



## 10M61-2 Tin (10,000µg/mL in 60% HCl)

### High-Purity Standards

Catalogue number: 10M61-2

Version No: 2.2

Safety Data Sheet according to OSHA HazCom Standard (2012) requirements

Chemwatch Hazard Alert Code: 3

Issue Date: 11/15/2016

Print Date: 11/15/2016

S.GHS.USA.EN

## SECTION 1 IDENTIFICATION

### Product Identifier

Product name	10M61-2 Tin (10,000µg/mL in 60% HCl)
Synonyms	10,000µg/mL Tin in 60% HCl
Proper shipping name	Hydrochloric acid (contains hydrochloric acid)
Other means of identification	10M61-2

### Recommended use of the chemical and restrictions on use

Relevant identified uses	The use of a quantity of material in an unventilated or confined space may result in increased exposure and an irritating atmosphere developing.
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### Name, address, and telephone number of the chemical manufacturer, importer, or other responsible party

Registered company name	High-Purity Standards
Address	PO Box 41727 SC 29423 United States
Telephone	843-767-7900
Fax	843-767-7906
Website	highpuritystandards.com
Email	Not Available

### Emergency phone number

Association / Organisation	INFOTRAC
Emergency telephone numbers	1-800-535-5053
Other emergency telephone numbers	1-352-323-3500

## SECTION 2 HAZARD(S) IDENTIFICATION

### Classification of the substance or mixture

Classification	Serious Eye Damage Category 1, Specific target organ toxicity - single exposure Category 3 (respiratory tract irritation), Metal Corrosion Category 1, Skin Corrosion/Irritation Category 1A
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### Label elements

GHS label elements	
SIGNAL WORD	<b>DANGER</b>

### Hazard statement(s)

H318	Causes serious eye damage.
H335	May cause respiratory irritation.
H290	May be corrosive to metals.
H314	Causes severe skin burns and eye damage.

Continued...

## 10M61-2 Tin (10,000µg/mL in 60% HCl)

### Hazard(s) not otherwise specified

Not Applicable

### Precautionary statement(s) Prevention

**P260** Do not breathe dust/fume/gas/mist/vapours/spray.

### Precautionary statement(s) Response

**P301+P330+P331** IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

### Precautionary statement(s) Storage

**P405** Store locked up.

### Precautionary statement(s) Disposal

**P501** Dispose of contents/container in accordance with local regulations.

## SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS

### Substances

See section below for composition of Mixtures

### Mixtures

CAS No	%[weight]	Name
7440-31-5	1	<u>tin</u>
7647-01-0	60	<u>hydrochloric acid</u>
7732-18-5	balance	<u>water</u>

## SECTION 4 FIRST-AID MEASURES

### Description of first aid measures

<b>Eye Contact</b>	<p>If this product comes in contact with the eyes:</p> <ul style="list-style-type: none"><li>▶ Immediately hold eyelids apart and flush the eye continuously with running water.</li><li>▶ Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids.</li><li>▶ Continue flushing until advised to stop by the Poisons Information Centre or a doctor, or for at least 15 minutes.</li><li>▶ Transport to hospital or doctor without delay.</li><li>▶ Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.</li></ul>
<b>Skin Contact</b>	<p>If skin or hair contact occurs:</p> <ul style="list-style-type: none"><li>▶ Immediately flush body and clothes with large amounts of water, using safety shower if available.</li><li>▶ Quickly remove all contaminated clothing, including footwear.</li><li>▶ Wash skin and hair with running water. Continue flushing with water until advised to stop by the Poisons Information Centre.</li><li>▶ Transport to hospital, or doctor.</li></ul>
<b>Inhalation</b>	<ul style="list-style-type: none"><li>▶ If fumes or combustion products are inhaled remove from contaminated area.</li><li>▶ Lay patient down. Keep warm and rested.</li><li>▶ Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures.</li><li>▶ Apply artificial respiration if not breathing, preferably with a demand valve resuscitator, bag-valve mask device, or pocket mask as trained. Perform CPR if necessary.</li><li>▶ Transport to hospital, or doctor, without delay.</li><li>▶ Inhalation of vapours or aerosols (mists, fumes) may cause lung oedema.</li><li>▶ Corrosive substances may cause lung damage (e.g. lung oedema, fluid in the lungs).</li><li>▶ As this reaction may be delayed up to 24 hours after exposure, affected individuals need complete rest (preferably in semi-recumbent posture) and must be kept under medical observation even if no symptoms are (yet) manifested.</li><li>▶ Before any such manifestation, the administration of a spray containing a dexamethasone derivative or beclomethasone derivative may be considered.</li></ul> <p><b>This must definitely be left to a doctor or person authorised by him/her.</b> (ICSC13719)</p>
<b>Ingestion</b>	<ul style="list-style-type: none"><li>▶ For advice, contact a Poisons Information Centre or a doctor at once.</li><li>▶ Urgent hospital treatment is likely to be needed.</li><li>▶ <b>If swallowed do NOT induce vomiting.</b></li><li>▶ If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration.</li><li>▶ Observe the patient carefully.</li><li>▶ Never give liquid to a person showing signs of being sleepy or with reduced awareness; i.e. becoming unconscious.</li><li>▶ Give water to rinse out mouth, then provide liquid slowly and as much as casualty can comfortably drink.</li><li>▶ Transport to hospital or doctor without delay.</li></ul>

