

Chloride Reagent

R-0682

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## SAFETY DATA SHEET

### SECTION 1. IDENTIFICATION

Product identifier used on the label

: **Chloride Reagent**

Product Code(s) : R-0682

Recommended use of the chemical and restrictions on use

: Use as directed by manufacturer for purposes directly related to water testing.  
Restriction on use: None known

Chemical family : Mixture

Name, address, and telephone number  
of the supplier:

**Lowry & Associates, Div. of Chem-Aquascience,  
Inc.**

5-1151 Gorham Street  
Newmarket, ON, Canada  
L3Y 8Y1

Supplier's Telephone # : (905) 836-0505, Hours 09:00 to 16:30

**24 Hr. Emergency Tel #** : (613) 996-6666 (CANUTEC)

Name, address, and telephone number of  
the manufacturer:

Refer to supplier

### SECTION 2. HAZARDS IDENTIFICATION

Classification of the chemical

Purple liquid. Alcoholic.

This material is classified as hazardous under U.S. OSHA regulations (29CFR 1910.1200) (Hazcom 2012) and Canadian WHMIS regulations (Hazardous Products Regulations) (WHMIS 2015).

Hazard classification:

Flammable Liquids - Category 2  
Serious eye damage/eye irritation - Category 2A  
Reproductive Toxicity - Category 2  
Specific Target Organ Toxicity, Single Exposure - Category 1  
Specific Target Organ Toxicity, Single Exposure - Category 3 narcotic effects

Label elements

Hazard pictogram(s)



Signal Word

DANGER!

Hazard statement(s)

Highly flammable liquid and vapor.  
Causes serious eye irritation.  
Suspected of damaging the unborn child.  
Causes damage to the optic nerves (eyes) if swallowed.  
May cause drowsiness or dizziness.

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### Precautionary statement(s)

Obtain special instructions before use.  
Do not handle until all safety precautions have been read and understood.  
Keep away from heat, open flames and hot surfaces. - No smoking.  
Keep container tightly closed.  
Ground and bond container and receiving equipment.  
Use explosion-proof electrical/ventilating/lighting/equipment.  
Use only non-sparking tools.  
Take precautionary measures against static discharge.  
Do not breath mist or vapor.  
Wash thoroughly after handling.  
Do not eat, drink or smoke when using this product.  
Use only outdoors or in a well-ventilated area.  
Wear protective gloves and eye/face protection.

If exposed or concerned: Get medical advice/attention.  
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.  
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
If eye irritation persists: get medical advice/attention.  
If inhaled: Remove person to fresh air and keep comfortable for breathing.  
Call a POISON CENTER or doctor/physician if you feel unwell.  
In case of fire: Use water fog, dry chemical, CO2 or 'alcohol' foam to extinguish.

Store locked up.  
Store in a well-ventilated place. Keep cool.  
Keep container tightly closed.  
Dispose of contents/container in accordance with local/regional/national/international regulations.

### Other hazards

Other hazards which do not result in classification: Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

## SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Mixture

<u>Chemical name</u>	<u>Common name and synonyms</u>	<u>CAS #</u>	<u>Concentration (% by weight)</u>
<b>Ethyl alcohol</b>	Ethyl alcohol Ethyl hydrate	64-17-5	<b>90.3</b>
<b>Methanol</b>	Carbinol Methyl hydrate Methyl alcohol	67-56-1	<b>8.9</b>

## SECTION 4. FIRST-AID MEASURES

### Description of first aid measures

- Ingestion* : Call a physician or poison control centre immediately. Do not induce vomiting. If vomiting occurs spontaneously, keep victim's head lowered (forward) to reduce the risk of aspiration. Never give anything by mouth to an unconscious person.
- Inhalation* : If inhaled, move to fresh air. If breathing is difficult, give oxygen by qualified medical personnel only. If breathing has stopped, give artificial respiration. Get medical attention if symptoms persist.
- Skin contact* : Wash off with soap and plenty of water. If irritation or symptoms develop, seek medical attention. Wash contaminated clothing before re-use.
- Eye contact* : Immediately flush eyes with running water for at least 15 minutes. Obtain medical attention if irritation persists.

