

化 学 品 安 全 技 术 说 明 书

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MSDS标题

YTTRIUM(III) OXIDE MSDS报告

产品标题

纳米氧化钇

CAS号

1314-36-9

化学品及企业标识

PRODUCT NAME

YTTRIUM(III) OXIDE

NFPA

Flammability	0
Toxicity	1
Body Contact	1
Reactivity	0
Chronic	2

SCALE: Min/Nil=0 Low=1 Moderate=2 High=3 Extreme=4

PRODUCT USE

Phosphors for colour TV tubes (alloy with europium), yttrium- iron garnets for microwave filters, stabiliser for high- temperature service materials (zirconia and silicon nitride refractories), dopant for optical fibres and superconductors.

SYNONYMS

O3-Y2, Y2O3, yttria, "yttrium sesquioxide", "yttrium trioxide", "diyttrium trioxide"

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.

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). The dust may produce eye discomfort causing smarting, pain and redness.

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.

CHRONIC HEALTH EFFECTS

Principal routes of exposure are by accidental skin and eye contact and inhalation of generated dusts. The toxicology of rare earth metal oxides has been determined by pathological and biochemical examination of rodents exposed to the oxides by oral, intraperitoneal or endotracheal routes. Weakly expressed general toxic action of the oxides is seen in acute and prolonged exposure. The dusts cause pronounced changes in the lungs. (The oxides of the rare earth metals are significantly less toxic than their salts.) Yttrium oxide, introduced endotracheally to white-rats, causes diffuse fibrosis, emphysema, small white nodules, giant cells and accumulation of dusts in the lung; the lymph nodes are enlarged. [Mogilevskaya & Raikhlin - Toxicology of Rare Earths]

Xinya