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

See Section 11

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

Treat symptomatically.

For acute or short term repeated exposures to strong acids:

- ▶ Airway problems may arise from laryngeal edema and inhalation exposure. Treat with 100% oxygen initially.
- ▶ Respiratory distress may require cricothyroidotomy if endotracheal intubation is contraindicated by excessive swelling
- ▶ Intravenous lines should be established immediately in all cases where there is evidence of circulatory compromise.
- ▶ Strong acids produce a coagulation necrosis characterised by formation of a coagulum (eschar) as a result of the dessicating action of the acid on proteins in specific tissues.

Continued...

## 10M61-2 Tin (10,000µg/mL in 60% HCl)

### INGESTION:

- ▶ Immediate dilution (milk or water) within 30 minutes post ingestion is recommended.
- ▶ **DO NOT attempt to neutralise the acid since exothermic reaction may extend the corrosive injury.**
- ▶ Be careful to avoid further vomit since re-exposure of the mucosa to the acid is harmful. Limit fluids to one or two glasses in an adult.
- ▶ Charcoal has no place in acid management.
- ▶ Some authors suggest the use of lavage within 1 hour of ingestion.

### SKIN:

- ▶ Skin lesions require copious saline irrigation. Treat chemical burns as thermal burns with non-adherent gauze and wrapping.
- ▶ Deep second-degree burns may benefit from topical silver sulfadiazine.

### EYE:

- ▶ Eye injuries require retraction of the eyelids to ensure thorough irrigation of the conjunctival cul-de-sacs. Irrigation should last at least 20-30 minutes. **DO NOT use neutralising agents or any other additives.** Several litres of saline are required.
- ▶ Cycloplegic drops, (1% cyclopentolate for short-term use or 5% homatropine for longer term use) antibiotic drops, vasoconstrictive agents or artificial tears may be indicated dependent on the severity of the injury.
- ▶ Steroid eye drops should only be administered with the approval of a consulting ophthalmologist).

[Ellenhorn and Barceloux: Medical Toxicology]

If exposure has been severe and/or symptoms marked, observation in hospital for 48 hours should be considered due to possibility of delayed pulmonary oedema.

## SECTION 5 FIRE-FIGHTING MEASURES

### Extinguishing media

- ▶ There is no restriction on the type of extinguisher which may be used.
- ▶ Use extinguishing media suitable for surrounding area.

### Special hazards arising from the substrate or mixture

Fire Incompatibility	None known.
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### Special protective equipment and precautions for fire-fighters

Fire Fighting	
Fire/Explosion Hazard	<ul style="list-style-type: none"><li>▶ Non combustible.</li></ul> Decomposition may produce toxic fumes of: hydrogen chloride <b>Contains low boiling substance:</b> Closed containers may rupture due to pressure buildup under fire conditions.

