

**1. Product and Company Identification**

<b>Product identifier</b>	<b>OTO (Orthotolidine)</b>
<b>Other means of identification</b>	Not available
<b>Recommended use</b>	Water Testing Solution
<b>Recommended restrictions</b>	None known.
<b>Manufacturer</b>	Pro Products LLC 7201 Engle Road Fort Wayne, IN 46804-5875 US Phone: 260-483-2519 Emergency Phone: 1-800-424-9300 (CHEMTREC)

**2. Hazards Identification**

<b>Physical hazards</b>	Corrosive to metals	Category 1
<b>Health hazards</b>	Acute toxicity, inhalation	Category 4
	Skin corrosion/irritation	Category 1
	Serious eye damage/eye irritation	Category 1
	Carcinogenicity	Category 1B
<b>Environmental hazards</b>	Not classified.	
<b>OSHA defined hazards</b>	Not classified.	

**Label elements**



**Signal word** Danger

**Hazard statement** May be corrosive to metals.  
Causes severe skin burns and eye damage.  
Harmful if inhaled.  
May cause cancer.

**Precautionary statement**

**Prevention** Keep only in original container.  
Do not breathe mist or vapor. Wash thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection.  
Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use only outdoors or in a well-ventilated area.

**Response** Absorb spillage to prevent material damage.  
If swallowed: Rinse mouth. Do NOT induce vomiting.  
If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse.  
If inhaled: Remove person to fresh air and keep comfortable for breathing.  
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
If exposed or concerned: Get medical advice/attention.  
Immediately call a poison center/doctor.  
Specific treatment (see this label).

**Storage** Store in corrosive resistant container with a resistant inner liner.  
Store locked up.

**Disposal** Dispose of contents/container in accordance with local/regional/national/international regulations.

**Hazard(s) not otherwise classified (HNOC)** None known.

**Supplemental information** 90% of the mixture consists of component(s) of unknown acute inhalation toxicity.

**3. Composition/Information on Ingredients**

**Mixture**

Chemical name	Common name and synonyms	CAS number	%
Hydrochloric acid		7647-01-0	7-13

Chemical name	Common name and synonyms	CAS number	%
O-tolidine dihydrochloride		612-82-8	0.1-1

**Composition comments** US GHS: The exact percentage (concentration) of composition has been withheld as a trade secret in accordance with paragraph (i) of §1910.1200.

#### 4. First Aid Measures

<b>Inhalation</b>	If inhaled: Remove person to fresh air and keep comfortable for breathing. Immediately call a poison center/doctor/.
<b>Skin contact</b>	If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. Immediately call a poison center/doctor/. Wash contaminated clothing before reuse. Specific treatment (see product label).
<b>Eye contact</b>	If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison center/doctor/.
<b>Ingestion</b>	If swallowed: Rinse mouth. Do NOT induce vomiting. Immediately call a poison center/doctor/.
<b>Most important symptoms/effects, acute and delayed</b>	Burning pain and severe corrosive skin damage. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result.
<b>Indication of immediate medical attention and special treatment needed</b>	Provide general supportive measures and treat symptomatically. In case of shortness of breath, give oxygen. Symptoms may be delayed.
<b>General information</b>	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. IF exposed or concerned: Get medical advice/attention. Show this safety data sheet to the doctor in attendance. Avoid contact with eyes and skin. Wear rubber gloves and chemical splash goggles. Keep out of reach of children.

#### 5. Fire Fighting Measures

<b>Suitable extinguishing media</b>	Dry chemical. Carbon dioxide. Water spray. Foam.
<b>Unsuitable extinguishing media</b>	Do not use water jet as an extinguisher, as this will spread the fire.
<b>Specific hazards arising from the chemical</b>	Firefighters should wear a self-contained breathing apparatus.
<b>Special protective equipment and precautions for firefighters</b>	Firefighters should wear full protective clothing including self contained breathing apparatus.
<b>Fire-fighting equipment/instructions</b>	Cool containers with flooding quantities of water until well after fire is out.
<b>Specific methods</b>	Use standard firefighting procedures and consider the hazards of other involved materials.
<b>Hazardous combustion products</b>	May include and are not limited to: Chlorine gas. Hydrogen gas. Hydrogen chloride.
<b>Explosion data</b>	
<b>Sensitivity to mechanical impact</b>	Not available.
<b>Sensitivity to static discharge</b>	Not available.

