

## 化 学 品 安 全 技 术 说 明 书

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### MSDS标题

ZIRCONIUM HYDRIDE MSDS报告

### 产品标题

氢化锆

### CAS号

7704-99-6

### 化学品及企业标识

## PRODUCT NAME

ZIRCONIUM HYDRIDE

## NFPA

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

## PRODUCT USE

Powerful reducing agent in acid solutions or high temperatures. Hydrogenation catalyst.  
Used as a vacuum- tube getter, in metallurgy, as a source of hydrogen, as a metal foaming agent, nuclear moderator.

## SYNONYMS

H<sub>2</sub>-Zr, ZrH<sub>2</sub>

## CANADIAN WHMIS SYMBOLS

## EMERGENCY OVERVIEW

### RISK

Highly flammable.

## POTENTIAL HEALTH EFFECTS

### ACUTE HEALTH EFFECTS

#### SWALLOWED

Accidental ingestion of the material may be damaging to the health of the individual. Because inorganic zirconium is poorly absorbed from the digestive tract, acute oral toxicity is low. Injection is much more dangerous, causing progressive depression until death.

#### EYE

There is some evidence to suggest that this material can cause eye irritation and damage in some persons.

#### SKIN

Skin contact is not thought to have harmful health effects, however the material may still produce health damage following entry through wounds, lesions or abrasions. There is some evidence to suggest that this material can cause inflammation of the skin on contact in some persons. The external application of zirconium can cause nodules in the skin of the armpits. 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 health damage\*. The material is not thought to produce respiratory irritation (as classified using animal models). Nevertheless inhalation of dusts, or fume, especially for prolonged periods, may produce respiratory discomfort and occasionally, distress. Inhalation of dusts, generated by the material during the course of normal handling, may be damaging to the health of the individual. Zirconium workers exposed to fume

for 1-5 years showed no abnormalities due to zirconium. Animal studies also reveal a low order of hazard from inhaled zirconium. The inhalation of small particles of metal oxide results in sudden thirst, a sweet, metallic or foul taste, throat irritation, cough, dry mucous membranes, tiredness and general unwellness. Headache, nausea and vomiting, fever or chills, restlessness, sweating, diarrhea, excessive urination and prostration may also occur. After exposure is removed, recovery occurs within 24-36 hours.

## **CHRONIC HEALTH EFFECTS**

Limited evidence suggests that repeated or long-term occupational exposure may produce cumulative health effects involving organs or biochemical systems. Zirconium can accumulate in the spleen. Oral administration has not been shown to cause any ill effects. Metallic dusts generated by the industrial process give rise to a number of potential health problems. The larger particles, above 5 micron, are nose and throat irritants. Smaller particles however, may cause lung deterioration. Particles of less than 1.5 micron can be trapped in the lungs and, dependent on the nature of the particle, may give rise to further serious health consequences.