## SECTION 6 ACCIDENTAL RELEASE MEASURES

### Personal precautions, protective equipment and emergency procedures

See section 8

### Environmental precautions

See section 12

### Methods and material for containment and cleaning up

Minor Spills	<ul style="list-style-type: none"><li>▶ Drains for storage or use areas should have retention basins for pH adjustments and dilution of spills before discharge or disposal of material.</li><li>▶ Clean up all spills immediately.</li></ul>
Major Spills	

Personal Protective Equipment advice is contained in Section 8 of the SDS.

## SECTION 7 HANDLING AND STORAGE

### Precautions for safe handling

Safe handling	<b>Contains low boiling substance:</b> Storage in sealed containers may result in pressure buildup causing violent rupture of containers not rated appropriately. <ul style="list-style-type: none"><li>▶ Avoid all personal contact, including inhalation.</li><li>▶ <b>DO NOT allow clothing wet with material to stay in contact with skin</b></li></ul>
Other information	<ul style="list-style-type: none"><li>▶ Store in original containers.</li></ul>

### Conditions for safe storage, including any incompatibilities

Suitable container	<ul style="list-style-type: none"><li>▶ <b>DO NOT use aluminium or galvanised containers</b></li><li>▶ Check regularly for spills and leaks</li><li>▶ Lined metal can, lined metal pail/ can.</li></ul> For low viscosity materials <ul style="list-style-type: none"><li>▶ Drums and jerrycans must be of the non-removable head type.</li></ul>
Storage incompatibility	<ul style="list-style-type: none"><li>▶ Inorganic acids are generally soluble in water with the release of hydrogen ions.</li></ul> Hydrogen chloride: <ul style="list-style-type: none"><li>▶ reacts strongly with strong oxidisers (releasing chlorine gas), acetic anhydride, caesium cyanotridecahydrodecaborate(2-), ethylidene difluoride, hexalithium disilicide, metal acetylide, sodium, silicon dioxide, tetraselenium tetranitride, and many organic materials</li><li>▶ is incompatible with alkaline materials, acetic anhydride, acetylides, aliphatic amines, alkanolamines, alkylene oxides, aluminium, aluminium-titanium alloys, aromatic amines, amines, amides, 2-aminoethanol, ammonia, ammonium hydroxide, borides, calcium phosphide, carbides, carbonates, cyanides, chlorosulfonic acid, ethylenediamine, ethyleneimine, epichlorohydrin, formaldehyde, isocyanates, metals, metal oxides, metal hydroxides, metal acetylides, metal carbides, oleum, organic anhydrides, potassium permanganate, perchloric acid, phosphides, 3-propiolactone, silicides, sulfides, sulfites, sulfuric acid,</li></ul>

Continued...

## 10M61-2 Tin (10,000µg/mL in 60% HCl)

- ▶ uranium phosphide, vinyl acetate, vinylidene fluoride
- ▶ attacks most metals forming flammable hydrogen gas, and some plastics, rubbers and coatings
- ▶ reacts with zinc, brass, galvanised iron, aluminium, copper and copper alloys
- ▶ Reacts vigorously with alkalis
- ▶ Reacts with mild steel, galvanised steel / zinc producing hydrogen gas which may form an explosive mixture with air.

## SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

### Control parameters

#### OCCUPATIONAL EXPOSURE LIMITS (OEL)

#### INGREDIENT DATA


Source	Ingredient	Material name	TWA	STEL	Peak	Notes
US OSHA Permissible Exposure Levels (PELs) - Table Z1	tin	Tin, organic compounds	0.1 mg/m <sup>3</sup>	Not Available	Not Available	(as Sn)
US OSHA Permissible Exposure Levels (PELs) - Table Z1	tin	Tin, inorganic compounds	2 mg/m <sup>3</sup>	Not Available	Not Available	(as Sn);(except oxides)
US NIOSH Recommended Exposure Limits (RELs)	tin	Metallic tin, Tin flake, Tin metal, Tin powder	2 mg/m <sup>3</sup>	Not Available	Not Available	[*Note: The REL also applies to other inorganic tin compounds (as Sn) except tin oxides.]
US OSHA Permissible Exposure Levels (PELs) - Table Z1	hydrochloric acid	Hydrogen chloride	Not Available	Not Available	7 mg/m <sup>3</sup> / 5 ppm	Not Available
US ACGIH Threshold Limit Values (TLV)	hydrochloric acid	Hydrogen chloride	Not Available	Not Available	2 ppm	TLV® Basis: URT irr
US NIOSH Recommended Exposure Limits (RELs)	hydrochloric acid	Anhydrous hydrogen chloride; Aqueous hydrogen chloride (i.e., Hydrochloric acid, Muriatic acid) [Note: Often used in an aqueous solution.]	Not Available	Not Available	7 mg/m <sup>3</sup> / 5 ppm	Not Available