#### 6. Accidental Release Measures

<b>Personal precautions, protective equipment and emergency procedures</b>	Keep unnecessary personnel away. Keep out of low areas. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Do not breathe mist or vapor. Fully encapsulating, vapor protective clothing should be worn for spills and leaks with no fire. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Avoid inhalation of vapors. Ventilate closed spaces before entering them. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.
<b>Methods and materials for containment and cleaning up</b>	Should not be released into the environment.  Large Spills: Stop leak if you can do so without risk. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Absorb spillage to prevent material damage. Absorb in vermiculite, dry sand or earth and place into containers. Large Spills: Wet down with water and dike for later disposal. Prevent entry into waterways, sewer, basements or confined areas. Following product recovery, flush area with water.  Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination. Never return spills to original containers for re-use.  Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.

**Environmental precautions** Prevent further leakage or spillage if safe to do so. Do not contaminate water. Avoid discharge into drains, water courses or onto the ground. Do not discharge into lakes, streams, ponds or public waters.

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## 7. Handling and Storage

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**Precautions for safe handling** Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Avoid prolonged exposure. Use only outdoors or in a well-ventilated area. Wear appropriate personal protective equipment. Observe good industrial hygiene practices. Use personal protective equipment as required. Wash thoroughly after handling. Use good industrial hygiene practices in handling this material. Do not get in eyes, on skin or on clothing. Keep container tightly closed. Avoid breathing vapors or mists of this product.

**Conditions for safe storage, including any incompatibilities** Store locked up. Store in corrosive resistant container with a resistant inner liner. Store in a closed container away from incompatible materials. Keep only in the original container. Store in a cool, dry place out of direct sunlight. Store in a well-ventilated place. Store away from incompatible materials (see Section 10 of the SDS).

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## 8. Exposure Controls/Personal Protection

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### Occupational exposure limits

#### US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value
Hydrochloric acid (CAS 7647-01-0)	Ceiling	7 mg/m3
		5 ppm

#### US. ACGIH Threshold Limit Values

Components	Type	Value
Hydrochloric acid (CAS 7647-01-0)	Ceiling	2 ppm

#### US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
Hydrochloric acid (CAS 7647-01-0)	Ceiling	7 mg/m3
		5 ppm

**Biological limit values** No biological exposure limits noted for the ingredient(s).

**Appropriate engineering controls** Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

### Individual protection measures, such as personal protective equipment

**Eye/face protection** Wear chemical goggles.

#### Skin protection

**Hand protection** Rubber gloves. Confirm with a reputable supplier first.

**Other** Wear appropriate chemical resistant clothing. As required by employer code. Rubber apron recommended.

**Respiratory protection** Wear positive pressure self-contained breathing apparatus (SCBA). Where exposure guideline levels may be exceeded, use an approved NIOSH respirator.

**Thermal hazards** Not applicable.

**General hygiene considerations** Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Use good industrial hygiene practices in handling this material. When using do not eat or drink.

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## 9. Physical and Chemical Properties

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<b>Appearance</b>	Clear
<b>Physical state</b>	Liquid.
<b>Form</b>	Liquid
<b>Color</b>	Slight yellow
<b>Odor</b>	None
<b>Odor threshold</b>	Not available.
<b>pH</b>	0.1
<b>Melting point/freezing point</b>	Not available.

<b>Initial boiling point and boiling range</b>	212 °F (100 °C)
<b>Pour point</b>	Not available.
<b>Specific gravity</b>	1.03
<b>Partition coefficient (n-octanol/water)</b>	Not available.
<b>Flash point</b>	Not available.
<b>Evaporation rate</b>	Not available.
<b>Flammability (solid, gas)</b>	Not applicable.
<b>Upper/lower flammability or explosive limits</b>	
<b>Flammability limit - lower (%)</b>	Not available.
<b>Flammability limit - upper (%)</b>	Not available.
<b>Explosive limit - lower (%)</b>	Not available.
<b>Explosive limit - upper (%)</b>	Not available.
<b>Vapor pressure</b>	17 mmHg
<b>Vapor density</b>	0.6 (air=1)
<b>Relative density</b>	Not available.
<b>Solubility(ies)</b>	Soluble
<b>Auto-ignition temperature</b>	Not available.
<b>Decomposition temperature</b>	Not available.
<b>Viscosity</b>	Not available.
<b>Other information</b>	
<b>Flash point class</b>	Flammable IB

