




SAFETY DATA SHEET

1. Product and Company Identification

Product identifier	OTO (Orthotolidine)
Other means of identification	Not available
Recommended use	Water Testing Solution
Recommended restrictions	None known.
Manufacturer information	Pro Products LLC 6714 Pointe Inverness Way Suite 200 Fort Wayne, IN 46804-7935 US Phone: 260-483-2519 Emergency Phone: 1-800-424-9300 (CHEMTREC)
Supplier	See above.

2. Hazards Identification

Physical hazards	Corrosive to metals	Category 1
Health hazards	Acute toxicity, inhalation	Category 4
	Skin corrosion/irritation	Category 1
	Serious eye damage/eye irritation	Category 1
	Carcinogenicity	Category 1B
	Specific target organ toxicity, single exposure	Category 3 respiratory tract irritation
Environmental hazards	Not classified.	
WHMIS 2015 defined hazards	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 respiratory irritation. May cause cancer.

Precautionary statement

Prevention Keep only in original packaging. Do not breathe mist or vapor. Wash thoroughly after handling. Wear protective gloves, protective clothing, eye protection and 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. Wash contaminated clothing before reuse. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER or doctor. Specific treatment (see information on this label). 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 attention.

Storage Store in a corrosion resistant container with a resistant inner liner. Store locked up. Store in a well-ventilated place. Keep container tightly closed.

Disposal Dispose of container in accordance with local, regional, national and international regulations.

WHMIS 2015: Health Hazard(s) not otherwise classified (HHNOC) None known

WHMIS 2015: Physical Hazard(s) not otherwise classified (PHNOC) None known

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

Supplemental information 99% 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	5-10*
O-tolidine dihydrochloride		612-82-8	0.1-1*

All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

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.
*CANADA GHS: The exact percentage (concentration) of composition has been withheld as a trade secret.

4. First Aid Measures

Inhalation	IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER or doctor.
Skin contact	IF ON SKIN: Wash with plenty of water. Immediately call a POISON CENTER or doctor. Wash contaminated clothing before reuse. Specific treatment (see information on this label).
Eye contact	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 or doctor.
Ingestion	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. Immediately call a POISON CENTER or doctor.
Most important symptoms/effects, acute and delayed	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. May cause respiratory irritation.
Indication of immediate medical attention and special treatment needed	Provide general supportive measures and treat symptomatically. Symptoms may be delayed.
General information	IF exposed or concerned: Get medical advice/attention. If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance. Avoid contact with eyes and skin. Keep out of reach of children.

5. Fire Fighting Measures

Suitable extinguishing media	Water fog. Foam. Dry chemical powder. Carbon dioxide.
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical	During fire, gases hazardous to health may be formed.
Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Fire-fighting equipment/instructions	Move containers from fire area if you can do so without risk.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.
Hazardous combustion products	May include and are not limited to: Hydrogen chloride.

6. Accidental Release Measures

Personal precautions, protective equipment and emergency procedures	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Do not breathe mist or vapor. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.
Methods and materials for containment and cleaning up	Should not be released into the environment. Prevent entry into waterways, sewer, basements or confined areas. Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Absorb spillage to prevent material damage. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. 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. 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.

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. Do not breathe mist or vapor. Do not get in eyes, on skin, or on clothing. Use only outdoors or in a well-ventilated area. Avoid prolonged exposure. Wear appropriate personal protective equipment. Should be handled in closed systems, if possible. Wash thoroughly after handling. Use good industrial hygiene practices in handling this material. When using do not eat or drink.

Conditions for safe storage, including any incompatibilities

Store locked up. Store in a cool, dry place out of direct sunlight. Store in a corrosion resistant container with a resistant inner liner. Keep only in the original container. Store in a well-ventilated place. Store away from incompatible materials (see Section 10 of the SDS). Keep out of reach of children.

8. Exposure Controls/Personal Protection

Occupational exposure limits**Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2)**

Components	Type	Value
Hydrochloric acid (CAS 7647-01-0)	Ceiling	3 mg/m ³
		2 ppm

Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended)

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

Canada. Manitoba OELs (Reg. 217/2006, The Workplace Safety And Health Act)

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

Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents)

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

Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment)

Components	Type	Value
Hydrochloric acid (CAS 7647-01-0)	Ceiling	7.5 mg/m ³
		5 ppm

Canada. Saskatchewan OELs (Occupational Health and Safety Regulations, 1996, Table 21)

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

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/m ³
		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/m ³
		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 safety glasses with side shields (or goggles) and a face shield.
Skin protection	
Hand protection	Impervious gloves. Confirm with reputable supplier first.
Other	Wear appropriate chemical resistant clothing. Use of an impervious apron is recommended. As required by employer code.
Respiratory protection	Where exposure guideline levels may be exceeded, use an approved NIOSH respirator. Respirator should be selected by and used under the direction of a trained health and safety professional following requirements found in OSHA's respirator standard (29 CFR 1910.134), CAN/CSA-Z94.4 and ANSI's standard for respiratory protection (Z88.2).
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. When using do not eat or drink.

