化 学 品 安 全 技 术 说 明 书

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MSDS标题

WATERSAVER WS 70 (B-TYPE) MSDS报告

产品标题

一氧五环, 氧杂环戊烷;四甲撑氧;四氢化氧杂茂;氧戊环;四亚甲基氧化物;二环氧乙烷;1, 4-环氧丁烷

CAS号

109-99-9

化学品及企业标识

PRODUCT NAME

WATERSAVER WS 70 (B-TYPE)

NFPA

Flammability	3
Toxicity	2
Body Contact	2
Reactivity	2
Chronic	2

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

PRODUCT USE

Solvent based vinyl adhesive.

SYNONYMS

"Watersaver Company.", "Solvent based vinyl adhesive."

CANADIAN WHMIS SYMBOLS

EMERGENCY OVERVIEW

RISK

May form explosive peroxides.
Irritating to eyes and respiratory system.
Highly flammable.

POTENTIAL HEALTH EFFECTS

ACUTE HEALTH EFFECTS

SWALLOWED

Accidental ingestion of the material may be damaging to the health of the individual. Ingestion of tetrahydrofuran may not, in itself, produce internal injury, however, contaminating levels of furan, present in certain grades of commercial product, may produce liver and kidney injury. The intake of alcoholic beverages may enhance the toxic effects of tetrahydrofuran.

EYE

This material can cause eye irritation and damage in some persons. The application of a 20% aqueous solution of tetrahydrofuran to rabbiteyes produced irritation. The material may produce moderate eye irritation leading to inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis.

SKIN

Skin contact with the material may damage the health of the individual; systemic effects may result following absorption. There is some evidence to suggest that this material can cause inflammation of the skin on contact in some persons. 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. Skin contact with tetrahydrofuran may produce smarting and reddening of the skin and after prolonged exposures, contact (non-allergic) dermatitis may result due to the degreasing effect of the substance.

INHALED

Inhalation may produce health damage*. Inhalation of vapors or aerosols (mists, fumes), generated by the material during the course of normal handling, may be damaging to the health of the individual. The material can cause respiratory irritation in some persons. The body's response to such irritation can cause further lung damage. Overexposure to tetrahydrofuran, by inhalation, may result in irritation of the mucous membranes and may produce coughing, chest pains, nausea, dizziness, headache and narcosis. Exposure to high concentrations can affect the central nervous system due to the strong narcotic effect of the material. Concentrations greater than 25000 ppm were reported to produce anaesthesia in animals. Anaesthetic properties are poor as onset is delayed and recovery is slow. Pronounced hypotension and marked respiratory hypernea accompany narcosis. Other symptoms include muscular hypotonia and disappearance of corneal reflexes, followed by coma and death. If exposure to highly concentrated solvent atmosphere is prolonged this may lead to narcosis, unconsciousness, even coma and possible death. Inhalation of high concentrations of gas/vapor causes lung irritation with coughing and nausea, central nervous depression with headache and dizziness, slowing of reflexes, fatigue and inco-ordination.

CHRONIC HEALTH EFFECTS

Limited evidence suggests that repeated or long-term occupational exposure may produce cumulative health effects involving organs or biochemical systems. Asthma-like symptoms may continue for months or even years after exposure to the material ceases. This may be due to a non-allergenic condition known as reactive airways dysfunction syndrome (RADS) which can occur following exposure to high levels of highly irritating compound. Key criteria for the diagnosis of RADS include the absence of preceding respiratory disease, in a non-atopic individual, with abrupt onset of persistent asthma-like symptoms within minutes to hours of a documented exposure to the irritant. A reversible airflow pattern, on spirometry, with the presence of moderate to severe bronchial hyperreactivity on methacholine challenge testing and the lack of minimal lymphocytic inflammation, without eosinophilia, have also been included in the criteria for diagnosis of RADS. RADS (or asthma) following an irritating inhalation is an infrequent disorder with rates related to the concentration of and duration of exposure to the irritating substance. Industrial bronchitis, on the other hand, is a disorder that occurs as result of exposure due to high concentrations of irritating substance (often particulate in nature) and is completely reversible after exposure ceases. The disorder is characterised by dyspnea, cough and mucus production. There has been some concern that this material can cause cancer or mutations but there is not enough data to make an assessment. There is some evidence that inhaling this product is more likely to cause a sensitization reaction in some persons compared to the general population. 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. There is some evidence that human exposure to the material may result in developmental toxicity. This evidence is based on animal studies

where effects have been observed in the absence of marked maternal toxicity, or at around the same dose levels as other toxic effects but which are not secondary non-specific consequences of the other toxic effects. Repeated exposure to tetrahydrofuran (THF) and its congeners has been associated with cytolytic hepatitis and fatty degeneration of the liver. Inhalation of THF at concentrations greater than 3000 ppm, 8 hours/day for 20 days, produced irritation and evidence for hepatic and renal injury in animals. Male rats inhaling more than 5000 ppm THF for 12 weeks, 4 hours/day showed signs of systemic intoxication, skin and respiratory irritation, liver function disturbance and abnormalities in glucose function. Muscle acetylcholinesterase activity increased in a concentration-dependent manner in male rats that inhaled 200 ppm for 18 weeks, 6 hours/day. Hepatic protein and mixed function oxidase activity also increased. At 2000 ppm, liver function was inhibited. In a 13-week inhalation study, ataxia was reported in rats at 5000 ppm and narcosis in mice at 1800 ppm. Hepatocytomegaly developed in mice of both sexes at 5000 ppm while uterine atrophy and degeneration of the adrenal cortex was found in female mice. A case history suggests that interaction of THF and endoflurane (an anaesthetic) may provoke epileptic seizures following surgery. The parent compound of tetrahydrofuran, furan, is carcinogenic in rats based on an increased incidence of cholangiocarcinoma and hepatocellular neoplasms of the liver and increased incidences of mononuclear cell leukaemia. In male and female mice, furan induced hepatocellular neoplasms and benign pheochromocytomas of the of the adrenal gland. 1,4-Dioxane, another cyclic ether solvent, is carcinogenic in rats and guinea pigs, following oral administration, inducing malignant tumours of the liver in rats and malignant tumours of the liver of the gall-bladder in guinea pigs. 1,4-Dioxane is a promoter in two stage skin carcinogenic studies in mice. In a two-year inhalation study * there was evidence of carcinogenic activity of THF, in male rats, based on increased incidences of renal tube adenoma or carcinoma (combined) and in female mice based on an increased incidence of hepatocellular neoplasms. There was no evidence of carcinogenic activity in female rats or male mice exposed to 200, 600 and 1800 ppm THF by inhalation. * National Toxicology Program Technical Report Series No. 475. Chronic solvent inhalation exposures may result in nervous system impairment and liver and blood changes. [PATTYS]. Long term cyclohexanone exposure may cause liver and kidney changes. Clouding of the eye lens and cataract development may occur. Avoid all exposure in pregnancy, cyclohexanone may cause birth defects. One ingredient of the product has caused skin sensitization reactions, shown as localized reddening and hives, or may produce respiratory sensitization characterized by asthma- like symptoms and runny nose.