

SECTION 1: Identification

| | |
|---|--|
| Product identifier | |
| Product name | Orthotolidine |
| Product number | R-0600 |
| Recommended use and restrictions | To be used in accordance with manufacturer instructions or under the direct guidance of the manufacturer. |
| Manufacturer | Taylor Technologies, Inc. 31 Loveton Circle Sparks, MD 21152 Phone: (410) 472-4340 Emergency phone: (800) 837-8548 |

SECTION 2: Hazard(s) identification

| | | |
|------------------------------|---|---|
| Physical hazards | Corrosive to metals | Category 1 |
| Health hazards | Carcinogenicity | Category 1B |
| | Eye damage/irritation | Category 1 |
| | Skin corrosion/irritation | Category 1B |
| | Specific target organ toxicity, single exposure | Category 3 Respiratory tract irritation |
| Environmental hazards | No data available | |

Label elements

Hazard pictograms



| | |
|---|--|
| Signal word | Danger |
| Hazard statements | May cause cancer. May be corrosive to metals. Causes severe skin burns and eye damage. May cause respiratory irritation. |
| Precautionary statements | |
| Prevention | Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not breathe dusts or mists. Use only outdoors or in a well-ventilated area. Wash skin thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection if contact is likely to occur. Keep only in original container. |
| Response | Absorb spillage to prevent material damage. IF EXPOSED OR CONCERNED: Get medical advice/attention. 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 physician or poison control center. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. Immediately call a physician or poison control center. |
| Storage | Store in corrosive-resistant container with a corrosive-resistant inner liner. Keep tightly capped. Store out of direct sunlight between 36°F–85°F. Store in a well ventilated place. Store locked up. |
| Disposal | Dispose of contents/container in accordance with local/regional/national/international regulations. |
| Hazards not otherwise classified | No data available |

SECTION 3: Composition/information on ingredients

Mixture

| Chemical name | Common name and synonyms | CAS number | % |
|-------------------|----------------------------|------------|-------|
| Water | Dihydrogen oxide | 7732-18-5 | 90–99 |
| Hydrochloric acid | Not available | 7647-01-0 | 5–10 |
| Orthotolidine | o-Tolidine dihydrochloride | 612-82-8 | 0.1–5 |

SECTION 4: First-aid measures

If inhaled

Remove individual to fresh air. Seek medical attention if breathing becomes difficult or if respiratory irritation develops. Give oxygen or artificial respiration if needed.

In case of skin contact

Immediately flush skin with plenty of water for at least 20 minutes. If clothing comes in contact with the product, the clothing should be removed and laundered before reuse. Seek medical attention if irritation develops. Chemical burns must be treated by a physician.

In case of eye contact

Immediately flush eyes with plenty of water for at least 20 minutes. Remove contact lenses if present and easy to do. Continue rinsing. Call a physician or poison control center immediately.

If swallowed

Call a physician or poison control center immediately. Rinse mouth. Never give anything by mouth to a person who is unconscious or is having convulsions. Do NOT induce vomiting unless directed by physician. If vomiting occurs, keep head low so that stomach content does not get into the lungs.

Most important symptoms and effects, both acute and delayed

Refer to section 2 and/or section 11 of the SDS for the most important known symptoms and effects.

Indication of any immediate medical attention and special treatment needed

Provide general supportive measures and treat symptomatically.

Chemical burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. Keep person under observation. Symptoms may be delayed.

General information

Ensure medical personnel are aware of the material(s) involved and take precautions to protect themselves.

SECTION 5: Firefighting measures

Extinguishing media

Suitable extinguishing media Use extinguishing media appropriate for surrounding fire.
Unsuitable extinguishing media Do not use a heavy water stream. Use of heavy stream of water may spread fire.

Specific hazards arising from the substance or mixture

Fire hazard Not flammable
Explosion hazard Not explosive
Reactivity May be corrosive to metals
Hazardous combustion products Hydrogen chloride gas

Advice for firefighters

Precautionary measures Exercise caution when fighting any chemical fire; hazardous fumes will be present.
Firefighting equipment/instructions Use water spray or fog for cooling exposed containers.
Protection during firefighting Do not enter fire area without proper protective equipment, including respiratory protection.
Other information Refer to section 9 of the SDS for flammability properties.

SECTION 6: Accidental release measures

Personal precautions, protective equipment, and emergency procedures

Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep out of low areas. Wear appropriate protective equipment and clothing during cleanup. 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 protective equipment, refer to section 8 of the SDS.

Environmental precautions

Avoid discharge into drains, watercourses, or onto the ground.