9. Physical and Chemical Properties

Appearance	Clear
Physical state	Liquid.
Form	Liquid.
Color	Clear to Light yellow
Odor	Odorless
Odor threshold	Not available.
pH	0.01
Melting point/freezing point	Not available.
Initial boiling point and boiling range	212 °F (100 °C)
Pour point	Not available.
Specific gravity	1.03
Partition coefficient (n-octanol/water)	Not available.
Flash point	Not available.
Evaporation rate	Not available.
Flammability (solid, gas)	Not applicable.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	Not available.
Flammability limit - upper (%)	Not available.
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	17 mmHg
Vapor density	0.6 (air=1)
Relative density	Not available.
Solubility(ies)	Soluble
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	Not available.
Other information	
Explosive properties	Not explosive.
Flash point class	Flammable IB
Oxidizing properties	Not oxidizing.

10. Stability and Reactivity

Reactivity	Reacts violently with strong alkaline substances. This product may react with reducing agents. May be corrosive to metals. This product may react with strong oxidizing agents.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Chemical stability	Material is stable under normal conditions.
Conditions to avoid	Do not mix with other chemicals.
Incompatible materials	Bases. Strong oxidizing agents. Reducing agents. Metals. Amines.
Hazardous decomposition products	May include and are not limited to: Hydrogen chloride.

11. Toxicological Information

Routes of exposure	Eye, Skin contact, Inhalation, Ingestion.
Information on likely routes of exposure	
Ingestion	Causes digestive tract burns. May cause stomach distress, nausea or vomiting.
Inhalation	Harmful if inhaled.
Skin contact	Causes severe skin burns.
Eye contact	Causes serious eye damage.
Symptoms related to the physical, chemical and toxicological characteristics	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. May cause respiratory irritation.

Information on toxicological effects

Acute toxicity Harmful if inhaled. May cause respiratory irritation.

Components	Species	Test Results
Hydrochloric acid (CAS 7647-01-0)		
Acute		
<i>Dermal</i>		
LD50	Mouse	1449 mg/kg, HSDB
<i>Inhalation</i>		
LC50	Mouse	13745 ppm, 5 Minutes, ECHA 2644 ppm, 5 Minutes, ECHA 1108 ppm, 1 Hours, RTECS 16.5 mg/L, 5 Minutes, ECHA 3.2 mg/L, 5 Minutes, ECHA
	Rat	40989 ppm, 5 Minutes, ECHA 4701 ppm, 5 Minutes, ECHA 3124 ppm, 1 Hours, HSDB 2810 ppm, 1 Hours 1405 ppm, 4 Hours 45.6 mg/L, 5 Minutes, ECHA 8.3 mg/L, 5 Minutes, ECHA
<i>Oral</i>		
LD50	Rabbit	900 mg/kg, HSDB
	Rat	238 - 277 mg/kg, HSDB
O-tolidine dihydrochloride (CAS 612-82-8)		
Acute		
<i>Dermal</i>		
LD50	Not available	
<i>Inhalation</i>		
LC50	Not available	
<i>Oral</i>		
LD50	Rat	404 mg/kg, Anachemia
Skin corrosion/irritation	Causes severe skin burns and eye damage.	

Exposure minutes	Not available.
Erythema value	Not available.
Oedema value	Not available.
Serious eye damage/eye irritation	Causes serious eye damage.
Corneal opacity value	Not available.
Iris lesion value	Not available.
Conjunctival reddening value	Not available.
Conjunctival oedema value	Not available.
Recover days	Not available.

Respiratory or skin sensitization

Canada - Alberta OELs: Irritant

Hydrochloric acid (CAS 7647-01-0) Irritant

Respiratory sensitization Not a respiratory sensitizer.

Skin sensitization This product is not expected to cause skin sensitization.

Mutagenicity No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Carcinogenicity May cause cancer. See below.

IARC Monographs. Overall Evaluation of Carcinogenicity

Hydrochloric acid (CAS 7647-01-0) Volume 54 - 3 Not classifiable as to carcinogenicity to humans.

US - California Proposition 65 - CRT: Listed date/Carcinogenic substance

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

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

Reproductive toxicity This product is not expected to cause reproductive or developmental effects.

Teratogenicity Not available.

Specific target organ toxicity - single exposure May cause respiratory irritation.

Specific target organ toxicity - repeated exposure Not classified.

Aspiration hazard Not an aspiration hazard.

