化 学 品 安 全 技 术 说 明 书

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MSDS标题

P-TOLUENESULFONYL ISOCYANATE MSDS报告

产品标题

4-甲基异氰酸苯磺酰酯;对甲苯磺酰异氰酸酯;4-甲苯磺酰异氰酸酯

CAS号

4083-64-1

化学品及企业标识

PRODUCT NAME

P-TOLUENESULFONYL ISOCYANATE

NFPA

Flammability	1
Toxicity	3
Body Contact	2
Reactivity	2
Chronic	2

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

PRODUCT USE

Persons with a history of asthma or other respiratory problems or are known to be sensitised, should not be engaged in any work involving the handling of isocyanates. [CCTRADE- Bayer, APMF]. Reacts readily with reactive hydrogens to form urethanes, tosylureas. Forms stable N- p- tosylaminocarbonyl- (Tac) amino acids. p- Toluenesulfonyl isocyanate (PTSI) is a highly reactive sulfonyl isocyanate. PTSI is used widely as a

stabilizer for organic isocyanates and as a water scavenger in the formulation of specialty urethane products The reactivity of PTSI toward active hydrogen atoms makes it useful as a scavenger for water and other isocyanate reactive groups such as free acid in powdered aluminum alkanoates and active hydrogen present in carbon black pigments which cause polyurethane coatings, sealants and adhesives to thicken during storage. PTSI is recommended especially for one- component, low- VOC polyurethane coatings. The reaction of PTSI with water introduced from pigments and solvents in the paint formulation generates carbon dioxide and soluble inert chemical products. This highly reactive sulfonyl isocyanate is also used as an intermediate in the synthesis of other useful chemical compounds. Intermediate

SYNONYMS

C8-H7-N-O3-S, C8-H7-N-O3-S, CH3C6H4SO2NCO, "tosyl isocyanate", "4-toluenesulfonyl isocyanate", "4-toluenesulfonyl isocyanate", "p-toluene-sulphonyl isocyanate", "p-toluene-sulphonyl isocyanate", "p-toluene sulfonyl isocyanate", "p-toluene sulfonyl isocyanate"

CANADIAN WHMIS SYMBOLS

EMERGENCY OVERVIEW

RISK

Reacts violently with water.
May cause SENSITIZATION by inhalation.
Irritating to eyes, respiratory system and skin.

POTENTIAL HEALTH EFFECTS

ACUTE HEALTH EFFECTS

SWALLOWED

Accidental ingestion of the material may be seriously damaging to the health of the individual; animal experiments indicate that ingestion of less than 40 gram may be fatal.

EYE

This material can cause eye irritation and damage in some persons. Irritation of the eyes may produce a heavy secretion of tears (lachrymation).

SKIN

This material can cause inflammation of the skin oncontact in some persons. The material may accentuate any pre-existing dermatitis condition. Skin contact with the material may damage the health of the individual; systemic effects may result following absorption. Open cuts, abraded or irritated

skin should not be exposed to this material. 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

Inhalation may produce serious health damage*. The material can cause respiratory irritation in some persons. The body's response to such irritation can cause further lung damage. Inhalation of aerosols (mists, fumes), generated by the material during the course of normal handling, may produce serious damage to the health of the individual. The vapor/mist may be highly irritating to the upper respiratory tract and lungs; the response may be severe enough to produce bronchitis and pulmonary edema. Possible neurological symptoms arising from isocyanate exposure include headache, insomnia, euphoria, ataxia, anxiety neurosis, depression and paranoia. Gastrointestinal disturbances are characterized by nausea and vomiting. Pulmonary sensitization may produce asthmatic reactions ranging from minor breathing difficulties to severe allergic attacks; this may occur following a single acute exposure or may develop without warning for several hours after exposure. Sensitized people can react to very low doses, and should not be allowed to work in situations allowing exposure to this material. Continued exposure of sensitized persons may lead to possible long term respiratory impairment.Inhalation hazard is increased at higher temperatures.

CHRONIC HEALTH EFFECTS

Long-term exposure to respiratory irritants may result in disease of the airways involving difficult breathing and related systemic problems. Inhaling this product 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. 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. Persons with a history of asthma or other respiratory problems or are known to be sensitised, should not be engaged in any work involving the handling of isocyanates. [CCTRADE-Bayer, APMF]. Respiratory sensitization may result in allergic/asthma like responses; from coughing and minor breathing difficulties to bronchitis with wheezing, gasping. Sensitization may give severe responses to very low levels of exposure, i.e. hypersensitivity. Sensitized persons should not be allowed to work in situations where exposure may occur. Isocyanate vapors are irritating to the airways and can cause their inflammation, with wheezing, gasping, severe distress, even loss of consciousness and fluid in the lungs. Nervous system symptoms that may occur include headache, sleep disturbance, euphoria, inco-ordination, anxiety, depression and paranoia. Digestive effects include nausea and vomiting. Breathing difficulties may occur unpredictably after a period of tolerance and after skin contact. Allergic inflammation of the skin can occur, with rash, itching, blistering, and swelling of the hands and feet. Sensitive people can react to very low levels and should not be exposed to this

material.