#### EMERGENCY LIMITS

Ingredient	Material name	TEEL-1	TEEL-2	TEEL-3
tin	Tin	6 mg/m <sup>3</sup>	67 mg/m <sup>3</sup>	400 mg/m <sup>3</sup>
hydrochloric acid	Hydrogen chloride; (Hydrochloric acid)	Not Available	Not Available	Not Available
hydrochloric acid	Deuteriochloric acid; (Deuterium chloride)	1.8 ppm	22 ppm	100 ppm

Ingredient	Original IDLH	Revised IDLH
tin	Unknown mg/m <sup>3</sup> / 400 mg/m <sup>3</sup> / Unknown ppm	25 mg/m <sup>3</sup> / 100 mg/m <sup>3</sup>
hydrochloric acid	100 ppm	50 ppm
water	Not Available	Not Available

### Exposure controls

Appropriate engineering controls	Engineering controls are used to remove a hazard or place a barrier between the worker and the hazard.
Personal protection	
Eye and face protection	▶ Chemical goggles.
Skin protection	See Hand protection below
Hands/feet protection	▶ Wear chemical protective gloves, e.g. PVC. ▶ When handling corrosive liquids, wear trousers or overalls outside of boots, to avoid spills entering boots. The selection of suitable gloves does not only depend on the material, but also on further marks of quality which vary from manufacturer to manufacturer.
Body protection	See Other protection below
Other protection	▶ Overalls.
Thermal hazards	Not Available

### Respiratory protection

Type B-P Filter of sufficient capacity.

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## SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

### Information on basic physical and chemical properties

Appearance	colorless
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10M61-2 Tin (10,000µg/mL in 60% HCl)

Physical state	Liquid	Relative density (Water = 1)	Not Available
Odour	Not Available	Partition coefficient n-octanol / water	Not Available
Odour threshold	Not Available	Auto-ignition temperature (°C)	Not Available
pH (as supplied)	<2	Decomposition temperature	Not Available
Melting point / freezing point (°C)	Not Available	Viscosity (cSt)	Not Available
Initial boiling point and boiling range (°C)	Not Available	Molecular weight (g/mol)	Not Available
Flash point (°C)	Not Available	Taste	Not Available
Evaporation rate	Not Available	Explosive properties	Not Available
Flammability	Not Available	Oxidising properties	Not Available
Upper Explosive Limit (%)	Not Available	Surface Tension (dyn/cm or mN/m)	Not Available
Lower Explosive Limit (%)	Not Available	Volatile Component (%vol)	Not Available
Vapour pressure (kPa)	Not Available	Gas group	Not Available
Solubility in water (g/L)	Miscible	pH as a solution (1%)	Not Available
Vapour density (Air = 1)	Not Available	VOC g/L	Not Available

## SECTION 10 STABILITY AND REACTIVITY

Reactivity	See section 7
Chemical stability	► Contact with alkaline material liberates heat
Possibility of hazardous reactions	See section 7
Conditions to avoid	See section 7
Incompatible materials	See section 7
Hazardous decomposition products	See section 5

