

World Headquarters  
Hach Company  
P.O.Box 389  
Loveland, CO USA 80539  
(970) 669-3050

MSDS No: M01752

# SAFETY DATA SHEET

## 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

**Product Name:** ORTHO TOLIDINE

**Catalog Number:** 26240BG

Hach Company  
P.O.Box 389  
Loveland, CO USA 80539  
(970) 669-3050

Emergency Telephone Numbers:  
(Medical and Transportation)  
(303) 623-5716 24 Hour Service  
(515)232-2533 8am - 4pm CST

**MSDS Number:** M01752

**Chemical Name:** Not applicable

**CAS Number:**

**Additional CAS No. (for hydrated forms):** Not applicable

**Chemical Formula:** Not applicable

**Chemical Family:** Not applicable

**Intended Use:** Laboratory Reagent

## 2. HAZARDS IDENTIFICATION

**GHS Classification:**

**Hazard categories:** Carcinogenicity: Carc. 1B Serious Eye Damage/Eye Irritation: Eye Dam. 1 Skin

Corrosion/Irritation: Skin Corr. 1B

**GHS Label Elements:**

DANGER



**Hazard statements:** Causes serious eye damage. Causes severe skin burns and eye damage. May cause cancer by inhalation. May be corrosive to metals.

**Precautionary statements:** Call a POISON CENTER or doctor/physician if you feel unwell. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Keep only in original container. Do not breathe dust/fume/gas/mist/vapours/spray. Wash thoroughly after handling. Wear eye protection. Use personal protective equipment as required. IF SWALLOWED: rinse mouth. Do NOT induce vomiting. IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. IF INHALED: Remove victim/person to fresh air and keep at rest in a position 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 or doctor/physician. P321 Specific treatment (see supplemental first aid instructions on this label). Wash contaminated clothing before reuse. Absorb spillage to prevent material damage. Dispose of contents/container according to state, local, federal or national regulations.

**HMIS:**

**Health:** 2

**Flammability:** 0

**Reactivity:** 0

**Protective Equipment:** X - See protective equipment, Section 8.

**NFPA:**

**Health:** 2

**Flammability:** 0

**Reactivity:** 0

*Symbol:* Not applicable  
*WHMIS Hazard Classification:* Class E - Corrosive material  
*WHMIS Symbols:* Corrosive

---

### 3. COMPOSITION / INFORMATION ON INGREDIENTS

*Hazardous Components according to GHS:*

**Hydrochloric Acid**

*CAS Number:* 7647-01-0  
*Chemical Formula:* HCl  
*GHS Classification:* Met. Corr. 1, H290; Acute Tox. 4-Orl, H302; Acute Tox. 5-Inh, H333; Skin Corr. 1B, H314; STOT Single 3, H335  
*Percent Range:* 1.0 - 10.0  
*Percent Range Units:* volume / volume  
*PEL:* 5 ppm ceiling  
*TLV:* 5 ppm ceiling

*WHMIS Symbols:* Corrosive

*Hazardous Components according to GHS:*

**O-Tolidine Dihydrochloride**

*CAS Number:*  
*Chemical Formula:* C<sub>14</sub>H<sub>16</sub>N<sub>2</sub>·2HCl  
*GHS Classification:*  
*Percent Range:* 0.1  
*Percent Range Units:* weight / volume  
*PEL:* Not established  
*TLV:* Not established

*WHMIS Symbols:* Other Toxic Effects

**Demineralized Water**

*CAS Number:* 7732-18-5  
*Chemical Formula:* H<sub>2</sub>O  
*GHS Classification:* Not a dangerous substance according to GHS.  
*Percent Range:*  
*Percent Range Units:*  
*PEL:* Not established  
*TLV:* Not established

*WHMIS Symbols:* Not applicable

---

### 4. FIRST AID MEASURES

*General Information:* In the event of exposure, show this Material Safety Data Sheet and label (where possible) to a doctor.

*Advice to doctor:* Treat symptomatically.

*Eye Contact:* Immediately flush eyes with water for 15 minutes. Call physician.

*Skin Contact (First Aid):* Wash skin with soap and plenty of water. Call physician if irritation develops.

*Inhalation:* Remove to fresh air. Give artificial respiration if necessary. Call physician.

