

## 化 学 品 安 全 技 术 说 明 书

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### MSDS标题

HEXAZINONE MSDS报告

### 产品标题

林草净;威尔柏;3-环己基-6-二甲氨基-1-甲基-1,3,5-三嗪-2,4-二酮

### CAS号

51235-04-2

### 化学品及企业标识

## PRODUCT NAME

HEXAZINONE

## NFPA

Flammability	1
Toxicity	2
Body Contact	2
Reactivity	1
Chronic	2

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

## PRODUCT USE

Control of annual, biennial and most perennial weeds and woody plants on non- crop areas and in some coniferous plantations. Selective control of weeds in sugar cane, pineapples and lucerne. Non- selective, primarily a contact herbicide, absorbed by the leaves and roots, with translocation upwards, towards the apex. Inhibits photosynthesis. Intermediate

## SYNONYMS

C12-H20-N4-O2, "3-cyclohexyl-6-(dimethylamino)-1-methyl-s-triazine-2, 4(1H, 3H)-dione", "3-cyclohexyl-6-(dimethylamino)-1-methyl-s-triazine-2, 4(1H, 3H)-dione", "3-cyclohexyl-6-(dimethylamino)-1-methyl-1, 3, 5-triazine-2, 4(1H, 3H)-dione", "3-cyclohexyl-6-(dimethylamino)-1-methyl-1, 3, 5-triazine-2, 4(1H, 3H)-dione", "DPX 3674", "Velpar weed killer", "Triazine Herbicide"

## CANADIAN WHMIS SYMBOLS

## EMERGENCY OVERVIEW

### RISK

Harmful if swallowed.

Irritating to eyes.

Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

## 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. Triazine derivatives have been shown to cause structural damage to the liver in animal studies.

#### EYE

This material may produce eye irritation in some persons and produce eye damage 24 hours or more after instillation. Moderate inflammation may be expected with redness; conjunctivitis may occur with prolonged exposure.

#### 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. 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

The material is not thought to produce either adverse health effects or irritation of the respiratory tract 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.

## CHRONIC HEALTH EFFECTS

There has been some concern that this material can cause cancer or mutations but there is not enough data to make an assessment. 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. Epidemiological studies have associated long-term exposures to triazine herbicides with increase risk of ovarian cancer in female farm workers in Italy and of breast cancer in the general population of Kentucky in the United States. In experiments with female F344 rats, atrazine induced tumours of the mammary gland and reproductive organs. Atrazine also caused lengthening of the oestrus cycle, a dose-dependent increase in the plasma levels of 17 $\beta$ -oestradiol and early onset of mammary and pituitary tumours in female Prague-Dawley rats. Investigations into the mechanism of these apparent oestrogenic effects have not been able to demonstrate any consistent interactions with triazine herbicides with the oestrogen receptor or effects on receptor-mediated responses. Atrazine, simazine and propazine have been shown to induce aromatase activity in a human adrenocortical carcinoma cell line. This response was observed at concentrations in the submicromolar range. Aromatase is a circulating enzyme which converts androstenedione (generated in the adrenals) to oestrone in peripheral tissues such as adipose tissues. Oestrone subsequently undergoes conversion to oestradiol which binds to oestrogen receptors in many tissues with induction of tumours. In addition, many human breast cancers contain aromatase. (Breast cancer therapies, based on aromatase inhibitors, are now available.) The effects of triazine herbicides and some of their metabolites on aromatase activity may provide a partial explanation for the observed increase in plasma oestradiol in rats, together with the observed oestrogen-mediated toxicities in vivo.

[1] [1] Sanderson et al: Environmental Health Perspectives, 109, pp 1027-1031, 2001 Suggestive evidence between atrazine (or triazines) exposure and an increased risk of prostate cancer, breast cancer, and ovarian cancer have been reported. Although these data provide a suspicion of carcinogenicity, the limited number of investigations and study limitations preclude drawing conclusions regarding these cancer types.