## SECTION 11 TOXICOLOGICAL INFORMATION

### Information on toxicological effects

Inhaled	<p>The material can cause respiratory irritation in some persons.</p> <p>The material has <b>NOT</b> been classified by EC Directives or other classification systems as "harmful by inhalation".</p> <p>Corrosive acids can cause irritation of the respiratory tract, with coughing, choking and mucous membrane damage.</p> <p>Hydrogen chloride (HCl) vapour or fumes present a hazard from a single acute exposure.</p> <p>The use of a quantity of material in an unventilated or confined space may result in increased exposure and an irritating atmosphere developing.</p>
Ingestion	<p>The material can produce chemical burns within the oral cavity and gastrointestinal tract following ingestion.</p> <p>The material has <b>NOT</b> been classified by EC Directives or other classification systems as "harmful by ingestion".</p> <p>Ingestion of acidic corrosives may produce burns around and in the mouth, the throat and oesophagus.</p>
Skin Contact	<p>The material can produce chemical burns following direct contact with the skin.</p> <p>Skin contact is not thought to have harmful health effects (as classified under EC Directives); the material may still produce health damage following entry through wounds, lesions or abrasions.</p> <p>Skin contact with acidic corrosives may result in pain and burns; these may be deep with distinct edges and may heal slowly with the formation of scar tissue.</p> <p>Open cuts, abraded or irritated skin should not be exposed to this material.</p> <p>Entry into the blood-stream, through, for example, cuts, abrasions or lesions, may produce systemic injury with harmful effects.</p>
Eye	<p>The material can produce chemical burns to the eye following direct contact.</p> <p>If applied to the eyes, this material causes severe eye damage.</p> <p>Direct eye contact with acid corrosives may produce pain, tears, sensitivity to light and burns.</p>
Chronic	<p>Long-term exposure to respiratory irritants may result in disease of the airways involving difficult breathing and related systemic problems.</p> <p>Substance accumulation, in the human body, may occur and may cause some concern following repeated or long-term occupational exposure.</p> <p>Repeated or prolonged exposure to acids may result in the erosion of teeth, swelling and/or ulceration of mouth lining.</p> <p>There has been some concern that this material can cause cancer or mutations but there is not enough data to make an assessment.</p> <p>Chronic minor exposure to hydrogen chloride (HCl) vapour or fume may cause discolouration or erosion of the teeth, bleeding of the nose and gums; and ulceration of the nasal mucous membranes.</p>

10M61-2 Tin (10,000µg/mL in 60% HCl)	TOXICITY	IRRITATION
	Not Available	Not Available
tin	TOXICITY	IRRITATION
	dermal (rat) LD50: >2000 mg/kg <sup>[1]</sup>	Not Available
	Oral (rat) LD50: >2000 mg/kg <sup>[1]</sup>	
hydrochloric acid	TOXICITY	IRRITATION

10M61-2 Tin (10,000µg/mL in 60% HCl)

	Inhalation (rat) LC50: 3124 ppm/1hr <sup>[2]</sup>	Eye (rabbit): 5mg/30s - mild
	Oral (rat) LD50: 900 mg/kg <sup>[2]</sup>	
water	TOXICITY	IRRITATION
	Oral (rat) LD50: >90000 mg/kg <sup>[2]</sup>	Not Available

**Legend:** 1. Value obtained from Europe ECHA Registered Substances - Acute toxicity 2. \* Value obtained from manufacturer's SDS. Unless otherwise specified data extracted from RTECS - Register of Toxic Effect of chemical Substances

<b>HYDROCHLORIC ACID</b>	The material may be irritating to the eye, with prolonged contact causing inflammation. The substance is classified by IARC as Group 3: <b>NOT</b> classifiable as to its carcinogenicity to humans.
<b>10M61-2 Tin (10,000µg/mL in 60% HCl) &amp; HYDROCHLORIC ACID</b>	Asthma-like symptoms may continue for months or even years after exposure to the material ceases.
<b>10M61-2 Tin (10,000µg/mL in 60% HCl) &amp; HYDROCHLORIC ACID</b>	for acid mists, aerosols, vapours Data from assays for genotoxic activity in vitro suggest that eukaryotic cells are susceptible to genetic damage when the pH falls to about 6.5.
<b>TIN &amp; HYDROCHLORIC ACID &amp; WATER</b>	No significant acute toxicological data identified in literature search.

