there was a slight decrease in birth weights.