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## 10. Stability and Reactivity

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<b>Reactivity</b>	Reacts violently with alkaline material. This product may react with reducing agents.
<b>Possibility of hazardous reactions</b>	Hazardous polymerization does not occur.
<b>Chemical stability</b>	Stable under recommended storage conditions.
<b>Conditions to avoid</b>	Reacts violently with strong alkaline substances. This product may react with reducing agents. Do not mix with other chemicals.
<b>Incompatible materials</b>	This product may react with reducing agents. Incompatible with bases. Amines. Caustics. Reducing agents. Oxidizers.
<b>Hazardous decomposition products</b>	May include and are not limited to: Chlorine gas. Hydrogen gas. Hydrogen chloride.

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## 11. Toxicological Information

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<b>Routes of exposure</b>	Eye, Skin contact, Skin absorption, Inhalation, Ingestion.
<b>Information on likely routes of exposure</b>	
<b>Ingestion</b>	Causes digestive tract burns.
<b>Inhalation</b>	Harmful if inhaled.
<b>Skin contact</b>	Causes severe skin burns.
<b>Eye contact</b>	Causes serious eye damage.
<b>Symptoms related to the physical, chemical and toxicological characteristics</b>	Burning pain and severe corrosive skin damage. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result.
<b>Information on toxicological effects</b>	
<b>Acute toxicity</b>	Harmful if inhaled.

<b>Components</b>	<b>Species</b>	<b>Test Results</b>
Hydrochloric acid (CAS 7647-01-0)		
<b>Acute</b>		
<i>Dermal</i>		
LD50	Mouse	1449 mg/kg
	Rat	5010 mg/kg

Components	Species	Test Results
<i>Inhalation</i> LC50	Mouse	1108 ppm, 1 Hours 554 ppm
	Rat	3124 ppm, 1 Hours 1562 mg/l/4h
<i>Oral</i> LD50	Rabbit	900 mg/kg
	Rat	700 mg/kg
O-tolidine dihydrochloride (CAS 612-82-8)		
<b>Acute</b>		
<i>Inhalation</i> LC50	Not available	
<i>Oral</i> LD50	Rat	404 mg/kg
<b>Skin corrosion/irritation</b>	Causes severe skin burns and eye damage.	
<b>Exposure minutes</b>	Not available.	
<b>Erythema value</b>	Not available.	
<b>Oedema value</b>	Not available.	
<b>Serious eye damage/eye irritation</b>	Causes serious eye damage.	
<b>Corneal opacity value</b>	Not available.	
<b>Iris lesion value</b>	Not available.	
<b>Conjunctival reddening value</b>	Not available.	
<b>Conjunctival oedema value</b>	Not available.	
<b>Recover days</b>	Not available.	
<b>Respiratory or skin sensitization</b>		
<b>Respiratory sensitization</b>	Not available.	
<b>Skin sensitization</b>	This product is not expected to cause skin sensitization.	
<b>Germ cell mutagenicity</b>	Non-hazardous by WHMIS/OSHA criteria.	
<b>Mutagenicity</b>	Non-hazardous by WHMIS/OSHA criteria.	
<b>Carcinogenicity</b>	May cause cancer.	
<b>ACGIH Carcinogens</b>		
Hydrochloric acid (CAS 7647-01-0)	A4 Not classifiable as a human carcinogen.	
<b>IARC Monographs. Overall Evaluation of Carcinogenicity</b>		
Hydrochloric acid (CAS 7647-01-0)	Volume 54 - 3 Not classifiable as to carcinogenicity to humans.	
<b>US - California Proposition 65 - CRT: Listed date/Carcinogenic substance</b>		
O-tolidine dihydrochloride (CAS 612-82-8)	Carcinogenic.	
<b>Reproductive toxicity</b>	Non-hazardous by WHMIS/OSHA criteria.	
<b>Teratogenicity</b>	Non-hazardous by WHMIS/OSHA criteria.	
<b>Specific target organ toxicity - single exposure</b>	Not classified.	
<b>Specific target organ toxicity - repeated exposure</b>	Not classified.	
<b>Aspiration hazard</b>	Not available.	
<b>Chronic effects</b>	Prolonged inhalation may be harmful.	
<b>Further information</b>	Not available.	
<b>Name of Toxicologically Synergistic Products</b>	Not available.	

