

## 化 学 品 安 全 技 术 说 明 书

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### MSDS标题

KETJENFINE HYDROTREATING CATALYST COBALT M MSDS报告

### 产品标题

氧化钼;钼酐;无水钼酸

### CAS号

1313-27-5

### 化学品及企业标识

## PRODUCT NAME

KETJENFINE HYDROTREATING CATALYST COBALT MOLYBDENUM TYPE

## NFPA

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

## PRODUCT USE

Hydrotreating catalyst.

## **SYNONYMS**

"Oxides of cobalt (<10%) and molybdenum (<30%) on alumina support", "CoMo type", catalyst

## **CANADIAN WHMIS SYMBOLS**

## **EMERGENCY OVERVIEW**

### **RISK**

Danger of cumulative effects.

May cause SENSITIZATION by skin contact.

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

Harmful by inhalation and if swallowed.

Irritating to eyes and respiratory system.

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. Harmful if swallowed. Molybdenum, an essential trace element, can in large doses hamper growth and cause loss of appetite, listlessness and diarrhea. Anemia also occurs, and other symptoms include graying of hair, shrinking of the testicles, reduced fertility and milk production, shortness of breath, incoordination and irritation of the mucous membranes. Symptoms of copper deficiency are also seen. In toxic doses soluble cobalt salts produce stomach pain and vomiting, flushing of the face and ears, rash, ringing in the ears, nervous deafness and reduced blood flow to the extremities.

#### **EYE**

This material can cause eye irritation and damage in some persons.

#### **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. 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**

Harmful by inhalation. The material can cause respiratory irritation in some persons. The body's response to such irritation can cause further lung damage. Bronchial and alveolar exudate are apparent in animals exposed to molybdenum by inhalation. Molybdenum fume may produce bronchial irritation and moderate fatty changes in liver and kidney. Molybdenum, an essential trace element, can in large doses hamper growth and cause loss of appetite, listlessness and diarrhea. Anemia also occurs, and other symptoms include graying of hair, shrinking of the testicles, reduced fertility and milk production, shortness of breath, incoordination and irritation of the mucous membranes. Symptoms of copper deficiency are also seen. Health hazards from welding fume containing cobalt are not well documented but there are well-known dangers associated with the processing of the substance by other techniques. Inhalation of the fume may result in shortness of breath, coughing and pneumonitis. Hypersensitivity, involving lung changes, occurs in a small number of workers exposed to the fume; the symptoms disappear after exposure ends. Obliterative bronchiolitis adenomatosis has been produced in guinea pigs receiving intratracheal injections of 10 mg cobalt dust. Intratracheal administration of 12.5 mg/kg caused lethargy and death in rats in 15 minutes to 6 hours.

## **CHRONIC HEALTH EFFECTS**

Repeated or long-term occupational exposure is likely to produce cumulative health effects involving organs or biochemical systems. 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. High levels of molybdenum can cause joint problems in the hands and feet with pain and lameness. Molybdenum compounds can also cause liver changes with elevated levels of enzymes and cause over-activity of the thyroid gland. A generalized feeling of unwellness can occur, with tiredness, weakness, diarrhea, loss of appetite and weight. Molybdenum has been associated with cancers of the airways, but on the other hand, a low intake of molybdenum may cause an increased risk of developing esophageal cancer. Inhalation of cobalt powder can induce asthma, chest tightness and chronic inflammation of the bronchi. Chronic exposure to cobalt causes increase in blood hemoglobin, increased production of cells in the blood marrow and thyroid gland, discharge from around the heart and damage to the alpha cells of the pancreas. Long-term administration has caused goiter (overactivity of the thyroid) and reduced thyroid activity. Allergic inflammation of the skin may appear following exposure to cobalt, usually exhibited as red patches. Injection of cobalt can cause cancer at the site of entry.