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# SAFETY DATA SHEET

## 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

### Product identifier

**Product Name** 1.0M-HCL

### Other means of identification

**Product Description** 1.0M Hydrochloric Acid

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

**Recommended Use** Laboratory chemicals.

**Uses advised against** No information available

### Details of the supplier of the safety data sheet

#### **Company**

Inorganic Ventures  
300 Technology Drive  
Christiansburg, VA 24073  
web: [www.inorganicventures.com](http://www.inorganicventures.com)

### Emergency telephone number

#### **Emergency Telephone Number**

Chemtrec 1-800-424-9300 (North America)  
Chemtrec +1 703-741-5970 (International)

## 2. HAZARDS IDENTIFICATION

### GHS

#### Classification

|                                     |                           |
|-------------------------------------|---------------------------|
| Acute toxicity - Inhalation (Gases) | Category 4                |
| Skin corrosion/irritation           | Category 1 Sub-category A |
| Serious eye damage/eye irritation   | Category 1                |

#### Label Elements

#### **Danger**

#### **Hazard statements**

May be harmful if swallowed  
Harmful if inhaled  
Causes severe skin burns and eye damage



**Appearance** clear / colorless**Physical state** Liquid**Odor** Odorless**Precautionary Statements - Prevention**

Use only outdoors or in a well-ventilated area  
 Do not breathe dust/fume/gas/mist/vapors/spray  
 Wash face, hands and any exposed skin thoroughly after handling  
 Wear protective gloves/protective clothing/eye protection/face protection

**Precautionary Statements - Response****Eyes**

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/physician

**Skin**

IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower  
 Wash contaminated clothing before reuse

**Inhalation**

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing  
 Call a POISON CENTER or doctor/physician if you feel unwell  
 Immediately call a POISON CENTER or doctor/physician

**Ingestion**

IF SWALLOWED: Rinse mouth. DO NOT induce vomiting

**Precautionary Statements - Storage**

Store locked up

**Precautionary Statements - Disposal**

Dispose of contents/container to an approved waste disposal plant

**Hazards not otherwise classified (HNOC)****Other Information**

No information available

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

| Chemical name     | CAS No    | Weight-% |
|-------------------|-----------|----------|
| Hydrochloric acid | 7647-01-0 | 8        |

### 4. FIRST AID MEASURES

**Description of first aid measures****General Advice**

Immediate medical attention is required. Show this safety data sheet to the doctor in attendance.

**Eye Contact**

Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.

**Skin Contact**

Wash skin with soap and water.

|                                   |                                                                                                                                                                                                        |
|-----------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Inhalation</b>                 | Immediate medical attention is required. Remove to fresh air. Artificial respiration and/or oxygen may be necessary. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. |
| <b>Ingestion</b>                  | Clean mouth with water and drink afterwards plenty of water.                                                                                                                                           |
| <b>Protection of First-aiders</b> | Use personal protective equipment as required. Avoid contact with skin, eyes or clothing.                                                                                                              |

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

|                                            |                          |
|--------------------------------------------|--------------------------|
| <b>Most Important Symptoms and Effects</b> | Difficulty in breathing. |
|--------------------------------------------|--------------------------|

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

|                           |                       |
|---------------------------|-----------------------|
| <b>Notes to Physician</b> | Treat symptomatically |
|---------------------------|-----------------------|

## 5. FIRE-FIGHTING MEASURES

**Suitable Extinguishing Media**

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

**Unsuitable Extinguishing Media** Decomposition by contact with water may generate vapors which can be ignited by heat or open flame.

**Special Exposure Hazards Arising from the Substance/Mixture**

Thermal decomposition can lead to release of irritating and toxic gases and vapors

**Explosion Data**

**Sensitivity to Mechanical Impact** None.

**Sensitivity to Static Discharge** None.

**Protective Equipment and Precautions for Firefighters**

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

## 6. ACCIDENTAL RELEASE MEASURES

**Personal precautions, protective equipment and emergency procedures**

|                             |                                                                                                                                                                                                            |
|-----------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Personal Precautions</b> | Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak. Ensure adequate ventilation. Use personal protective equipment as required. Do not get in eyes, on skin, or on clothing. |
|-----------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

**Environmental precautions**

|                                  |                                                                                                             |
|----------------------------------|-------------------------------------------------------------------------------------------------------------|
| <b>Environmental precautions</b> | Prevent further leakage or spillage if safe to do so. See Section 12 for additional Ecological Information. |
|----------------------------------|-------------------------------------------------------------------------------------------------------------|

**Methods and material for containment and cleaning up**

|                                |                                                                                                                                                                                          |
|--------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Methods for Cleaning up</b> | Dam up. Neutralise with lime milk; soda. Soak up with inert absorbent material. Sweep up and shovel into suitable containers for disposal. After cleaning, flush away traces with water. |
|--------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

