

### 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : Sodium cyanide  
Product Number : 71430  
Brand : Fluka  
Company : Sigma-Aldrich Canada, Ltd  
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CANADA  
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### 2. COMPOSITION/INFORMATION ON INGREDIENTS

Formula : CNNa  
Molecular Weight : 49.01 g/mol

CAS-No.	EC-No.	Index-No.	Concentration
<b>Sodium cyanide</b>			
143-33-9	205-599-4	006-007-00-5	-

### 3. HAZARDS IDENTIFICATION

#### Emergency Overview

##### Target Organs

Central nervous system, Blood, Lungs, Cardiovascular system., Thyroid.

#### WHMIS Classification

D1A Very Toxic Material Causing Immediate and Serious Toxic Effects  
Highly toxic by ingestion  
Highly toxic by skin absorption  
Highly toxic by inhalation

#### HMIS Classification

Health Hazard: 4  
Chronic Health Hazard: \*  
Flammability: 0  
Physical hazards: 0

#### Potential Health Effects

**Inhalation** May be fatal if inhaled. May cause respiratory tract irritation.  
**Skin** May cause skin irritation. May be fatal if absorbed through skin.  
**Eyes** May cause eye irritation.  
**Ingestion** May be fatal if swallowed.

#### 4. FIRST AID MEASURES

**General advice**

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

**If inhaled**

If breathed in, move person into fresh air. If not breathing give artificial respiration Consult a physician.

**In case of skin contact**

Wash off with soap and plenty of water. Take victim immediately to hospital. Consult a physician.

**In case of eye contact**

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

**If swallowed**

Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

#### 5. FIRE-FIGHTING MEASURES

**Flammable properties**

Flash point no data available

Ignition temperature no data available

**Suitable extinguishing media**

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

**Special protective equipment for fire-fighters**

Wear self contained breathing apparatus for fire fighting if necessary.

#### 6. ACCIDENTAL RELEASE MEASURES

**Personal precautions**

Wear respiratory protection. Avoid dust formation. Avoid breathing dust. Ensure adequate ventilation. Evacuate personnel to safe areas.

**Environmental precautions**

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

**Methods for cleaning up**

Pick up and arrange disposal without creating dust. Keep in suitable, closed containers for disposal.

#### 7. HANDLING AND STORAGE

**Handling**

Avoid contact with skin and eyes. Avoid formation of dust and aerosols.

Provide appropriate exhaust ventilation at places where dust is formed. Normal measures for preventive fire protection.

**Storage**

Keep container tightly closed in a dry and well-ventilated place.

Do not store near acids.

#### 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**Components with workplace control parameters**

Components	CAS-No.	Value	Control parameters	Update	Basis
Sodium cyanide	143-33-9	STEL	5 mg/m3	2004-04-30	Canada. Occupational

					Health and Safety Code 218
Remarks	Substance may be readily absorbed through intact skin ceiling (c) occupational exposure limit				
		STEL	5 mg/m3	2004-04-30	Canada. Occupational Health and Safety Code 218
	Substance may be readily absorbed through intact skin ceiling (c) occupational exposure limit				
		CEIL	5 mg/m3	2005-02-03	Canada. Occupational Health and Safety Act [R.S.O. 1990, c.1], Industrial Establishments (R.R.O. 1990, Reg 851),139
	The notation "skin" following the name of an agent in this Schedule indicates that direct or airborne contact with the agents may result in significant absorption of the agent through the skin, mucous membranes or eyes. Vehicles, such as certain solvents, may enhance the rate of skin absorption. Inclusion of this notation is intended to suggest that preventative action should be taken against absorption of the agent through the skin, mucous membranes or eyes.				
		STEL	10 ppm 11 mg/m3	2000-01-12	Canada. Act Respecting Occupational Health and Safety [R.S.Q., c.2.1], Regulation respecting Occupational Health and Safety (O.C.885-2001), Division XV, Sections 130-14
	<p>SKIN (percutaneous) : The designation "Pc" in the Designation and remarks column refers to the potentially significant contribution to the overall exposure by the cutaneous route. Exposure is by contact with vapours or, of probable greater significance, by direct skin contact with the substance. The cutaneous route includes mucous membranes and the eyes.</p> <p>A substance which may not be recirculated in accordance with section 108.</p> <p>CEILING : The designation "C" in the STEV/Ceiling column refers to a concentration never be exceeded during any length of time whatsoever.</p>				
		STEL	5 mg/m3	2004-08-01	Canada. Worker's Compensation Act, Occupational Health and Safety Regulations (BC Reg 296/97 as amended), 7.2 [B.C. Reg. 382/2004, s.1]
	The term "skin" identifies substances that contribute significantly to the overall exposure by the skin route. indicates a ceiling limit				

## Personal protective equipment

### Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a dust mask type N95 (US) or type P1 (EN 143) respirator. Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N99 (US) or type P2 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

### Hand protection

Handle with gloves.