<b>Acute Toxicity</b>	☐	<b>Carcinogenicity</b>	☐
<b>Skin Irritation/Corrosion</b>	✓	<b>Reproductivity</b>	☐
<b>Serious Eye Damage/Irritation</b>	✓	<b>STOT - Single Exposure</b>	✓
<b>Respiratory or Skin sensitisation</b>	☐	<b>STOT - Repeated Exposure</b>	☐
<b>Mutagenicity</b>	☐	<b>Aspiration Hazard</b>	☐

**Legend:** ✗ – Data available but does not fill the criteria for classification  
 ✓ – Data required to make classification available  
 ☐ – Data Not Available to make classification

## SECTION 12 ECOLOGICAL INFORMATION

### Toxicity

Ingredient	Endpoint	Test Duration (hr)	Species	Value	Source
tin	LC50	96	Fish	>0.0124mg/L	2
tin	EC50	48	Crustacea	0.00018mg/L	5
tin	EC50	72	Algae or other aquatic plants	>0.0192mg/L	2
tin	EC50	72	Algae or other aquatic plants	>0.0192mg/L	2
tin	NOEC	168	Crustacea	<0.005mg/L	2
hydrochloric acid	LC50	96	Fish	70.057mg/L	3
hydrochloric acid	EC50	96	Algae or other aquatic plants	344.947mg/L	3
hydrochloric acid	EC50	9.33	Fish	0.014000mg/L	4
hydrochloric acid	NOEC	0.08	Fish	10mg/L	4

**Legend:** Extracted from 1. IUCLID Toxicity Data 2. Europe ECHA Registered Substances - Ecotoxicological Information - Aquatic Toxicity 3. EPIWIN Suite V3.12 - Aquatic Toxicity Data (Estimated) 4. US EPA, Ecotox database - Aquatic Toxicity Data 5. ECETOC Aquatic Hazard Assessment Data 6. NITE (Japan) - Bioconcentration Data 7. METI (Japan) - Bioconcentration Data 8. Vendor Data

### Ecotoxicity:

The tolerance of water organisms towards pH margin and variation is diverse.  
 For Chloride: Although inorganic chloride ions are not normally considered toxic they can exist in effluents at acutely toxic levels.  
 Prevent, by any means available, spillage from entering drains or water courses.  
**DO NOT discharge into sewer or waterways.**

### Persistence and degradability

Ingredient	Persistence: Water/Soil	Persistence: Air
hydrochloric acid	LOW	LOW
water	LOW	LOW

### Bioaccumulative potential

Ingredient	Bioaccumulation
hydrochloric acid	LOW (LogKOW = 0.5392)
water	LOW (LogKOW = -1.38)

### Mobility in soil

Continued...

10M61-2 Tin (10,000µg/mL in 60% HCl)

Ingredient	Mobility
hydrochloric acid	LOW (KOC = 14.3)
water	LOW (KOC = 14.3)

## SECTION 13 DISPOSAL CONSIDERATIONS

### Waste treatment methods

Product / Packaging disposal	Legislation addressing waste disposal requirements may differ by country, state and/ or territory. ▶ <b>DO NOT allow wash water from cleaning or process equipment to enter drains.</b> ▶ Recycle wherever possible.
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## SECTION 14 TRANSPORT INFORMATION

### Labels Required

	
Marine Pollutant	NO

### Land transport (DOT)

UN number	1789				
UN proper shipping name	Hydrochloric acid (contains hydrochloric acid)				
Transport hazard class(es)	<table border="1"> <tr> <td>Class</td><td>8</td></tr> <tr> <td>Subrisk</td><td>Not Applicable</td></tr> </table>	Class	8	Subrisk	Not Applicable
Class	8				
Subrisk	Not Applicable				
Packing group	II				
Environmental hazard	Not Applicable				
Special precautions for user	<table border="1"> <tr> <td>Hazard Label</td><td>8</td></tr> <tr> <td>Special provisions</td><td>386, A3, A6, B3, B15, B133, IB2, N41, T8, TP2</td></tr> </table>	Hazard Label	8	Special provisions	386, A3, A6, B3, B15, B133, IB2, N41, T8, TP2
Hazard Label	8				
Special provisions	386, A3, A6, B3, B15, B133, IB2, N41, T8, TP2				