## 7. HANDLING AND STORAGE

**Precautions for safe handling**

|                 |                                                                                                                                                                                                                           |
|-----------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Handling</b> | Wear personal protective equipment. Ensure adequate ventilation In case of insufficient ventilation, wear suitable respiratory equipment Do not get in eyes, on skin, or on clothing Do not breathe vapors or spray mist. |
|-----------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

**Conditions for safe storage, including any incompatibilities**

|                              |                                                                          |
|------------------------------|--------------------------------------------------------------------------|
| <b>Storage Conditions</b>    | Keep containers tightly closed in a dry, cool and well-ventilated place. |
| <b>Incompatible Products</b> | None known based on information supplied.                                |

**8. EXPOSURE CONTROLS/PERSONAL PROTECTION****Control parameters****Exposure Guidelines**

| Chemical name                  | ACGIH TLV      | OSHA PEL                                       | NIOSH IDLH                                                     |
|--------------------------------|----------------|------------------------------------------------|----------------------------------------------------------------|
| Hydrochloric acid<br>7647-01-0 | Ceiling: 2 ppm | Ceiling: 5 ppm<br>Ceiling: 7 mg/m <sup>3</sup> | IDLH: 50 ppm<br>Ceiling: 5 ppm<br>Ceiling: 7 mg/m <sup>3</sup> |

**Appropriate engineering controls**

|                             |                                                            |
|-----------------------------|------------------------------------------------------------|
| <b>Engineering Measures</b> | Ensure adequate ventilation, especially in confined areas. |
|-----------------------------|------------------------------------------------------------|

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

|                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|-------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Respiratory Protection</b> | When workers are facing concentrations above the exposure limit they must use appropriate certified respirators. If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn.                                                                                                                                                                                                                                                                                    |
| <b>Hygiene Measures</b>       | Handle in accordance with good industrial hygiene and safety practice. Wear suitable gloves and eye/face protection. Avoid contact with skin, eyes or clothing. Do not eat, drink or smoke when using this product. Wash hands before breaks and immediately after handling the product. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Contaminated work clothing should not be allowed out of the workplace. Regular cleaning of equipment, work area and clothing is recommended. |

**9. PHYSICAL AND CHEMICAL PROPERTIES****Information on basic physical and chemical properties**

|                                        |                          |
|----------------------------------------|--------------------------|
| <b>Physical state</b>                  | Liquid                   |
| <b>Appearance</b>                      | clear / colorless        |
| <b>Odor</b>                            | Odorless                 |
| <b>Property</b>                        | <b>Values</b>            |
| pH - VALUE 1                           | No data available        |
| Melting Point/Range                    | No data available        |
| Boiling point / boiling range          | 100 °C                   |
| Evaporation rate                       | No data available        |
| Flammability (solid, gas)              | No data available        |
| Vapor pressure @20 °C (kPa)            | No data available        |
| Vapor density                          | No data available        |
| Relative Density                       | No data available        |
| Specific gravity - VALUE 1             | No data available        |
| Water solubility                       | Miscible                 |
| Partition coefficient: n-octanol/water | No data available        |
| Autoignition temperature               | No data available        |
| Decomposition temperature              | No data available        |
| Dynamic viscosity - VALUE 1            | No data available        |
| <b>Explosive Properties</b>            | No information available |
| <b>Oxidizing Properties</b>            | No information available |
| <b>Other information</b>               |                          |
| VOC Content (%)                        | No information available |

## 10. STABILITY AND REACTIVITY

### Reactivity

No data available

### Chemical stability

Stable under recommended storage conditions.

### Possibility of hazardous reactions

None under normal processing.

#### **Hazardous Polymerization**

Hazardous polymerization does not occur.

### Conditions to Avoid

None known.

### Incompatible materials

Reducing agent

### Hazardous decomposition products

Hydrogen chloride.

## 11. TOXICOLOGICAL INFORMATION

### Information on likely routes of exposure

|                            |                        |
|----------------------------|------------------------|
| <b>Product Information</b> | Harmful by inhalation  |
| <b>Inhalation</b>          | Harmful by inhalation. |
| <b>Eye Contact</b>         | No data available.     |
| <b>Skin Contact</b>        | No data available.     |
| <b>Ingestion</b>           | No data available.     |

| Chemical name                 | Oral LD50               | Dermal LD50             | Inhalation LC50         |
|-------------------------------|-------------------------|-------------------------|-------------------------|
| Hydrochloric acid - 7647-01-0 | 238 - 277 mg/kg ( Rat ) | > 5010 mg/kg ( Rabbit ) | = 1.68 mg/L ( Rat ) 1 h |

### Information on toxicological effects

**Symptoms** No information available.

### Delayed and immediate effects as well as chronic effects from short and long-term exposure

**Sensitization** No information available.

**Mutagenic Effects** No information available.

#### **Carcinogenic effects**

| Chemical name                  | ACGIH | IARC | NTP | OSHA |
|--------------------------------|-------|------|-----|------|
| Hydrochloric acid<br>7647-01-0 |       |      |     | X    |

