

化 学 品 安 全 技 术 说 明 书

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MSDS标题

MALEIC ANHYDRIDE MSDS报告

产品标题

失水苹果酸酐;马来酸酐;顺酐;马来酐;顺丁二酸酐

CAS号

108-31-6

化学品及企业标识

PRODUCT NAME

MALEIC ANHYDRIDE

NFPA

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

PRODUCT USE

Used in manufacture of polyester resin, alkyd coating resins, fumaric and tartaric acid production, pesticides, preservatives for oils and fats, permanent press resins (textiles), Diels- Alder reactions.

SYNONYMS

C4-H2-O3, "cis-butenedioic anhydride", "2, 5-furandione", "2, 5-furandione", "maleic acid anhydride", "toxilic anhydride"

CANADIAN WHMIS SYMBOLS

EMERGENCY OVERVIEW

RISK

Harmful if swallowed.

Causes burns.

Risk of serious damage to eyes.

May cause SENSITIZATION by inhalation and skin contact.

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. The material can produce chemical burns within the oral cavity and gastrointestinal tract following ingestion. Ingestion of low-molecular organic acid solutions may produce spontaneous hemorrhaging, production of blood clots, gastrointestinal damage and narrowing of the esophagus and stomach entry. Ingestion of acidic corrosives may produce burns around and in the mouth, the throat and esophagus. Immediate pain and difficulties in swallowing and speaking may also be evident. Swelling of the epiglottis may make it difficult to breathe which may result in suffocation. More severe exposure may result in vomiting blood and thick mucus, shock, abnormally low blood pressure, fluctuating pulse, shallow respiration and clammy skin, inflammation of stomach wall, and rupture of esophageal tissue. Untreated shock may eventually result in kidney failure. Severe cases may result in perforation of the stomach and abdominal cavity with consequent infection, rigidity and fever. There may be severe narrowing of the esophageal or pyloric sphincters; this may occur immediately or after a delay of weeks to years. There may be coma and convulsions, followed by death due to infection of the abdominal cavity, kidneys or lungs.

EYE

The material can produce chemical burns to the eye following direct contact. Vapors or mists may be extremely irritating. If applied to the eyes, this material causes severe eye damage. Solutions of low-molecular weight organic acids cause pain and injury to the eyes. Direct eye contact with acid corrosives may produce pain, tears, sensitivity to light and burns.

Mild burns of the epithelia generally recover rapidly and completely. Severe burns produce long-lasting and possibly irreversible damage. The appearance of the burn may not be apparent for several weeks after the initial contact. The cornea may ultimately become deeply opaque resulting in blindness.

SKIN

The material can produce chemical burns following direct contact with the skin. Skin contact is not thought to produce harmful health effects (as classified using animal models). Systemic harm, however, has been identified following exposure of animals by at least one other route and the material may still produce health damage following entry through wounds, lesions or abrasions. Good hygiene practice requires that exposure be kept to a minimum and that suitable gloves be used in an occupational setting. Molten material is capable of causing burns. Skin contact with acidic corrosives may result in pain and burns; these may be deep with distinct edges and may heal slowly with the formation of scar tissue. 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

If inhaled, this material can irritate the throat and lungs of some persons. The material is not thought to produce adverse health effects following inhalation (as classified using animal models). Nevertheless, adverse effects have been produced following exposure of animals by at least one other route and good hygiene practice requires that exposure be kept to a minimum and that suitable control measures be used in an occupational setting. Processing for an overly long time or processing at overly high temperatures may cause generation and release of highly irritating vapors, which irritate eyes, nose, throat, causing red itching eyes, coughing, sore throat. 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. Corrosive acids can cause irritation of the respiratory tract, with coughing, choking and mucous membrane damage. There may be dizziness, headache, nausea and weakness. Swelling of the lungs can occur, either immediately or after a delay; symptoms of this include chest tightness, shortness of breath, frothy phlegm and cyanosis. Lack of oxygen can cause death hours after onset. Usually handled as molten liquid which requires worker thermal protection and increases hazard of vapor exposure. CAUTION: Vapors may be irritating.

CHRONIC HEALTH EFFECTS

Inhaling this product is more likely to cause a sensitization reaction in some persons compared to the general population. Skin contact with the material is more likely to cause a sensitization reaction in some persons compared to the general population. 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. Repeated or prolonged exposure to acids may result in the erosion of teeth, swelling and or ulceration of mouth lining. Irritation of airways to lung, with cough, and inflammation of lung tissue often occurs. Chronic exposure may inflame the skin or conjunctiva. Repeated inhalation may cause chronic bronchitis of the asthmatic type, pulmonary oedema (delayed to 72 hours) and ulceration of nasal mucosa. Chronic bronchitis among maleic anhydride workers is greater than that among workers with similar exposures to phthalic anhydride. Chronic eye irritation and keratitis may also result from chronic occupational exposure. Repeated exposure at concentrations exceeding 1.25 ppm has produced asthma in workers. An increase in bronchitis and dermatitis has also been reported after long term exposure.

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