### Air transport (ICAO-IATA / DGR)

UN number	1789														
UN proper shipping name	Hydrochloric acid (contains hydrochloric acid)														
Transport hazard class(es)	<table border="1"> <tr> <td>ICAO/IATA Class</td><td>8</td></tr> <tr> <td>ICAO / IATA Subrisk</td><td>Not Applicable</td></tr> <tr> <td>ERG Code</td><td>8L</td></tr> </table>	ICAO/IATA Class	8	ICAO / IATA Subrisk	Not Applicable	ERG Code	8L								
ICAO/IATA Class	8														
ICAO / IATA Subrisk	Not Applicable														
ERG Code	8L														
Packing group	II														
Environmental hazard	Not Applicable														
Special precautions for user	<table border="1"> <tr> <td>Special provisions</td><td>A3A803</td></tr> <tr> <td>Cargo Only Packing Instructions</td><td>855</td></tr> <tr> <td>Cargo Only Maximum Qty / Pack</td><td>30 L</td></tr> <tr> <td>Passenger and Cargo Packing Instructions</td><td>851</td></tr> <tr> <td>Passenger and Cargo Maximum Qty / Pack</td><td>1 L</td></tr> <tr> <td>Passenger and Cargo Limited Quantity Packing Instructions</td><td>Y840</td></tr> <tr> <td>Passenger and Cargo Limited Maximum Qty / Pack</td><td>0.5 L</td></tr> </table>	Special provisions	A3A803	Cargo Only Packing Instructions	855	Cargo Only Maximum Qty / Pack	30 L	Passenger and Cargo Packing Instructions	851	Passenger and Cargo Maximum Qty / Pack	1 L	Passenger and Cargo Limited Quantity Packing Instructions	Y840	Passenger and Cargo Limited Maximum Qty / Pack	0.5 L
Special provisions	A3A803														
Cargo Only Packing Instructions	855														
Cargo Only Maximum Qty / Pack	30 L														
Passenger and Cargo Packing Instructions	851														
Passenger and Cargo Maximum Qty / Pack	1 L														
Passenger and Cargo Limited Quantity Packing Instructions	Y840														
Passenger and Cargo Limited Maximum Qty / Pack	0.5 L														

### Sea transport (IMDG-Code / GGVSee)

UN number	1789				
UN proper shipping name	HYDROCHLORIC ACID (contains hydrochloric acid)				
Transport hazard class(es)	<table border="1"> <tr> <td>IMDG Class</td><td>8</td></tr> <tr> <td>IMDG Subrisk</td><td>Not Applicable</td></tr> </table>	IMDG Class	8	IMDG Subrisk	Not Applicable
IMDG Class	8				
IMDG Subrisk	Not Applicable				
Packing group	II				
Environmental hazard	Not Applicable				

10M61-2 Tin (10,000µg/mL in 60% HCl)

Special precautions for user

EMS Number	F-A, S-B
Special provisions	Not Applicable
Limited Quantities	1 L

Transport in bulk according to Annex II of MARPOL and the IBC code

Source	Product name	Pollution Category	Ship Type
IMO MARPOL (Annex II) - List of Noxious Liquid Substances Carried in Bulk	Hydrochloric acid	Z	3

SECTION 15 REGULATORY INFORMATION

Safety, health and environmental regulations / legislation specific for the substance or mixture

TIN(7440-31-5) IS FOUND ON THE FOLLOWING REGULATORY LISTS

US - Alaska Limits for Air Contaminants	US - Vermont Permissible Exposure Limits Table Z-1-A Final Rule Limits for Air Contaminants
US - California Permissible Exposure Limits for Chemical Contaminants	US - Vermont Permissible Exposure Limits Table Z-1-A Transitional Limits for Air Contaminants
US - Hawaii Air Contaminant Limits	US - Washington Permissible exposure limits of air contaminants
US - Idaho - Limits for Air Contaminants	US NIOSH Recommended Exposure Limits (RELs)
US - Minnesota Permissible Exposure Limits (PELs)	US OSHA Permissible Exposure Levels (PELs) - Table Z1
US - Tennessee Occupational Exposure Limits - Limits For Air Contaminants	US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory

