

化 学 品 安 全 技 术 说 明 书

填表时间 2019-12-30

打印时间 2025-12-15

MSDS标题

VANADIUM TRIOXIDE MSDS报告

产品标题

钒酸酐;三氧化钒

CAS号

1314-34-7

化学品及企业标识

PRODUCT NAME

VANADIUM TRIOXIDE

NFPA

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

PRODUCT USE

Catalyst for conversion of ethylene to ethanol.

SYNONYMS

O3-V2, V2O3, "vanadic oxide", "vanadium sesquioxide"

CANADIAN WHMIS SYMBOLS

None

EMERGENCY OVERVIEW

RISK

Irritating to respiratory system.

Possible risk of harm to the unborn child.

Possible risk of irreversible effects.

Toxic: danger of serious damage to health by prolonged exposure through inhalation.

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

POTENTIAL HEALTH EFFECTS

ACUTE HEALTH EFFECTS

SWALLOWED

Strong evidence exists that the substance may cause irreversible but non-lethal mutagenic effects following a single exposure. Accidental ingestion of the material may be seriously damaging to the health of the individual; animal experiments indicate that ingestion of less than 40 gram may be fatal. Vanadium poisoning causes immediate distress with nose bleeds, severe diarrhea, paralysis of the legs, breathing difficulties, convulsions and death. The liver and kidneys may degenerate, and sometimes there can be bleeding from the lung and adrenal cortex. Vanadium is about as toxic as arsenic.

EYE

Although the material is not thought to be an irritant, direct contact with the eye may cause transient discomfort characterized by tearing or conjunctival redness (as with windburn). Slight abrasive damage may also result. The material may produce foreign body irritation in certain individuals.

SKIN

The material is not thought to produce adverse health effects or skin irritation following contact (as classified using animal models).

Nevertheless, good hygiene practice requires that exposure be kept to a minimum and that suitable gloves be used in an occupational setting. 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.

INHALED

Inhalation may produce serious health damage*. The material can cause respiratory irritation in some persons. The body's response to such irritation can cause further lung damage. Inhalation of dusts, generated by the material during the course of normal handling, may produce serious damage to the health of the individual. 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. The inhalation of vanadium dust can cause irritation of the respiratory tract and eyes, with cough, wheezing, bronchitis, phlegm with blood stains, and blackening of the tongue. Internal symptoms may include loss of appetite, anemia, nausea, headache, sleep difficulties, nervousness, dizziness, kidney damage, tremor, psychic disturbances and blindness.

CHRONIC HEALTH EFFECTS

Toxic: danger of serious damage to health by prolonged exposure through inhalation. Toxic: danger of serious damage to health by prolonged exposure through inhalation. 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. Results in experiments suggest that this material may cause disorders in the development of the embryo or fetus, even when no signs of poisoning show in the mother. 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 using mammalian somatic cells in vivo. Such findings are often supported by positive results from in vitro mutagenicity studies. There has been some concern that this material can cause cancer or mutations but there is not enough data to make an assessment. 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. Vanadium is an essential trace element. Poisoning can cause stomach upset, emphysema and wheezing. Sensitivity reactions may occur with repeated exposure. These are expressed by increased severity of symptoms.