Chronic effects Prolonged inhalation may be harmful.

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

Ecotoxicological data

Components	Species	Test Results
Hydrochloric acid (CAS 7647-01-0)		
Aquatic		
Fish	LC50 Western mosquitofish (<i>Gambusia affinis</i>)	282 mg/L, 96 hours

Persistence and degradability No data is available on the degradability of this product.

Bioaccumulative potential No data available.

Mobility in soil No data available.

Mobility in general Not available.

Other adverse effects 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

Disposal instructions Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Do not allow this material to drain into sewers/water supplies. Dispose of contents/container in accordance with local/regional/national/international regulations.

Local disposal regulations Dispose in accordance with all applicable regulations.

Hazardous waste code	D002: Waste Corrosive material [pH ≤2 or ≥12.5, or corrosive to steel] The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
Waste from residues / unused products	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).
Contaminated packaging	Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport Information

Transport of Dangerous Goods (TDG) Proof of Classification Classification Method: Classified as per Part 2, Sections 2.1 – 2.8 of the Transportation of Dangerous Goods Regulations. If applicable, the technical name and the classification of the product will appear below.

General IMDG Regulated Marine Pollutant.

U.S. Department of Transportation (DOT)

Basic shipping requirements:

UN number	UN1760
Proper shipping name	Corrosive liquids, n.o.s.
Technical name	Hydrogen chloride
Hazard class	8
Subsidiary hazard class	Limited Quantity - US
Packing group	II
Marine pollutant	Yes
Special provisions	B2, IB2, T11, TP2, TP27
Packaging exceptions	<1.3 gallons - Limited Quantity
Packaging non bulk	202
Packaging bulk	242

Transportation of Dangerous Goods (TDG - Canada)

Basic shipping requirements:

UN number	UN1760
Proper shipping name	CORROSIVE LIQUID, N.O.S.
Technical name	Hydrogen chloride
Hazard class	8
Subsidiary hazard class	Limited Quantity - Canada
Packing group	II
Special provisions	16
Packaging exceptions	<1L - Limited Quantity

DOT



TDG



15. Regulatory Information

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

Export Control List (CEPA 1999, Schedule 3)

Not listed.

Greenhouse Gases

Not listed.

Precursor Control Regulations

Hydrochloric acid (CAS 7647-01-0) Class B

WHMIS 2015 Exemptions Not applicable**US federal regulations** This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.**TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)**

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

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

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

US EPCRA Section 304 Extremely Haz. Subs. & CERCLA Haz. Subs.: Section 304 EHS reportable quantity

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

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not 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	5-10*
O-tolidine dihydrochloride	612-82-8	0.1-1*

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

Hydrochloric acid (CAS 7647-01-0)

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

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

Hydrochloric acid (CAS 7647-01-0)

Clean Water Act (CWA) Section 112(r) (40 CFR 68.130) Hazardous substance**US state regulations** See below**US - California Hazardous Substances (Director's): Listed substance**

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

US - Illinois Chemical Safety Act: Listed substanceHydrochloric acid (CAS 7647-01-0)
O-tolidine dihydrochloride (CAS 612-82-8)**US - Louisiana Spill Reporting: Listed substance**Hydrochloric acid (CAS 7647-01-0) Listed.
O-tolidine dihydrochloride (CAS 612-82-8) Listed.**US - Minnesota Haz Subs: Listed substance**

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

US - New Jersey RTK - Substances: Listed substanceHydrochloric acid (CAS 7647-01-0)
O-tolidine dihydrochloride (CAS 612-82-8)**US - North Carolina Toxic Air Pollutants: Listed substance**Hydrochloric acid (CAS 7647-01-0)
O-tolidine dihydrochloride (CAS 612-82-8)**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)

US. New Jersey Worker and Community Right-to-Know Act

Hydrochloric acid (CAS 7647-01-0)

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

US. Pennsylvania Worker and Community Right-to-Know Law

Hydrochloric acid (CAS 7647-01-0)

US. Rhode Island RTK

Hydrochloric acid (CAS 7647-01-0)

US. California Proposition 65



WARNING: This product can expose you to O-tolidine dihydrochloride, which is known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

US - California Proposition 65 - CRT: Listed date/Carcinogenic substance

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

Listed: April 1, 1992

Inventory status

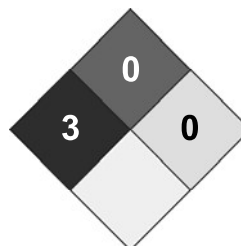
Country(s) or region	Inventory name	On inventory (yes/no)*
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*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

HEALTH	* 3
FLAMMABILITY	0
PHYSICAL HAZARD	0
PERSONAL PROTECTION	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

23-November-2018

Version #

03

Effective date

17-July-2018

Prepared by

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

Other information

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