Methods and material for containment and cleaning up

Ventilate the area. Dike the spilled material where this is possible. Stop leak if it can be done without risk. Absorb spillage to prevent material damage. Absorb in vermiculite, dry sand or earth, and place into containers. Prevent entry into waterways, sewers, basements, or confined areas. Following product recovery, flush area with water. Dilute acid with water and neutralize with dilute base. If not recoverable, dilute with water or flush to holding area and neutralize. Contaminated absorbent material may pose the same hazards as the spilled product. In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable regulations.

Reference to other sections

For exposure controls and personal protection, refer to section 8 of the SDS. For waste disposal, refer to section 13 of the SDS.

SECTION 7: Handling and storage

Personal precautions, protective equipment, and emergency procedures

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Pregnant or breastfeeding women must not handle this product. Do not breathe mist or vapor. Do not get in eyes, on skin, or on clothing. Do not taste or swallow. Avoid prolonged exposure. Provide adequate ventilation. Wear appropriate personal protective equipment. For personal protective equipment, refer to section 8 of the SDS. Keep away from incompatibles. Observe good industrial hygiene practices. Label containers appropriately.

Conditions for safe storage, including any incompatibilities

Store in corrosive-resistant container with a corrosive-resistant inner liner. Keep tightly capped. Store out of direct sunlight between 36°F–85°F. Store in a well ventilated place. Store locked up. Store away from incompatible materials (refer to section 10 of the SDS).

SECTION 8: Exposure controls/personal protection

Occupational exposure limits

ACGIH Threshold Limit Values

| Components | Type | Value | Form |
|-----------------------------------|---------|-------|----------------|
| Hydrochloric acid (CAS 7647-01-0) | Ceiling | 2 ppm | Not applicable |

NIOSH: Pocket Guide to Chemical Hazards

| Components | Type | Value | Form |
|-----------------------------------|---------|------------------------------|----------------------------------|
| Hydrochloric acid (CAS 7647-01-0) | Ceiling | 7 mg/m ³ 5 ppm | Not applicable Not applicable |

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

| Components | Type | Value | Form |
|-----------------------------------|---------|------------------------------|----------------------------------|
| Hydrochloric acid (CAS 7647-01-0) | Ceiling | 7 mg/m ³ 5 ppm | Not applicable Not applicable |

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

Exposure controls

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. Eyewash facilities and emergency shower must be available when handling this product.

Personal protective equipment

- Eye/face protection Wear appropriate chemical safety goggles if contact is likely to occur.
- Skin protection Wear appropriate chemical-resistant gloves and clothing if contact is likely to occur.
- Body protection Wear appropriate protective clothing.
- Respiratory protection In case of insufficient ventilation, wear suitable respiratory equipment. Use a NIOSH/MSHA approved respirator if there is a risk of exposure to dust/fumes at levels exceeding the exposure limits. Advice should be sought from respiratory protection suppliers.

SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties

| | |
|----------------|-----------------------|
| Physical state | Liquid |
| Form | Liquid |
| Color | Clear to light yellow |
| Odor | Odorless |
| Odor threshold | No data available |
| pH | 0.01 |

| | |
|---|----------------------------|
| Evaporation rate | No data available |
| Melting point | No data available |
| Freezing point | No data available |
| Boiling point | 212°F (100°C) |
| Flash point | No data available |
| Auto-ignition temperature | No data available |
| Decomposition temperature | No data available |
| Flammability (solid, gas) | No data available |
| Vapor pressure | 17 mm Hg |
| Relative vapor density | 0.6 |
| Solubility | Soluble in all proportions |
| Partition coefficient (n-octanol/water) | No data available |
| Viscosity | No data available |
| Explosive properties | No data available |
| Oxidizing properties | No data available |

SECTION 10: Stability and reactivity

| | |
|---|--|
| Reactivity | May be corrosive to metals |
| Chemical stability | Stable under recommended handling and storage conditions (refer to section 7 of the SDS) |
| Possibility of hazardous reactions | No dangerous reaction known under conditions of normal use |
| Conditions to avoid | Contact with incompatible materials. Do not use in areas without adequate ventilation. |
| Incompatible materials | Cesium carbide, metals sodium, and strong oxidizing materials |

SECTION 11: Toxicological information

Information on toxicological effects

| | |
|--------------|--|
| Inhalation | May cause irritation to the respiratory system |
| Skin contact | Causes severe skin burns |
| Eye contact | Causes serious eye damage |
| Ingestion | Causes digestive tract burns |

Most important symptoms/effects, acute and delayed

Direct skin contact may cause corrosive skin burns, deep ulcerations, and possibly permanent scarring.

Direct contact with concentrated solutions may be corrosive to the eyes and may cause severe damage, including blindness. Symptoms may include stinging, tearing, redness, swelling, and blurred vision.

Inhalation of mists can cause severe respiratory irritation. Symptoms may include coughing, choking, and wheezing. Inhalation could result in pulmonary edema (fluid accumulation). Symptoms of pulmonary edema (chest pain, shortness of breath) may be delayed.