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### Most important symptoms and effects, both acute and delayed

- : Causes serious eye irritation. Symptoms may include redness, pain, tearing and conjunctivitis. Direct skin contact may cause slight or mild, transient irritation. May cause respiratory irritation. Symptoms may include upper respiratory irritation, coughing and breathing difficulties. May cause central nervous system effects. Symptoms may include pain, headache, nausea, vomiting, dizziness, drowsiness and other central nervous system effects. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. Causes damage to the optic nerves (eyes) if swallowed. Suspected of damaging the unborn child.

### Indication of any immediate medical attention and special treatment needed

- : Treat symptomatically. This product is a CNS depressant. Contains methanol.

## SECTION 5. FIRE-FIGHTING MEASURES

### Extinguishing media

#### *Suitable extinguishing media*

- : Use water fog or fine spray, foams, carbon dioxide or dry chemical. Do not use a solid water stream as it may scatter and spread fire.

#### *Unsuitable extinguishing media*

- : Do not use a solid water stream as it may scatter and spread fire.

### Special hazards arising from the substance or mixture / Conditions of flammability

- : Highly flammable liquid and vapor. Vapors may travel considerable distance to a source of ignition and flash back. Vapors are heavier than air and may spread along floors. Static discharge, impact, friction, and heat may ignite exposed chemical material.

### Flammability classification (OSHA 29 CFR 1910.106)

- : Flammable Liquids - Category 2

### Hazardous combustion products

- : Carbon dioxide, carbon monoxide and other unidentified organic compounds.

### Special protective equipment and precautions for firefighters

#### *Protective equipment for fire-fighters*

- : Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.

#### *Special fire-fighting procedures*

- : Fight fires from a safe distance. Firefighters should wear proper protective equipment and self-contained breathing apparatus with full face piece operated in positive pressure mode. Move containers from fire area if safe to do so. Water spray may be useful in cooling equipment exposed to heat and flame.

## SECTION 6. ACCIDENTAL RELEASE MEASURES

### Personal precautions, protective equipment and emergency procedures

- : Restrict access to area until completion of clean-up. Ensure clean-up is conducted by trained personnel only. Individuals involved in the cleanup must wear appropriate personal protective equipment. For personal protection see section 8.

**Environmental precautions** : Ensure spilled product does not enter drains, sewers, waterways, or confined spaces. For large spills, dike the area to prevent spreading.

### Methods and material for containment and cleaning up

- : Ventilate area of release. Stop spill or leak at source if safely possible. Dike for water control. Use only non-sparking tools and equipment in the clean-up process. Contain and absorb spilled liquid with inert, non-combustible absorbent material (e.g. sand, vermiculite), then place material into open, unsealed containers. For waste disposal, see Section 13 of the SDS.

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### Special spill response procedures

- : If a spill/release in excess of the EPA reportable quantity is made into the environment, immediately notify the national response center in the United States (phone: 1-800-424-8802).  
US CERCLA Reportable quantity (RQ): Methanol (5000 lbs / 2270 kg)

### SECTION 7. HANDLING AND STORAGE

#### Precautions for safe handling

- : Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use only in well-ventilated areas. Wear protective gloves and eye/face protection. Do not ingest or swallow. Avoid breathing vapours. Avoid contact with skin, eyes and clothing. Wash thoroughly after handling. Keep away from heat and flame. Use only non-sparking tools with this material. Avoid contact with incompatible materials. Keep containers tightly closed when not in use. Empty containers retain residue (liquid and/or vapour) and can be dangerous. Do not use pressure to empty drums. Do not cut, weld, drill or grind on or near this container. Follow labeled warnings even after container is emptied.

- Conditions for safe storage** : Store in a cool, dry, well-ventilated area. Store away from incompatible materials. Storage area should be clearly identified, clear of obstruction and accessible only to trained and authorized personnel. Inspect periodically for damage or leaks. No smoking in the area.