## 12. Ecological Information

**Ecotoxicity** Because of the low pH of this product, it would be expected to produce significant ecotoxicity upon exposure to aquatic organisms and aquatic systems. See below

Components	Species	Test Results
Hydrochloric acid (CAS 7647-01-0)		
<b>Aquatic</b>		
Fish	LC50	Western mosquitofish ( <i>Gambusia affinis</i> ) 282 mg/L, 96 hours
<b>Persistence and degradability</b>	No data is available on the degradability of this product.	
<b>Bioaccumulative potential</b>	No data available.	
<b>Mobility in soil</b>	No data available.	
<b>Mobility in general</b>	Not available.	
<b>Other adverse effects</b>	No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.	

### 13. Disposal Considerations

<b>Disposal instructions</b>	Review federal, state/provincial, and local government requirements prior to disposal. Collect and reclaim or dispose in sealed containers at licensed waste disposal site. This material and its container must be disposed of as hazardous waste. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container.
<b>Local disposal regulations</b>	Dispose in accordance with all applicable regulations.
<b>Hazardous waste code</b>	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
<b>Waste from residues / unused products</b>	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
<b>Contaminated packaging</b>	Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

### 14. Transport Information

<b>General</b>	Canada: TDG Proof of Classification: In accordance with Part 2.2.1 (SOR/2014-152) of the Transportation of Dangerous Goods Regulations, we certify that the classification of this product is correct as of the SDS date of issue. If applicable, the technical name and the classification of the product will appear below.
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#### U.S. Department of Transportation (DOT)

##### Basic shipping requirements:

<b>UN number</b>	UN1760
<b>Proper shipping name</b>	Corrosive liquids, n.o.s. (Hydrochloric Acid)
<b>Hazard class</b>	8
<b>Packing group</b>	II
<b>Special provisions</b>	B2, IB2, T11, TP2, TP27
<b>Packaging exceptions</b>	154
<b>Packaging non bulk</b>	202
<b>Packaging bulk</b>	242

#### Transportation of Dangerous Goods (TDG - Canada)

##### Basic shipping requirements:

<b>UN number</b>	UN1760
<b>Proper shipping name</b>	CORROSIVE LIQUID, N.O.S. (Hydrochloric acid)
<b>Hazard class</b>	8
<b>Packing group</b>	II
<b>Special provisions</b>	16

DOT





## 15. Regulatory Information

**Canadian federal regulations** This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the SDS contains all the information required by the Controlled Products Regulations.

**Canada WHMIS Ingredient Disclosure: Threshold limits**

Hydrochloric acid (CAS 7647-01-0) 1 %

**WHMIS status** Controlled

**WHMIS classification** Class E - Corrosive Material

**WHMIS labeling**



**US federal regulations** This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

**US EPCRA (SARA Title III) Section 302 - Extremely Hazardous Spill: Reportable quantity**

Hydrochloric acid (CAS 7647-01-0) 5000 LBS

**US EPCRA (SARA Title III) Section 302 - Extremely Hazardous Substance: Threshold Planning Quantity**

Hydrochloric acid (CAS 7647-01-0) 500 LBS

**US EPCRA (SARA Title III) Section 313 - Toxic Chemical: De minimis concentration**

Hydrochloric acid (CAS 7647-01-0) 1.0 %

O-tolidine dihydrochloride (CAS 612-82-8) 0.1 %

**US EPCRA (SARA Title III) Section 313 - Toxic Chemical: Listed substance**

Hydrochloric acid (CAS 7647-01-0) Listed.

O-tolidine dihydrochloride (CAS 612-82-8) Listed.

**TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)**

Not regulated.

**US CWA Section 311 Hazardous Substances: Listed substance**

Hydrochloric acid (CAS 7647-01-0) Listed.

**CERCLA Hazardous Substance List (40 CFR 302.4)**

Hydrochloric acid (CAS 7647-01-0) Listed.

**US CAA Section 112(r) Accidental Release Prevention - Regulated Toxic Substance: Listed substance**

Hydrochloric acid (CAS 7647-01-0) Regulated toxic substance.

**US CAA Section 112(r) Accidental Release Prevention: Threshold quantity**

Hydrochloric acid (CAS 7647-01-0) 15000 LBS

5000 LBS

**Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)**

Hydrochloric acid (CAS 7647-01-0) Listed.

**Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List**

Hydrochloric acid (CAS 7647-01-0) Listed.

