

化 学 品 安 全 技 术 说 明 书

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MSDS标题

HETASTARCH MSDS报告

产品标题

羟乙基淀粉醚

CAS号

9005-27-0

化学品及企业标识

PRODUCT NAME

HETASTARCH

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

Reagent.

SYNONYMS

"amylopectin, hydroxyethylated", "starch, 2-hydroxyethyl ether", "starch, 2-hydroxyethyl ether", hydroxyethylstarke, O-(hydroxyethyl)starch, O-(hydroxyethyl)starch, "2-hydroxyethyl starch", "2-hydroxyethyl starch", O-(2-hydroxyethyl)starch, O-(2-hydroxyethyl)starch, "2-hydroxyethyl starch ether", "2-hydroxyethyl starch ether", "starch hydroxyethyl ether", "tapioca starch hydroxyethyl ether", pentastarch, "Essex 1360", "Essex Gum 1360", "Ethylex Gum 2020", HAS, HES, Hespander, "Penford 260, 280, 290, P-208", "Penford 260, 280, 290, P-208", Plasmasteril, polysaccharide, "glucose polymer"

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. Polysaccharides are not substantially absorbed from the gastrointestinal tract but may produce a laxative effect. Larger doses may produce intestinal obstruction or stomach concretions. Large quantities of the substituted polysaccharide, methylcellulose (as with other bulk laxatives), may temporarily increase flatulence. Oesophageal obstruction, by swelling, may occur if the material is swallowed dry. Doses of 3-9 gm hydroxypropylcellulose, fed to human subjects, at least one week apart, were eliminated within 96 hours. Animals fed on diets containing 3% or less, experienced no adverse effects. Higher levels produced malnutrition due to excessive bulk but caused no organic damage. In one dog, an oral dose of hydroxypropylcellulose produced diarrhoea and blood cell depression. Ingestion of hetastarch (hydroxyethyl amylopectin) has reportedly produced fever, chills, urticaria and salivary gland enlargement. Several of these effects may be due to contamination by other naturally occurring macromolecules extracted from the source material. Large volumes of ingested hetastarch may interfere with coagulation mechanisms and increase the risk of haemorrhage. Anaphylaxis has occurred. Infusions of dextrans may occasionally produce allergic reactions such as

urticaria, hypotension and bronchospasm. Severe anaphylactic reactions may occasionally occur and death may result from cardiac and respiratory arrest. Nausea, vomiting, fever, joint pains, and flushing may also occur. Similarly, allergic reactions, sometimes severe (but rare) have been reported following ingestion or inhalation of tragacanth gums. Starch has such a low oral acute toxicity that rats given 10-20% of their body weight, show only minimal effects. This may not be true of modified starches but given their use in foods as stabilisers and thickeners, there is probably little cause for concern. An abnormal craving for starch (amylophagia), during pregnancy, is recognised as a common form of eating disorder in certain localities. In one study the incidence was as high as 35%. Some women retain the habit for years and may ingest several kilograms of starch daily. Since starch, in such "addicts", accounts for the bulk of the diet, the commonly observed iron-deficiency anaemia is probably the result of the practice and not its cause. Less common complications include parotid gland enlargement and partial intestinal obstruction due to starch concretions (gastroliths). Withdrawal reverse these sequelae.

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.

CHRONIC HEALTH EFFECTS

Primary route of exposure is usually by inhalation of generated dust. The material may induce local or systemic reactions which are identical or similar to allergic reactions. The mechanism of these pseudo-allergic ("anaphylactoid") response is still largely unknown but does not involve an antigen-antibody interaction and therefore may appear on first contact with the material. Studies indicate that diets containing large amounts of non-absorbable polysaccharides, such as cellulose, might decrease absorption of calcium, magnesium, zinc and phosphorus. Some workers may develop chronic occupational dermatitis (generally mild) through the handling of starch products. When starch is used as a lubricant in surgical gloves, small

amounts, released into the patient during the course of surgery, have resulted in granulomas and peritonitis.

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