

化 学 品 安 全 技 术 说 明 书

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MSDS标题

ZINC DIETHYLDITHIOCARBAMATE MSDS报告

产品标题

二乙基二硫代氨基甲酸锌盐;促进剂ZDEC

CAS号

14324-55-1

化学品及企业标识

PRODUCT NAME

ZINC DIETHYLDITHIOCARBAMATE

NFPA

Flammability	1
Toxicity	2
Body Contact	2
Reactivity	1
Chronic	2

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

PRODUCT USE

Metal chelating agent. Rubber accelerator. Base for bright yellow/ gold electroplate finish for indoor use.

SYNONYMS

C10-H20-N2-S2.Zn, [(C2H5)2NCS2]2Zn, "zinc diethyl dithiocarbamate", "diethyl zinc dithiocarbamate", "diethyldithiocarbamic acid zinc salt", "carbamic acid, diethyldithio-, zinc salt", "zinc N, N-diethyldithiocarbamate", "zinc N, N-diethyldithiocarbamate", "zinc-N, N-diethyldithioic carbamate", "zinc-N, N-diethyldithioic carbamate", "zinc DEDT", "zinc bis(diethyldithiocarbamato)-", bis(diethyldithiocarbamato)zinc, ethazate, "ethyl cyamate", "ethyl zimate", "ethyl ziram", "zimate, ethyl", Ethazate, Vulcacure, "Vulkacit LDA"

CANADIAN WHMIS SYMBOLS

None

EMERGENCY OVERVIEW

RISK

Harmful if swallowed.

May cause SENSITIZATION by skin contact.

Irritating to eyes, respiratory system and skin.

Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

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. Limited evidence exists that the substance may cause irreversible but non-lethal mutagenic effects following a single exposure. Lethal doses of some thiocarbamates have produced muscle weakness and ascending paralysis progressing to respiratory paralysis and death in animals. Exposure to small quantities of thiocarbamates and intake of small quantities of ethanol may produce flushing, breathing difficulties, nausea and vomiting and lowered blood pressure. Sensitization to alcohol may last as long as 6-14 days following exposure. The acute toxicity of thiocarbamates is generally low, because of their rapid metabolism. Exposure to high doses may produce signs such as loss of appetite, squinting, excessive production of saliva, watery eyes, hairs standing on end, labored breathing, reduced body temperature, incoordination, depression and rapid muscle twitching.

EYE

This material may produce eye irritation in some persons and produce eye damage 24 hours or more after instillation. Moderate inflammation may be expected with redness; conjunctivitis may occur with prolonged exposure.

SKIN

This material can cause inflammation of the skin on contact in some persons. The material may accentuate any pre-existing dermatitis condition. 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

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. Limited evidence exists that the substance may cause irreversible but non-lethal mutagenic effects following a single exposure.

CHRONIC HEALTH EFFECTS

Long-term exposure to respiratory irritants may result in disease of the airways involving difficult breathing and related systemic problems. Skin contact with the material is more likely to cause a sensitization reaction in some persons compared to the general population. 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. Exposure to the material may cause concerns for human fertility, on the basis that similar materials provide some evidence of impaired fertility in the absence of toxic effects, or evidence of impaired fertility occurring at around the same dose levels as other toxic effects, but which are not a secondary non-specific consequence of other toxic effects.. Exposure to the material may result in a possible risk of irreversible effects. The material may produce mutagenic effects in man. This concern is raised, generally, on the basis of appropriate studies with similar materials using mammalian somatic cells in vivo. Such findings are often supported by positive results from in vitro mutagenicity studies. 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. Some dithiocarbamates may cause birth defects and cancer and may affect male reproductive capacity. They may also cause goiter (overactivity of the thyroid gland) and nerve disorders. Thiocarbamates have

been shown to alter sperm form and therefore reproduction. Welding or flame cutting of metals with zinc or zinc dust coatings may result in inhalation of zinc oxide fume; high concentrations of zinc oxide fume may result in "metal fume fever"; also known as "brass chills", an industrial disease of short duration. [I.L.O] Symptoms include malaise, fever, weakness, nausea and may appear quickly if operations occur in enclosed or poorly ventilated areas. A case has been reported of a female kitchen worker who developed urticaria on her wrists after wearing a certain brand of gloves containing zinc diethyldithiocarbamate (ZDC). Patch testing revealed sensitivity to ZDC. Symptoms disappeared when other gloves were used (1). DNA base-substitution mutagenicity has been demonstrated using Salmonella(2). (1) Helander& Makela, Contact Dermatitis, 9, pp 327-328, 1983 (2) Hedenstedt et al, Mutation Research, 68, 313-325, 1979 Zinc diethyldithiocarbamate was fed to mice for 18 months at concentrations up to 260 ppm. No increase in tumour incidence was noted.

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