- Incompatible materials** : Strong oxidizing agents. Ammonia

### SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

#### Exposure Limits:

<u>Chemical Name</u>	<u>ACGIH TLV</u>		<u>OSHA PEL</u>	
	<u>TWA</u>	<u>STEL</u>	<u>PEL</u>	<u>STEL</u>
Ethyl alcohol	N/Av	1000 ppm	1000 ppm (1900 mg/m <sup>3</sup> )	N/Av
Methanol	200 ppm (skin)	250 ppm (skin)	200 ppm (260 mg/m <sup>3</sup> )	N/Av

#### Exposure controls

##### Ventilation and engineering measures

- : Ensure adequate ventilation, especially in confined areas. Use general or local exhaust ventilation to maintain air concentrations below recommended exposure limits.

##### Respiratory protection

- : Respiratory protection is required if the concentrations exceed the TLV. NIOSH-approved respirators are recommended. Advice should be sought from respiratory protection specialists. Respirators should be selected based on the form and concentration of contaminants in air, and in accordance with OSHA (29 CFR 1910.134) or CSA Z94.4-02.

##### Skin protection

- : Wear protective gloves. Advice should be sought from glove suppliers.

##### Eye / face protection

- : Wear eye/face protection. Chemical splash goggles are recommended. A full face shield may also be necessary.

##### Other protective equipment

- : An eyewash station and safety shower should be made available in the immediate working area. Depending on conditions of use, an impervious apron should be worn. Other equipment may be required depending on workplace standards.

##### General hygiene considerations

- : Avoid breathing vapour or mist. Avoid contact with skin, eyes and clothing. Do not ingest. Do not eat, drink or smoke when using this product. Upon completion of work, wash hands before eating, drinking, smoking or use of toilet facilities. Remove soiled clothing and wash it thoroughly before reuse.

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### SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

**Appearance** : Purple liquid.  
**Odour** : Alcohol  
**Odour threshold** : Not available.  
**pH** : Neutral.  
**Melting/Freezing point** : Not available.  
**Initial boiling point and boiling range**  
: 82.2°C (180°F)  
**Flash point** : 17.8°C (64.0°F)  
**Flashpoint (Method)** : Closed cup  
**Evaporation rate (BuAe = 1)** : Not available.  
**Flammability (solid, gas)** : Not applicable.  
**Lower flammable limit (% by vol.)**  
: 2%  
**Upper flammable limit (% by vol.)**  
: 12%  
**Oxidizing properties** : None.  
**Explosive properties** : Not explosive  
**Vapour pressure** : 40 mmHg  
**Vapour density** : 1.6  
**Relative density / Specific gravity**  
: 0.80  
**Solubility in water** : Soluble  
**Other solubility(ies)** : Not available.  
**Partition coefficient: n-octanol/water or Coefficient of water/oil distribution**  
: Not available.  
**Auto-ignition temperature** : Not available.  
**Decomposition temperature** : Not applicable.  
**Viscosity** : Not available.  
**Volatiles (% by weight)** : 99%  
**Volatile organic Compounds (VOC's)**  
: N/Av  
**Absolute pressure of container**  
: N/Av  
**Flame projection length** : N/Av  
**Other physical/chemical comments**  
: None known or reported by the manufacturer.

### SECTION 10. STABILITY AND REACTIVITY

**Reactivity** : Not normally reactive.  
**Chemical stability** : Stable under the recommended storage and handling conditions prescribed.  
**Possibility of hazardous reactions**  
: Hazardous polymerization will not occur.  
**Conditions to avoid** : Keep away from excessive heat, open flames, sparks and other possible sources of ignition. Avoid contact with incompatible materials. Do not use in areas without adequate ventilation. Avoid heat, open flames, sparks, static electricity and electrical equipment.  
**Incompatible materials** : Strong oxidizing agents. Ammonia

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### Hazardous decomposition products

: None known, refer to hazardous combustion products in Section 5.

### SECTION 11. TOXICOLOGICAL INFORMATION

#### Information on likely routes of exposure:

Routes of entry inhalation : YES

Routes of entry skin & eye : YES

Routes of entry Ingestion : YES

Routes of exposure skin absorption

: NO

#### Potential Health Effects:

##### Signs and symptoms of short-term (acute) exposure

###### *Sign and symptoms Inhalation*

: May cause irritation of the nose, throat, mucous membranes, and respiratory tract. Symptoms may include pain, headache, nausea, vomiting, dizziness, drowsiness and other central nervous system effects.

