

## 化 学 品 安 全 技 术 说 明 书

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### MSDS标题

HACH AMINO ACID REAGENT POWDER MSDS报告

### 产品标题

4-氨基-2-萘酚-4-磺酸; 4-氨基-3-羟基萘-1-磺酸; 1, 2, 4-氨基萘酚

### CAS号

116-63-2

### 化学品及企业标识

## PRODUCT NAME

HACH AMINO ACID REAGENT POWDER

## NFPA

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

## PRODUCT USE

Used for silica and phosphate determination.

# **CANADIAN WHMIS SYMBOLS**

## **EMERGENCY OVERVIEW**

### **RISK**

Harmful if swallowed.  
Contact with acids liberates toxic gas.  
Risk of serious damage to eyes.  
Irritating to respiratory system and skin.

## **POTENTIAL HEALTH EFFECTS**

### **ACUTE HEALTH EFFECTS**

#### **SWALLOWED**

There is some evidence to suggest that this material can cause, if swallowed once, irreversible damage of organs. Ingestion of sulfite salts may cause gastric irritation. Large doses may produce violent colic, diarrhea, circulatory disturbance, depression of vital functions and, sometimes, death. 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.

#### **EYE**

If applied to the eyes, this material causes severe eye damage.

#### **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. Inhalation of dusts, generated by the material during the course of normal handling, may be damaging to the health of the individual. Sulfur dioxide irritation probably results from the action of sulfurous acid as the highly soluble gas dissolves in mucous fluid. Short-term exposure causes bronchoconstriction measurable as an increase in flow-resistance. The magnitude is concentration-dependent.. Chief effects are upper respiratory tract irritation and severe acute

exposure may cause oedema of the lungs and possible respiratory paralysis. These exposures have produced severe obstructive and restrictive defects up to 3 months post-exposure; these have failed to respond to bronchodilators. Such exposures have also, on rare occasions, been associated with moderately severe obstructive illness and persistent, productive cough. Systemic effects of acute poisoning are not known but regular exposure may deaden the sense of smell. Symptoms include throat irritation, coughing, tightness of chest, difficulty with breathing, tear formation (lachrymation), eye smarting and suffocating feeling. Substantial exposures produce direct respiratory tract irritation, cough, burning, lachrymation, conjunctival injection, difficulty in swallowing, and oropharyngeal erythema. Other symptoms may include vomiting, diarrhoea, abdominal pain, fever, headache, vertigo, agitation, tremor, convulsions, and peripheral neuritis. High dose acute exposure may produce immediate bronchospasm and pulmonary oedema with respiratory failure/ paralysis, inflammation of the conjunctivae and inflammation of the tongue.

## CHRONIC HEALTH EFFECTS

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. There is some evidence that inhaling this product is more likely to cause a sensitization reaction in some persons compared to the general population. There is limited evidence that, skin contact with this product is more likely to cause a sensitization reaction in some persons compared to the general population. 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. Exposure to Sulfonates can cause an imbalance in cellular salts and therefore cellular function. Airborne sulfonates may be responsible for respiratory allergies and, in some instances, minor dermal allergies. Sulfites and bisulfites can cause narrowing of the airways, stomach upset, flushing, low blood pressure. tingling sensation, itchy wheal, swelling and shock, and asthmatics are especially prone. They induce allergic-like reactions which can occur on first contact with the material. Repeated exposure of animals to airborne sulfur dioxide (SO<sub>2</sub>) can produce a thickening of the mucous layer in the trachea and an increase in goblet cells and mucous glands similar to pathological changes found in chronic human bronchitis. Chronic exposure to sulfur dioxide (SO<sub>2</sub>) particulate complexes, present in polluted air, have been associated with the aggravation of chronic cardiovascular diseases such as asthma, chronic pulmonary disease, and coronary artery disease (this may occur at levels of 6-10 ug/m<sup>3</sup> for 24 hours), An association exists between persistent cough and sputum production, particularly in women and non-smokers. A 10-year follow study on workers exposed to a mean sulfur dioxide concentration of up to 33 ppm did not reveal an increased prevalence of chronic respiratory disease or decreased pulmonary function. By contrast, studies of smelter workers, exposed to concentrations below 2 ppm, suggest that chronic respiratory disease may develop and that workers exposed at

concentrations exceeding 1 ppm show accelerated loss of pulmonary function. Although SO<sub>2</sub> is not a carcinogen, the apparent increases in mortalities amongst arsenic- exposed smelter workers was greater when exposures included both high arsenic concentrations and moderate to high SO<sub>2</sub> exposures, suggesting that SO<sub>2</sub> might act as a promoter. Intermittent exposure of rats to benz[a]pyrene along with inhalation of SO<sub>2</sub> at 4-10 ppm, 1-6 hours per day, 5 days per week, produced substantial increases in respiratory tract squamous cell carcinomas compared to that associated with exposure to B[a]P or SO<sub>2</sub> alone.

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