Ingestion may produce burns to the lips, oral cavity, upper airway, esophagus, and possibly the digestive tract. Symptoms may include abdominal pain, vomiting, burns, perforations, bleeding.

Acute toxicity This product is not classified as an acute toxicity hazard. See below for individual ingredient acute toxicity data.

| Components | Species | Test Results |
|------------|---------|--------------|
|------------|---------|--------------|

Hydrochloric acid (CAS 7647-01-0)

Acute

Dermal

| | | |
|------------------|-------|------------|
| LD ₅₀ | Mouse | 1449 mg/kg |
|------------------|-------|------------|

Inhalation

| | | |
|------------------|-------|------------------|
| LC ₅₀ | Mouse | 1108 ppm, 1 hour |
| LC ₅₀ | Rat | 3124 ppm, 1 hour |

Oral

| | | |
|------------------|--------|---------------|
| LD ₅₀ | Rabbit | 900 mg/kg |
| LD ₅₀ | Rat | 238–277 mg/kg |

Orthotolidine (CAS 612-82-8)

Acute

Oral

LD₅₀

Rat

404 mg/kg

| | |
|---|----------------------------------|
| Respiratory or skin sensitization | No data available |
| Germ cell mutagenicity | No data available |
| Carcinogenicity | No data available |
| Reproductive toxicity | No data available |
| Specific target organ toxicity (single exposure) | May cause respiratory irritation |
| Specific target organ toxicity (repeated exposure) | No data available |
| Aspiration hazard | No data available |

SECTION 12: Ecological information

This product is not classified as environmentally hazardous; however, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

SECTION 13: Disposal considerations

Collect and reclaim or dispose of in sealed containers at a licensed waste disposal site. Since emptied containers may retain product residue, follow label warnings even after container is emptied. This material and its container must be disposed of in a safe manner. Dispose of contents/container in accordance with local/regional/national/international regulations.

SECTION 14: Transport information

DOT

| | |
|------------------------------|--|
| UN number | UN1789 |
| UN proper shipping name | Hydrochloric acid |
| Transport hazard class(es) | |
| Class | 8 |
| Subsidiary risk | Not listed |
| Label(s) | 8 |
| Packing group | II |
| Special precautions for user | Read safety instructions, SDS, and emergency procedures before handling. |
| Special provisions | A3, A6, B3, B15, IB2, N41, T8, TP2, TP12 |
| Packaging exceptions | 154 |
| Packaging, non-bulk | 202 |
| Packaging, bulk | 242 |

IATA

| | |
|------------------------------|--|
| UN number | UN1789 |
| UN proper shipping name | Hydrochloric acid |
| Transport hazard class(es) | |
| Class | 8 |
| Subsidiary risk | Not listed |
| Packing group | II |
| Environmental hazards | Not listed |
| ERG code | 8L |
| Special precautions for user | Read safety instructions, SDS, and emergency procedures before handling. |
| Other information | |
| Passenger and cargo aircraft | Allowed |
| Cargo aircraft only | Allowed |

IMDG

| | |
|------------------------------|--|
| UN number | UN1789 |
| UN proper shipping name | Hydrochloric acid |
| Transport hazard class(es) | |
| Class | 8 |
| Subsidiary risk | Not listed |
| Packing group | II |
| Environmental hazards | |
| Marine pollutant | Not listed |
| EmS | F-A, S-B |
| Special precautions for user | Read safety instructions, SDS, and emergency procedures before handling. |

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

This substance/mixture is not intended to be transported in bulk

DOT



IATA; IMDG



SECTION 15: Regulatory information

U.S. federal regulations

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

CERCLA Hazardous Substance (40 CFR 302.4)

Hydrochloric acid (CAS 7647-01-0)

SARA 302 Extremely Hazardous Substance

Hydrochloric acid (CAS 7647-01-0)

SARA 304 Emergency Release Notification

Hydrochloric acid (CAS 7647-01-0)

SARA 313 (TRI Reporting)

Orthotolidine (CAS 612-82-8)

U.S. state regulations

Massachusetts Right-to-Know Act

Hydrochloric acid (CAS 7647-01-0)

Orthotolidine (CAS 612-82-8)

New Jersey Worker and Community Right-to-Know Act

Hydrochloric acid (CAS 7647-01-0)

Orthotolidine (CAS 612-82-8)

Pennsylvania Worker and Community Right-to-Know Act

Hydrochloric acid (CAS 7647-01-0)

Orthotolidine (CAS 612-82-8)

Rhode Island Right-to-Know Act

Hydrochloric acid (CAS 7647-01-0)

SECTION 16: Other information

NFPA Rating

| | |
|---------------|-----|
| Health hazard | 3 |
| Fire hazard | 0 |
| Reactivity | 2 |
| Specific | N/A |

Disclaimer

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