

## 化 学 品 安 全 技 术 说 明 书

填表时间 2019-12-26

打印时间 2025-07-14

### MSDS标题

MALATE DEHYDROGENASE MSDS报告

### 产品标题

苹果酸脱氢酶

### CAS号

9001-64-3

### 化学品及企业标识

## PRODUCT NAME

MALATE DEHYDROGENASE

## NFPA

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

## PRODUCT USE

Enzyme used for analytical purposes e.g. the determination of oxaloacetate, malate or tartrate Specific for the L- configuration, D- malate, D- tartrate do not react.

## **SYNONYMS**

"enzyme (EC 1.1.1.37)", "malic dehydrogenase", MDH, L-MDH, L-MDH

## **CANADIAN WHMIS SYMBOLS**

## **EMERGENCY OVERVIEW**

## **RISK**

## **POTENTIAL HEALTH EFFECTS**

## **ACUTE HEALTH EFFECTS**

### **SWALLOWED**

Although ingestion is not thought to produce harmful effects, the material may still be damaging to the health of the individual following ingestion, especially where pre-existing organ (e.g. liver, kidney) damage is evident. Present definitions of harmful or toxic substances are generally based on doses producing mortality (death) rather than those producing morbidity (disease, ill-health). Gastrointestinal tract discomfort may produce nausea and vomiting. In an occupational setting however, ingestion of insignificant quantities is not thought to be cause for concern. Considered an unlikely route of entry in commercial/industrial environments.

### **EYE**

Although the material is not thought to be an irritant, direct contact with the eye may produce transient discomfort characterized by tearing or conjunctival redness (as with windburn).

### **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.

### **INHALED**

The material is not thought to produce adverse health effects or irritation of the respiratory tract (as classified using animal models). Nevertheless, good hygiene practice requires that exposure be kept to a minimum and that suitable control measures be used in an occupational setting. 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. Respiratory sensitization may

result in allergic/asthma like responses; from coughing and minor breathing difficulties to bronchitis with wheezing, gasping.

## **CHRONIC HEALTH EFFECTS**

There is some evidence that inhaling this product is more likely to cause a sensitization reaction in some persons compared to the general population.

Principal routes of exposure are usually by skin contact/absorption and inhalation of generated dust. Dusts produced by enzymes can attack the respiratory system. Allergic asthma produced after exposure includes spasm, cough and wheezing. Other symptoms include chronic cough, phlegm, fever, muscle pains, fatigue, airway obstruction, and scarring at the top or base of the lungs. There may also be abdominal pain, headache, stomach-ache and a general feeling of unwellness. Prolonged contact can result in skin soreness, redness, inflammation and possible ulceration. There may also be loss of lung function due to scarring.

Xinya