*Ingestion (First Aid):* Do not induce vomiting. Give 1-2 glasses of water. Never give anything by mouth to an unconscious person. Call physician immediately.

---

### 5. FIRE FIGHTING MEASURES

*Flammable Properties:* Material will not burn.

*Fire Fighting Instruction:* As in any fire, wear self-contained breathing apparatus pressure-demand and full protective gear. Evacuate area and fight fire from a safe distance.

*Extinguishing Media:* Water.

*Extinguishing Media NOT To Be Used:* Not applicable

**Fire / Explosion Hazards:** None reported  
**Hazardous Combustion Products:** This material will not burn.

---

## 6. ACCIDENTAL RELEASE MEASURES

**Spill Response Notice:**

Only persons properly qualified to respond to an emergency involving hazardous substances may respond to a spill according to federal regulations (OSHA 29 CFR 1910.120(a)(v)) and per your company's emergency response plan and guidelines/procedures. See Section 13, Special Instructions for disposal assistance.

**Containment Technique:** Absorb spilled liquid with non-reactive sorbent material. Stop spilled material from being released to the environment.

**Clean-up Technique:** Cover spilled material with an alkali, such as soda ash or sodium bicarbonate. Scoop up slurry into a large beaker. Dilute with a large excess of water. Adjust to a pH between 6 and 9. Use sulfuric or citric acid to lower pH. Use soda ash or sodium bicarbonate to increase pH. Flush reacted material to the drain with a large excess of water. Decontaminate the area of the spill with a soap solution.

**Evacuation Procedure:** Evacuate local area (15 foot radius or as directed by your facility's emergency response plan) when: a gallon or more of liquid is spilled. If conditions warrant, increase the size of the evacuation.

**DOT Emergency Response Guide Number:** 157

---

## 7. HANDLING AND STORAGE

**Handling:** Avoid contact with eyes. Do not breathe mist or vapors. Wash thoroughly after handling. Maintain general industrial hygiene practices when using this product.

**Storage:** Store in a cool, dry place. Keep away from: alkalis, metals. Keep this product and all other chemicals out of children's reach.

**Flammability Class:** Not applicable

---

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

**Engineering Controls:** Have an eyewash station nearby. Maintain general industrial hygiene practices when using this product.

**Personal Protective Equipment:**

**Eye Protection:** chemical splash goggles

**Skin Protection:** lab coat, nitrile gloves

**Inhalation Protection:** adequate ventilation

**Precautionary Measures:** Avoid contact with: eyes. Do not breathe: mist/vapor. Wash thoroughly after handling. Keep away from: alkalis, metals.

**TLV:** Not established

**PEL:** Not established

**For Occupational Exposure Limits (OEL) for ingredients, see section 3 - Composition/Information on Ingredients.:**

---

## 9. PHYSICAL AND CHEMICAL PROPERTIES

**Appearance:** Clear, colorless liquid

**Physical State:** Liquid

**Molecular Weight:** Not applicable

**Odor:** None

**Odor Threshold:**

**pH:** <1

**Metal Corrosivity:**

**Corrosivity Classification:** Classed as corrosive to skin. Not generally classed as corrosive to metals in addition to skin classification.

**Steel:** Not determined

**Aluminum:** Not determined

**Specific Gravity/ Relative Density (water = 1; air =1):** 1

**Viscosity:**

**Solubility:**

**Water:** Miscible

**Acid:** Miscible

**Other:** Not determined

**Partition Coefficient (n-octanol / water):**  
**Coefficient of Water / Oil:** Not applicable  
**Melting Point:** Not applicable  
**Decomposition Temperature:**  
**Boiling Point:** Not determined  
**Vapor Pressure:** Not determined  
**Vapor Density (air = 1):** Not determined  
**Evaporation Rate (water = 1):** Not determined  
**Volatile Organic Compounds Content:** Not applicable  
**Flammable Properties:** Material will not burn.  
**Flash Point:** Not applicable  
**Method:** Not applicable  
**Flammability Limits:**  
**Lower Explosion Limits:** Not applicable  
**Upper Explosion Limits:** Not applicable  
**Autoignition Temperature:** Not applicable  
**Explosive Properties:**  
Not determined  
**Oxidizing Properties:**  
Not determined  
**Reactivity Properties:**  
Not determined  
**Gas under Pressure:**  
Not classified according to GHS criteria.

