

化 学 品 安 全 技 术 说 明 书

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**MSDS标题**

HAEMOGLOBIN MSDS报告

**产品标题**

血红蛋白;牛血红蛋白

**CAS号**

9008-02-0

**化学品及企业标识**

**PRODUCT NAME**

HAEMOGLOBIN

**NFPA**

Flammability	1
Toxicity	2
Body Contact	0
Reactivity	0
Chronic	2

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

**PRODUCT USE**

The major component of red blood cells responsible for the transport of oxygen from the lungs to body tissue. Composed of four peptide chains (globins) each of which is bound to haeme. Iron is coordinated to the four pyrrole nitrogens of protoporphyrin iX and to an imidazole nitrogen of a histidine residue from the globin side of the porphyrin. Oxyhaemoglobin is the product of commerce.

## **SYNONYMS**

"hemoglobin polypeptide/ protein", ferrohaemoglobin, ferrohämoglobin, oxyhaemoglobin, oxyhemoglobin

## **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.

### **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. Blood and blood-related products can cause the transmission of pathogens and bring up immune reactions. Workers may be exposed to AIDS, hepatitis and other infectious diseases. Immune responses include anaphylaxis and delayed symptoms including itch, chills, fever, fatigue and swollen lymph nodes.

### **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. Persons with impaired respiratory function, airway diseases and conditions such as emphysema or chronic bronchitis, may incur further disability if excessive concentrations of particulate are inhaled. Respiratory sensitization may result in allergic/asthma like responses; from coughing and minor breathing difficulties to bronchitis with wheezing, gasping. Use of blood and related products can cause infection and immune reactions. Aerosols containing blood may contain the risk of infection to AIDS, hepatitis and other infectious diseases. Immune responses include anaphylaxis and delayed symptoms including itch, chills, fever, fatigue and swollen lymph nodes.

## **CHRONIC HEALTH EFFECTS**

There is some evidence that inhaling this product is more likely to cause a sensitization reaction in some persons compared to the general population.

Principal routes of exposure are usually by skin contact/absorption and inhalation of generated dust. Exposure to small quantities may induce hypersensitivity reactions characterized by acute bronchospasm, hives (urticaria), deep dermal wheals (angioneurotic edema), running nose (rhinitis) and blurred vision. Anaphylactic shock and skin rash (non-thrombocytopenic purpura) may occur. An individual may be predisposed to such anti-body mediated reaction if other chemical agents have caused prior sensitization (cross-sensitivity). Dusts produced by proteins can sometimes sensitize workers like other foreign bodies. Symptoms include asthma appearing soon after exposure, with wheezing, narrowing of the airways and breathing difficulties. There may also be a chronic cough, phlegm, fever, muscle pains, fatigue and airway obstruction; chest X-rays may show a characteristic net-like pattern or scarring at the tip and base. There may also be chest discomfort, headache, stomachache and a general feeling of unwellness. Often the clinical picture is similar to "farmer's lung" and other allergic lung inflammations. Prolonged contact with the skin can cause pain, redness, inflammation and ulceration. Repeated attacks can cause loss of lung function due to scarring. Chronic excessive intake of iron have been associated with damage to the liver and pancreas. People with a genetic disposition to poor control over iron are at an increased risk. Iron overload in men may lead to diabetes, joint inflammation, liver cancer, heart irregularities and problems with other organs.