

## 化 学 品 安 全 技 术 说 明 书

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### MSDS标题

VINCRIStINE MSDS报告

### 产品标题

长春新碱

### CAS号

57-22-7

### 化学品及企业标识

## PRODUCT NAME

VINCRIStINE

## NFPA

Flammability	1
Toxicity	3
Body Contact	3
Reactivity	1
Chronic	3

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

## PRODUCT USE

An alkaloid, 22- oxovincaleukoblastine, obtained from Vinca rosea (Catharancus roseus - Apocynaceae). Vincristine is an antineoplastic agent with anti- mitotic properties (ie inhibits cell division). Also has immuno- supressive activity. Used principally in combination chemo- therapy regimes for acute leukaemia and Hodgkin' s disease and other lymphomas (including Burkitt' s). Also used in the treatment of Wilm' s tumor,

neuroblastoma, retinoblastoma, sarcomas and in breast, brain and lung tumors. Normally administered by injection.

## **SYNONYMS**

C46-H56-N4-O10, leurocristine, 22-oxovincalcaleukoblastine, 22-oxovincalcaleukoblastine, "vincaleukoblastine, 22-oxo-", "vincaleukoblastine, 22-oxo-", LCR, NCI-C04864, NSC-67574, Oncovin, VCR, Vincristine, Vinkristin, "anti-cancer agent", tumoristat, tumouristat

## **CANADIAN WHMIS SYMBOLS**

## **EMERGENCY OVERVIEW**

### **RISK**

Risk of serious damage to eyes.

May cause heritable genetic damage.

Limited evidence of a carcinogenic effect.

May impair fertility.

May cause harm to the unborn child.

Harmful by inhalation, in contact with skin and if swallowed.

Irritating to respiratory system and skin.

## **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. The killing action of antineoplastic drugs used for cancer chemotherapy is not selective for cancerous cells alone but affect all dividing cells. Acute side effects include loss of appetite, nausea and vomiting, allergic reaction (skin rash, itch, redness, low blood pressure, unwellness and anaphylactic shock) and local irritation. Gout and renal failure can occur.

#### **EYE**

If applied to the eyes, this material causes severe eye damage.

#### **SKIN**

Skin contact with the material may be harmful; systemic effects may result following absorption. This material can cause inflammation of the skin on contact in some persons. The material may accentuate any pre-existing dermatitis condition. 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 of dusts, generated by the material, during the course of normal handling, may be harmful. The material can cause respiratory irritation in some persons. The body's response to such irritation can cause further lung damage. Side effects of topoisomerase I and II inhibitors (acting as antineoplastics/ cytotoxics) include early diarrhoea which may occur within 24 hours of exposure to the drug; this may be accompanied by symptoms including runny nose, increased salivation, watery eyes, sweating, flushing, abdominal cramping. Late diarrhoea may occur after 24 hours and usually peaks at about 11 days after treatment. Because of concerns of dehydration and electrolyte imbalances with diarrhoea it is important to be in contact with health care professionals for monitoring, and for medication and diet modifications advice. Other common side-effects of therapy may include nausea and vomiting may also occur; low red and white blood cell counts may also result; anaemia may follow. Hair loss, poor appetite, fever and weight loss may also ensue. Less common symptoms include constipation, shortness of breath, insomnia, cough, headache, dehydration, chills, skin rash, flatulence, flushing of the face, mouth sores, heartburn and swelling of the feet and ankles.

## **CHRONIC HEALTH EFFECTS**

There has been concern that this material can cause cancer or mutations, but there is not enough data to make an assessment. Long-term exposure to respiratory irritants may result in disease of the airways involving difficult breathing and related systemic problems. Based on experiments and other information, there is ample evidence to presume that exposure to this material can cause genetic defects that can be inherited. Ample evidence exists from experimentation that reduced human fertility is directly caused by exposure to the material. Ample evidence exists, from results in experimentation, that developmental disorders are directly caused by human exposure to the material. Limited evidence suggests that repeated or long-term occupational exposure may produce cumulative health effects involving organs or biochemical systems. Anti-cancer drugs used for chemotherapy can depress the bone marrow with reduction in the number of white blood cells and platelets and bleeding. Susceptibility to infections and bleeding is increased, which can be life-threatening. Digestive system effects may include inflammation of the mouth cavity, mouth ulcers, esophagus inflammation, abdominal pain and bleeds, diarrhea, bowel ulcers and perforation. Reversible hair loss can result and wound healing may be delayed. Long-term effects on the gonads may cause periods to stop and inhibit sperm production. Most anti-cancer drugs can potentially cause mutations and birth defects, and coupled with the effects of the suppression of the immune system, may also cause cancer. Topoisomerase inhibitors represent a subgroup of plant alkaloids, which also encompasses the vinca

alkaloids such as vincristine and vinblastine, taxanes and podophyllotoxin derivatives. Topoisomerase inhibitors act by preventing the unpackaging of DNA that must occur prior to transcription and replication. The earliest drugs in this class were inhibitors of topoisomerase II, however topoisomerase I inhibitors such as topotecan started entering the market in the mid-1990<sub>鐳</sub>

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