**Superfund Amendments and Reauthorization Act of 1986 (SARA)**

**Hazard categories** Immediate Hazard - Yes  
Delayed Hazard - Yes  
Fire Hazard - No  
Pressure Hazard - No  
Reactivity Hazard - No

**SARA 302 Extremely hazardous substance** No

**SARA 311/312 Hazardous chemical** No

**SARA 313 (TRI reporting)**

Chemical name	CAS number	% by wt.
Hydrochloric acid	7647-01-0	7-13
O-tolidine dihydrochloride	612-82-8	0.1-1

**Other federal regulations**

**Clean Water Act (CWA) Section 112(r) (40 CFR 68.130)** Hazardous substance

**Safe Drinking Water Act (SDWA)** Not regulated.

**Food and Drug Administration (FDA)** Not regulated.

**US state regulations**

WARNING: This product contains a chemical known to the State of California to cause cancer.

**US - California Hazardous Substances (Director's): Listed substance**

Hydrochloric acid (CAS 7647-01-0) Listed.

**US - California Proposition 65 - Carcinogens & Reproductive Toxicity (CRT): Listed substance**

O-tolidine dihydrochloride (CAS 612-82-8) Listed.

**US - Illinois Chemical Safety Act: Listed substance**

Hydrochloric acid (CAS 7647-01-0) Listed.

**US - Louisiana Spill Reporting List: Reportable quantity (total mass into atmosphere)**

Hydrochloric acid (CAS 7647-01-0) 1000 LBS

**US - Louisiana Spill Reporting: Listed substance**

Hydrochloric acid (CAS 7647-01-0) Listed.

**US - Minnesota Haz Subs: Listed substance**

Hydrochloric acid (CAS 7647-01-0) Listed.

**US - New Jersey RTK - Substances: Listed substance**

Hydrochloric acid (CAS 7647-01-0) Listed.

O-tolidine dihydrochloride (CAS 612-82-8) Listed.

**US - New York Release Reporting: Hazardous Substances: Listed substance**

Hydrochloric acid (CAS 7647-01-0) Listed.

**US - North Carolina Toxic Air Pollutants: Listed substance**

Hydrochloric acid (CAS 7647-01-0) Listed.

**US - Texas Effects Screening Levels: Listed substance**

Hydrochloric acid (CAS 7647-01-0) Listed.

**US. Massachusetts RTK - Substance List**

Hydrochloric acid (CAS 7647-01-0) Listed.

**US. Pennsylvania RTK - Hazardous Substances**

Hydrochloric acid (CAS 7647-01-0) Listed.

**US. Rhode Island RTK**

Hydrochloric acid (CAS 7647-01-0) Listed.

O-tolidine dihydrochloride (CAS 612-82-8) Listed.

**Inventory status**

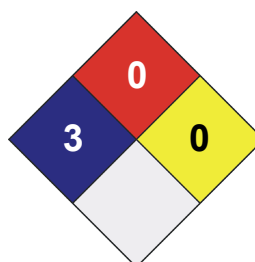
Country(s) or region	Inventory name	On inventory (yes/no)*
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

\*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

**16. Other Information**

LEGEND	
Severe	4
Serious	3
Moderate	2
Slight	1
Minimal	0

<b>HEALTH</b>	* 3
<b>FLAMMABILITY</b>	0
<b>PHYSICAL HAZARD</b>	0
<b>PERSONAL PROTECTION</b>	X





**Disclaimer**

The data contained in this material safety data sheet was obtained from sources that were technically accurate, reliable, and state of the art when this document was prepared. If data was unavailable to complete certain sections, the absence of that data is identified in this document. Because the supplier cannot know the exact circumstances during actual use of this product, other hazards, exposure scenarios, disposal considerations, and regulations may apply and it is the responsibility of the user to read and understand the product label and this document before use. Do not use the product for purposes other than those stated in Section 1.

**Issue date**

31-July-2015

**Effective date**

31-July-2015

**Expiry date**

31-July-2018

**Further information**

For an updated SDS, please contact the supplier/manufacturer listed on the first page of the document.

**Prepared by**

Dell Tech Laboratories, Ltd. Phone: (519) 858-5021

**Other information**

This Safety Data Sheet was prepared to comply with the current OSHA Hazard Communication Standard (HCS) adoption of the Globally Harmonized System of Classification and Labeling of Chemicals (GHS).

This SDS conforms to the ANSI Z400.1/Z129.1-2010 Standard.