###### *Sign and symptoms ingestion*

: May be harmful if swallowed. Ingestion can cause gastrointestinal irritation, nausea, and diarrhea. Contains methanol. Contains material which when ingested may be fatal or cause blindness.

###### *Sign and symptoms skin*

: May cause mild skin irritation.

###### *Sign and symptoms eyes*

: May cause severe eye irritation. Symptoms may include severe pain, tearing, redness, swelling and blurred vision. Permanent eye damage including blindness could result.

##### Potential Chronic Health Effects

: Prolonged or repeated skin contact may cause drying and irritation. Prolonged overexposure may cause liver and kidney effects.

##### Mutagenicity

: Not expected to be mutagenic in humans.

##### Carcinogenicity

: No components are listed as carcinogens by ACGIH, IARC, OSHA or NTP.

##### Reproductive effects & Teratogenicity

: This material is classified as hazardous under U.S. OSHA regulations (29CFR 1910.1200) (Hazcom 2012) and Canadian WHMIS regulations (Hazardous Products Regulations) (WHMIS 2015). Classification: Reproductive Toxicity - Category 2 Suspected of damaging the unborn child. Contains Methanol. Methanol may cause fetotoxic and teratogenic effects at doses which are not maternally toxic, based on animal data.

##### Sensitization to material

: Not expected to be a skin or respiratory sensitizer.

##### Specific target organ effects

: Eyes, skin, respiratory system, digestive system, central nervous system. Liver

This material is classified as hazardous under U.S. OSHA regulations (29CFR 1910.1200) (Hazcom 2012) and Canadian WHMIS regulations (Hazardous Products Regulations) (WHMIS 2015). Classification  
Specific Target Organ Toxicity, Single Exposure - Category 1  
Specific Target Organ Toxicity, Single Exposure - Category 3 narcotic effects

Causes damage to the optic nerves (eyes) if swallowed.  
May cause drowsiness or dizziness.

Not classified as specific target organ toxicity-repeated exposure.

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### Medical conditions aggravated by overexposure

: Pre-existing skin, eye and respiratory disorders.

### Synergistic materials

: None known or reported by the manufacturer.

### Toxicological data

: There is no available data for the product itself, only for the ingredients. See below for individual ingredient acute toxicity data. The calculated ATE values for this mixture are:

ATE dermal = >2000 mg/kg

ATE oral = >2000 mg/kg

ATE inhalation (vapours) = >50 mg/kg

<u>Chemical name</u>	<u>LC<sub>50</sub>(4hr)</u> <u>inh. rat</u>	<u>LD<sub>50</sub></u>	
		<u>(Oral, rat)</u>	<u>(Rabbit, dermal)</u>
Ethyl alcohol	> 32 380 ppm (61 mg/L) (vapour)	7060 mg/kg	> 15 800 mg/kg
Methanol	> 5000 ppm/6H (4.1 mg/L/4H (vapour)	5628 mg/kg (rat) The estimated human lethal dose is: 300 - 1000 mg/kg	> 393 mg/kg (Monkey) 15 800 mg/kg (rabbit)

### Other important toxicological hazards

: None known or reported by the manufacturer.

## SECTION 12. ECOLOGICAL INFORMATION

**Ecotoxicity** : Not expected to be harmful to aquatic organisms. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment. See the following tables for individual ingredient ecotoxicity data. Do not allow material to contaminate ground water system.

### Ecotoxicity data:

<u>Ingredients</u>	<u>CAS No</u>	<u>Toxicity to Fish</u>		
		<u>LC50 / 96h</u>	<u>NOEC / 21 day</u>	<u>M Factor</u>
Ethyl alcohol	64-17-5	> 100 mg/L (Fathead minnow)	N/Av	None.
Methanol	67-56-1	15 400 mg/L (Bluegill sunfish)	446.7 mg/L/28-day (Fathead minnow)	None.