HYDROCHLORIC ACID(7647-01-0) IS FOUND ON THE FOLLOWING REGULATORY LISTS

International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs	US - Vermont Permissible Exposure Limits Table Z-1-A Transitional Limits for Air Contaminants
US - Alaska Limits for Air Contaminants	US - Washington Permissible exposure limits of air contaminants
US - California OEHHA/ARB - Acute Reference Exposure Levels and Target Organs (RELs)	US - Washington Toxic air pollutants and their ASIL, SQER and de minimis emission values
US - California OEHHA/ARB - Chronic Reference Exposure Levels and Target Organs (CRELs)	US - Wyoming Toxic and Hazardous Substances Table Z1 Limits for Air Contaminants
US - California Permissible Exposure Limits for Chemical Contaminants	US ACGIH Threshold Limit Values (TLV)
US - Hawaii Air Contaminant Limits	US ACGIH Threshold Limit Values (TLV) - Carcinogens
US - Idaho - Limits for Air Contaminants	US EPCRA Section 313 Chemical List
US - Michigan Exposure Limits for Air Contaminants	US NIOSH Recommended Exposure Limits (RELs)
US - Minnesota Permissible Exposure Limits (PELs)	US OSHA Permissible Exposure Levels (PELs) - Table Z1
US - Oregon Permissible Exposure Limits (Z-1)	US SARA Section 302 Extremely Hazardous Substances
US - Tennessee Occupational Exposure Limits - Limits For Air Contaminants	US Spacecraft Maximum Allowable Concentrations (SMACs) for Airborne Contaminants
US - Vermont Permissible Exposure Limits Table Z-1-A Final Rule Limits for Air Contaminants	US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory

WATER(7732-18-5) IS FOUND ON THE FOLLOWING REGULATORY LISTS

US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory
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Federal Regulations

Superfund Amendments and Reauthorization Act of 1986 (SARA)

SECTION 311/312 HAZARD CATEGORIES

Immediate (acute) health hazard	Yes
Delayed (chronic) health hazard	No
Fire hazard	No
Pressure hazard	No
Reactivity hazard	No

US. EPA CERCLA HAZARDOUS SUBSTANCES AND REPORTABLE QUANTITIES (40 CFR 302.4)

Name	Reportable Quantity in Pounds (lb)	Reportable Quantity in kg
Hydrochloric acid	5000	2270

State Regulations

US. CALIFORNIA PROPOSITION 65

None Reported

National Inventory	Status
Australia - AICS	Y
Canada - DSL	Y
Canada - NDSL	N (hydrochloric acid; water; tin)
China - IECSC	Y
Europe - EINEC / ELINCS / NLP	Y
Japan - ENCS	N (water; tin)



10M61-2 Tin (10,000µg/mL in 60% HCl)

Korea - KECI	Y
New Zealand - NZIoC	Y
Philippines - PICCS	Y
USA - TSCA	Y
<b>Legend:</b>	<i>Y = All ingredients are on the inventory</i> <i>N = Not determined or one or more ingredients are not on the inventory and are not exempt from listing(see specific ingredients in brackets)</i>

## SECTION 16 OTHER INFORMATION

### Other information

Classification of the preparation and its individual components has drawn on official and authoritative sources as well as independent review by the Chemwatch Classification committee using available literature references.

The SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment.

### Definitions and abbreviations

PC — TWA: Permissible Concentration-Time Weighted Average  
PC — STEL: Permissible Concentration-Short Term Exposure Limit  
IARC: International Agency for Research on Cancer  
ACGIH: American Conference of Governmental Industrial Hygienists  
STEL: Short Term Exposure Limit  
TEEL: Temporary Emergency Exposure Limit.  
IDLH: Immediately Dangerous to Life or Health Concentrations  
OSF: Odour Safety Factor  
NOAEL :No Observed Adverse Effect Level  
LOAEL: Lowest Observed Adverse Effect Level  
TLV: Threshold Limit Value  
LOD: Limit Of Detection  
OTV: Odour Threshold Value  
BCF: BioConcentration Factors  
BEI: Biological Exposure Index

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