---

## 10. STABILITY AND REACTIVITY

**Chemical Stability:** Stable when stored under proper conditions.  
**Mechanical Impact:** None reported  
**Static Discharge:** None reported.  
**Reactivity / Incompatibility:** Incompatible with: strong bases  
**Hazardous Decomposition:** Contact with metals may release flammable hydrogen gas.  
**Conditions to Avoid:** Heating to decomposition.

---

## 11. TOXICOLOGICAL INFORMATION

**Toxicokinetics, Metabolism and Distribution:** No information available for mixture.  
**Toxicologically Synergistic Products:** None reported  
**Acute Toxicity:** Based on classification principles, the classification criteria are not met.  
**Specific Target Organ Toxicity - Single Exposure (STOT-SE):** Based on classification principles, the classification criteria are not met.  
**Specific Target Organ Toxicity - Repeat Exposure (STOT-RE):** Based on classification principles, the classification criteria are not met.  
**Skin Corrosion/Irritation:** Corrosive to skin.  
**Eye Damage:** Corrosive to eyes.  
**Sensitization:** Based on classification principles, the classification criteria are not met.  
**CMR Effects/Properties (carcinogenic, mutagenic or toxic to reproduction):** Contains Listed Carcinogen  
This product does NOT contain any IARC listed chemicals.  
This product does NOT contain any NTP listed chemicals.  
This product does NOT contain any OSHA listed carcinogens.  
**Symptoms/Effects:**  
**Ingestion:** May be harmful if swallowed May cause: nausea vomiting irritation of the mouth and esophagus  
**Inhalation:** May cause: irritation of nose and throat  
**Skin Absorption:** Harmful if absorbed through the skin  
**Chronic Effects:** None reported  
**Medical Conditions Aggravated:** Pre-existing: Respiratory conditions

---

## 12. ECOLOGICAL INFORMATION

**Product Ecological Information:** --  
No ecological data available for this product.

**Ingredient Ecological Information:** Hydrochloric acid: LC100 trout 10 mg/L 24 hr; LC50 shrimp 100 to 330 ppm/48-hr (salt water); LC50 starfish 100 to 330 mg/L/48-hr; LC50 cockle 330 to 1,000 mg/L/48-hr; TLm mosquito fish 282 ppm/96-hr (fresh water); LC50 goldfish 178 mg/L

---

## 13. DISPOSAL CONSIDERATIONS

**EPA Waste ID Number:** D002

**Special Instructions (Disposal):** Add a non-reactive absorbant material if waste contains free liquid and seal bag. Dispose of material in an E.P.A. approved hazardous waste facility.

**Empty Containers:** Rinse three times with an appropriate solvent. Dispose of empty container as normal trash. Rinsate from empty containers may contain sufficient product to require disposal as hazardous waste.

**NOTICE (Disposal):** These disposal guidelines are based on federal regulations and may be superseded by more stringent state or local requirements. Please consult your local environmental regulators for more information. In Europe: Chemical and analysis solutions must be disposed of in compliance with the respective national regulations. Product packaging must be disposed of in compliance with the country-specific regulations or must be passed to a packaging return system.

---

## 14. TRANSPORT INFORMATION

**D.O.T.:**

**D.O.T. Proper Shipping Name:** Hydrochloric Acid Solution

**Hazard Class:** 8

**Subsidiary Risk:** NA

**ID Number:** UN1789

**Packing Group:** III

**T.D.G.:**

**Proper Shipping Name:** Hydrochloric Acid Solution

--

**Hazard Class:** 8

**Subsidiary Risk:** NA

**UN Number/PIN:** 1789

**Packing Group:** III

**I.C.A.O.:**

**I.C.A.O. Proper Shipping Name:** Hydrochloric Acid Solution

**Hazard Class:** 8

**Subsidiary Risk:** NA

**ID Number:** UN1789

**Packing Group:** III

**I.M.O.:**

**Proper Shipping Name:** Hydrochloric Acid Solution

**Hazard Class:** 8

**Subsidiary Risk:** NA

**ID Number:** UN1789

**Packing Group:** III

**Additional Information:** There is a possibility that this product could be contained in a reagent set or kit composed of various compatible dangerous goods. If the item is NOT in a set or kit, the classification given above applies. If the item IS part of a set or kit, the classification would change to the following: UN3316 Chemical Kit, Class 9, PG II or III. If the item is not regulated, the Chemical Kit classification does not apply.