<u>Ingredients</u>	<u>CAS No</u>	<u>Toxicity to Daphnia</u>		
		<u>EC50 / 48h</u>	<u>NOEC / 21 day</u>	<u>M Factor</u>
Ethyl alcohol	64-17-5	5012 mg/L (Daphnia magna)	N/Av	None.
Methanol	67-56-1	> 10 000 mg/L (Daphnia magna)	208 mg/L (QSAR)	None.

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Ingredients	CAS No	Toxicity to Algae		
		EC50 / 96h or 72h	NOEC / 96h or 72h	M Factor
Ethyl alcohol	64-17-5	1000 mg/L/96hr (Green algae)	N/Av	None.
Methanol	67-56-1	22 000 mg/L/96hr (Green algae)	N/Av	None.

**Persistence and degradability**

: Readily biodegradable

**Bioaccumulation potential**

: No data is available on the product itself.

Components	Partition coefficient n-octanol/water (log Kow)	Bioconcentration factor (BCF)
Ethyl alcohol (CAS 64-17-5)	- 0.31	Not expected to bioaccumulate.
Methanol (CAS 67-56-1)	- 0.82 to - 0.64	<10 species: fish

**Mobility in soil**

: No data is available on the product itself.

**Other Adverse Environmental effects**

: No data is available on the product itself.

### SECTION 13. DISPOSAL CONSIDERATIONS

**Handling for Disposal**

: See Section 7 (Handling and Storage) for further details. Empty containers retain residue (liquid and/or vapour) and can be dangerous. Do not cut, weld, drill or grind on or near this container.



**Methods of Disposal**

: Dispose in accordance with all applicable federal, state, provincial and local regulations.

**RCRA**

: If this product, as supplied, becomes a waste in the United States, it may meet the criteria of a hazardous waste as defined under RCRA, Title 40 CFR 261. It is the responsibility of the waste generator to determine the proper waste identification and disposal method.

### SECTION 14. TRANSPORTATION INFORMATION

Regulatory Information	UN Number	UN proper shipping name	Transport hazard class(es)	Packing Group	Label
TDG	UN1993	FLAMMABLE LIQUID, N.O.S. (Ethanol)	3	II	
<b>TDG Additional information</b>	Must be a consumer-type product, in Limited Quantity size, no larger than 1 L per can. Package weight must not exceed 30 kg gross.				
49CFR/DOT	UN1993	Flammable Liquids, n.o.s. (Ethanol)	3	II	
<b>49CFR/DOT Additional information</b>	May be shipped as LIMITED QUANTITY when transported in cans no larger than 1 L, in packages not exceeding 30 kg gross mass.				
ICAO/IATA	UN1993	Flammable liquid, n.o.s. (Ethanol)	3	II	




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<b>ICAO/IATA Additional information</b>	Refer to ICAO/IATA Packing Instruction				
<b>IMDG</b>	UN1993	FLAMMABLE LIQUID, N.O.S. (Ethanol)	3	II	
<b>IMDG Additional information</b>	Consult the IMDG regulations for exceptions.				

**Special precautions for user** : Keep away from heat, sparks and open flame. - No smoking.

**Environmental hazards** : This product does not meet the criteria for an environmentally hazardous mixture, according to the IMDG Code. See ECOLOGICAL INFORMATION, Section 12.

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code**  
: Not available.

### SECTION 15 - REGULATORY INFORMATION

#### US Federal Information:

Components listed below are present on the following U.S. Federal chemical lists:

<u>Ingredients</u>	CAS #	TSCA Inventory	CERCLA Reportable Quantity (RQ) (40 CFR 117.302):	SARA TITLE III: Sec. 302, Extremely Hazardous Substance, 40 CFR 355:	SARA TITLE III: Sec. 313, 40 CFR 372, Specific Toxic Chemical	
					Toxic Chemical	de minimus Concentration
Ethyl alcohol	64-17-5	Yes	None.	None.	No	N/Ap
Methanol	67-56-1	Yes	5000 lbs / 2270 kg	None.	Yes	1%

SARA TITLE III: Sec. 311 and 312, SDS Requirements, 40 CFR 370 Hazard Classes: Fire Hazard; Immediate (Acute) health hazard; Chronic Health Hazard. Under SARA Sections 311 and 312, the EPA has established threshold quantities for the reporting of hazardous chemicals. The current thresholds are 500 pounds for the threshold planning quantity (TPQ), whichever is lower, for extremely hazardous substances and 10,000 pounds for all other hazardous chemicals.