### Eye protection

Safety glasses

### Skin and body protection

Choose body protection according to the amount and concentration of the dangerous substance at the work place.

### Hygiene measures

Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### Appearance

Form crystalline

Colour white

### Safety data

pH 11.0 - 12.0 at 49.0 g/l at 25 °C (77 °F)

Melting point 563.7 °C (1,046.7 °F)

Boiling point no data available

Flash point no data available

Ignition temperature no data available

Lower explosion limit no data available

Upper explosion limit no data available

Vapour pressure 1 hPa (1 mmHg) at 817 °C (1,503 °F)

Water solubility ca.49 g/l at 20 °C (68 °F)

## 10. STABILITY AND REACTIVITY

### Storage stability

Stable under recommended storage conditions.

### Materials to avoid

Do not store near acids., Strong oxidizing agents, Carbon dioxide (CO<sub>2</sub>)

### Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Carbon oxides, Sodium oxides

Reacts with water to form: - Hydrogen cyanide (hydrocyanic acid)

## 11. TOXICOLOGICAL INFORMATION

### Acute toxicity

LD50 Oral - rat - 6.44 mg/kg

LD50 Dermal - rabbit - 10.4 mg/kg

Remarks: Behavioral:Somnolence (general depressed activity). Behavioral:Tremor. Lungs, Thorax, or Respiration:Dyspnea.

### Irritation and corrosion

no data available

### Sensitisation

no data available

### Chronic exposure

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

Developmental Toxicity - Hamster - Implant

Effects on Embryo or Fetus: Fetotoxicity (except death, e.g., stunted fetus). Specific Developmental Abnormalities: Musculoskeletal system. Specific Developmental Abnormalities: Cardiovascular (circulatory) system.

Reproductive toxicity - rat - Oral

Paternal Effects: Spermatogenesis (including genetic material, sperm morphology, motility, and count). Paternal Effects: Testes, epididymis, sperm duct.

Reproductive toxicity - Hamster - Implant

Effects on Fertility: Post-implantation mortality (e.g., dead and/or resorbed implants per total number of implants). Specific Developmental Abnormalities: Central nervous system.

### Signs and Symptoms of Exposure

Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin., Cough, Shortness of breath, Headache, Nausea

### Potential Health Effects

<b>Inhalation</b>	May be fatal if inhaled. May cause respiratory tract irritation.
<b>Skin</b>	May cause skin irritation. May be fatal if absorbed through skin.
<b>Eyes</b>	May cause eye irritation.
<b>Ingestion</b>	May be fatal if swallowed.
<b>Target Organs</b>	Central nervous system, Blood, Lungs, Cardiovascular system., Thyroid.,

### Additional Information

RTECS: VZ7525000

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## 12. ECOLOGICAL INFORMATION

### Elimination information (persistence and degradability)

no data available

### Ecotoxicity effects

Toxicity to fish	LC50 - Oncorhynchus mykiss (rainbow trout) - 0.05 mg/l - 96 h
Toxicity to daphnia and other aquatic invertebrates.	LC50 - Daphnia magna (Water flea) - 0.09 mg/l - 96 h
Toxicity to algae	EC50 - Nitzschia closterium - 0.051 mg/l - 72 h

### Further information on ecology

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.  
Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

### 13. DISPOSAL CONSIDERATIONS

#### Product

Observe all federal, state, and local environmental regulations. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

#### Contaminated packaging

Dispose of as unused product.

### 14. TRANSPORT INFORMATION

#### DOT (US)

UN-Number: 1689 Class: 6.1 Packing group: I

Proper shipping name: Sodium cyanide, solid

Marine pollutant: Marine pollutant

Poison Inhalation Hazard: No

#### IMDG

UN-Number: 1689 Class: 6.1 Packing group: I EMS-No: F-A, S-A

Proper shipping name: SODIUM CYANIDE, SOLID

Marine pollutant: Marine pollutant

#### IATA

UN-Number: 1689 Class: 6.1 Packing group: I

Proper shipping name: Sodium cyanide, solid

### 15. REGULATORY INFORMATION

#### DSL Status

All components of this product are on the Canadian DSL list.

#### WHMIS Classification

D1A	Very Toxic Material Causing Immediate and Serious Toxic Effects	Highly toxic by ingestion Highly toxic by skin absorption Highly toxic by inhalation
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### 16. OTHER INFORMATION

#### Further information

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