---

## 15. REGULATORY INFORMATION

**U.S. Federal Regulations:**

**O.S.H.A.:** This product meets the criteria for a hazardous substance as defined in the Hazard Communication Standard. (29 CFR 1910.1200)

**E.P.A.:**

**S.A.R.A. Title III Section 311/312 Categorization (40 CFR 370):** Immediate (Acute) Health Hazard

**S.A.R.A. Title III Section 313 (40 CFR 372):** This product contains a chemical(s) subject to the reporting requirements of Section 313 of Title III of SARA.

**302 (EHS) TPQ (40 CFR 355):** Not applicable

**304 CERCLA RQ (40 CFR 302.4):** Hydrochloric Acid 5000 lbs.

**304 EHS RQ (40 CFR 355):** Not applicable

**Clean Water Act (40 CFR 116.4):** Hydrochloric Acid - RQ 5000 lbs.

**RCRA:** Contains RCRA regulated substances. See Section 13, EPA Waste ID Number.

**State Regulations:**

**California Prop. 65:** WARNING - This product contains a chemical known to the State of California to cause cancer.

**Identification of Prop. 65 Ingredient(s):**

**California Perchlorate Rule CCR Title 22 Chap 33:** Not applicable

**Trade Secret Registry:** Not applicable

**National Inventories:**

**U.S. Inventory Status:** All ingredients in this product are listed on the TSCA 8(b) Inventory (40 CFR 710).

**CAS Number:**

**Canadian Inventory Status:** All ingredients of this product are DSL Listed.

**EEC Inventory Status:** All ingredients used to make this product are listed on EINECS / ELINCS.

**Australian Inventory (AICS) Status:** Not determined

**New Zealand Inventory (NZIoC) Status:** Not determined

**Korean Inventory (KECI) Status:** Not determined

**Japan (ENCs) Inventory Status:** Not determined

**China (PRC) Inventory (MEP) Status:** Not determined

---

## 16. OTHER INFORMATION

**References:** 29 CFR 1900 - 1910 (Code of Federal Regulations - Labor). Air Contaminants, Federal Register, Vol. 54, No. 12. Thursday, January 19, 1989. pp. 2332-2983. TLV's Threshold Limit Values and Biological Exposure Indices for 1992-1993. American Conference of Governmental Industrial Hygienists, 1992. Technical Judgment. Outside Testing. NIOSH/OSHA Occupational Health Guidelines for Chemical Hazards. Cincinnati: Department of Health and Human Services, 1981.

**Complete Text of H phrases referred to in Section 3:** H318 Causes serious eye damage. H314 Causes severe skin burns and eye damage. H290 May be corrosive to metals. H350 May cause cancer.

**Revision Summary:** . Substantial revision to comply with EU Reg 1272/2008, Reg 1907/2006 and UN GHS ( ST/SG/AC.10/36/Add.3).

**Date of MSDS Preparation:**

**Day:** 08

**Month:** December

**Year:** 2014

**MSDS Prepared:** MSDS prepared by Product Compliance Department extension 3350

**CCOHS Evaluation Note:** It is offered under exemption from WHMIS labeling as specified in the Controlled Products Regulation (CPR) Section 17.

---

**Legend:**

NA - Not Applicable

ND - Not Determined

NV - Not Available

w/w - weight/weight

w/v - weight/volume

v/v - volume/volume

**USER RESPONSIBILITY:** Each user should read and understand this information and incorporate it in individual site safety programs in accordance with applicable hazard communication standards and regulations.

**THE INFORMATION CONTAINED HEREIN IS BASED ON DATA CONSIDERED TO BE ACCURATE. HOWEVER, NO WARRANTY IS EXPRESSED OR IMPLIED REGARDING THE ACCURACY OF THESE DATA OR THE RESULTS TO BE OBTAINED FROM THE USE THEREOF.**

**HACH COMPANY ©2015**