#### US State Right to Know Laws:

The following chemicals are specifically listed by individual States:

<u>Ingredients</u>	CAS #	California Proposition 65		State "Right to Know" Lists					
		Listed	Type of Toxicity	CA	MA	MN	NJ	PA	RI
Ethyl alcohol	64-17-5	Yes	Cancer (in alcoholic beverages) Developmental (in alcoholic beverages)	Yes	Yes	Yes	Yes	Yes	Yes
Methanol	67-56-1	No	Developmental	Yes	Yes	Yes	Yes	Yes	Yes

#### Canadian Information:

WHMIS Classification: Refer to Section 2 for a WHMIS Classification for this product.  
All ingredients are present on the DSL.

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### International Information:

Components listed below are present on the following International Inventory list:

<u>Ingredients</u>	<u>CAS #</u>	<u>European EINECs</u>	<u>Australia AICS</u>	<u>Philippines PICCS</u>	<u>Japan ENCS</u>	<u>Korea KECI/KECL</u>	<u>China IECSC</u>	<u>NewZealand IOC</u>
Ethyl alcohol	64-17-5	200-578-6	Present	Present	(2)-202	KE-13217	Present	HSR001144
Methanol	67-56-1	200-659-6	Present	Present	(2)-201	KE-23193	Present	HSR001186

### SECTION 16. OTHER INFORMATION

#### Legend

: ACGIH: American Conference of Governmental Industrial Hygienists  
 CA: California  
 CAS: Chemical Abstract Services  
 CERCLA: Comprehensive Environmental Response, Compensation, and Liability Act of 1980  
 CFR: Code of Federal Regulations  
 CNS: Central Nervous System  
 CSA: Canadian Standards Association  
 DOT: Department of Transportation  
 EPA: Environmental Protection Agency  
 HMIS: Hazardous Materials Identification System  
 HSDB: Hazardous Substances Data Bank  
 IARC: International Agency for Research on Cancer  
 Inh: Inhalation  
 IUCLID: International Uniform Chemical Information Database  
 LC: Lethal Concentration  
 LD: Lethal Dose  
 MA: Massachusetts  
 MN: Minnesota  
 N/Ap: Not Applicable  
 N/Av: Not Available  
 NFPA: National Fire Protection Association  
 NIOSH: National Institute of Occupational Safety and Health  
 NJ: New Jersey  
 NTP: National Toxicology Program  
 OSHA: Occupational Safety and Health Administration  
 PA: Pennsylvania  
 PEL: Permissible exposure limit  
 RCRA: Resource Conservation and Recovery Act  
 RI: Rhode Island  
 RTECS: Registry of Toxic Effects of Chemical Substances  
 SARA: Superfund Amendments and Reauthorization Act  
 STEL: Short Term Exposure Limit  
 TDG: Canadian Transportation of Dangerous Goods Act & Regulations  
 TLV: Threshold Limit Values  
 TWA: Time Weighted Average  
 WHMIS: Workplace Hazardous Materials Identification System

#### References

: Canadian Centre for Occupational Health and Safety, CCIInfoWeb Databases, 2015 (Chempendium, RTECs, HSDB, INCHEM).  
 European Chemicals Agency, Classification Legislation, 2015  
 OECD- The Global Portal to Information on Chemical Substances - eChemPortal, 2015  
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### Other special considerations for handling

: Provide adequate information, instruction and training for operators.

<p><b>Prepared for:</b> Lowry &amp; Associates, Div. of Chem-Aquascience, Inc. 5-1151 Gorham Street Newmarket, ON L3Y 8Y1 <a href="http://www.lowryassociates.ca">www.lowryassociates.ca</a></p>	
<p><b>Prepared by:</b> ICC The Compliance Center Inc. Telephone: (888) 442-9628 (U.S.); (888) 977-4834 (Canada) <a href="http://www.thecompliancecenter.com">http://www.thecompliancecenter.com</a></p>	

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