**Reproductive Toxicity** No information available.

**STOT - single exposure** No information available.

**STOT - repeated exposure** No information available.

**Target Organ Effects** Respiratory system.

**Aspiration hazard** No information available.

### Numerical measures of toxicity - Product Information

The following values are calculated based on chapter 3.1 of the GHS document .

|                        |             |
|------------------------|-------------|
| <b>ATEmix (oral)</b>   | 2975 mg/kg  |
| <b>ATEmix (dermal)</b> | 62688 mg/kg |

|                               |           |
|-------------------------------|-----------|
| ATEmix (inhalation-gas)       | 7041 mg/l |
| ATEmix (inhalation-dust/mist) | 6.3 mg/l  |
| ATEmix (inhalation-vapor)     | 37.5 mg/l |

## 12. ECOLOGICAL INFORMATION

### Ecotoxicity

#### Ecotoxicity effects

Contains 0 % of components with unknown hazards to the aquatic environment

| Chemical name                  | Algae/aquatic plants | Fish                                           | Toxicity to microorganisms | Crustacea |
|--------------------------------|----------------------|------------------------------------------------|----------------------------|-----------|
| Hydrochloric acid<br>7647-01-0 |                      | 282: 96 h Gambusia affinis<br>mg/L LC50 static |                            |           |

### Persistence and Degradability

No information available.

### Bioaccumulation

No information available.

### Other Adverse Effects

## 13. DISPOSAL CONSIDERATIONS

### Waste treatment methods

|                                     |                                                                    |
|-------------------------------------|--------------------------------------------------------------------|
| Waste from Residues/Unused Products | Dispose of in accordance with federal, state and local regulations |
| Contaminated Packaging              | Do not reuse empty containers.                                     |

| Chemical name                  | California Hazardous Waste Status |
|--------------------------------|-----------------------------------|
| Hydrochloric acid<br>7647-01-0 | Toxic<br>Corrosive<br>Reactive    |

## 14. TRANSPORT INFORMATION

### IMDG

|                                                                                                   |                                            |
|---------------------------------------------------------------------------------------------------|--------------------------------------------|
| 14.1. UN-No                                                                                       | UN3264                                     |
| 14.2. Proper shipping name                                                                        | Corrosive liquid, acidic, inorganic, n.o.s |
| 14.3. Transport hazard class(es)                                                                  | 8                                          |
| 14.4. Packing Group                                                                               | III                                        |
| Description                                                                                       | Not applicable                             |
| 14.5. Marine Pollutant                                                                            | None                                       |
| 14.6. Special Provisions                                                                          | None                                       |
| No information available Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code | No information available                   |

### RID

|                            |                                            |
|----------------------------|--------------------------------------------|
| 14.1. UN-No                | UN3264                                     |
| 14.2. Proper shipping name | Corrosive liquid, acidic, inorganic, n.o.s |
| 14.3. Hazard Class         | 8                                          |
| 14.4. Packing Group        | III                                        |
| Description                | Not applicable                             |
| 14.5. Environmental hazard | None                                       |

14.6. Special Provisions None

**ADR**

14.1. UN-No UN3264  
 14.2. Proper shipping name Corrosive liquid, acidic, inorganic, n.o.s  
 14.3. Hazard Class 8  
 14.4. Packing Group III  
 Description Not applicable  
 14.5. Environmental hazard None  
 14.6. Special Provisions None

**ICAO**

14.1. UN-No UN3264  
 14.2. Proper Shipping Name Corrosive liquid, acidic, inorganic, n.o.s  
 14.3. Hazard Class 8  
 14.4. Packing Group III  
 Description Not applicable  
 14.5. Environmental hazard None  
 14.6. Special Provisions None

**IATA-DGR**

14.1. UN-No UN3264  
 14.2. Proper shipping name Corrosive liquid, acidic, inorganic, n.o.s  
 14.3. Transport hazard class(es) 8  
 14.4. Packing Group III  
 Description Not applicable  
 14.5. Environmental hazard None  
 14.6. Special Provisions None

## 15. REGULATORY INFORMATION

**International Inventories**

TSCA Complies  
 DSL/NDL Complies  
 EINECS/ELINCS Complies  
 ENCS Complies  
 IECSC Complies  
 KECL Complies  
 PICCS Complies  
 AICS Complies

*TSCA - United States Toxic Substances Control Act Section 8(b) Inventory*

*DSL/NDL - Canadian Domestic Substances List/Non-Domestic Substances List*

*EINECS/ELINCS - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances*

*ENCS - Japan Existing and New Chemical Substances*

*IECSC - China Inventory of Existing Chemical Substances*

*KECL - Korean Existing and Evaluated Chemical Substances*

*PICCS - Philippines Inventory of Chemicals and Chemical Substances*

*AICS - Australian Inventory of Chemical Substances*

**U.S. Federal Regulations****SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372:

| Chemical name                 | CAS No    | Weight-% | SARA 313 - Threshold Values % |
|-------------------------------|-----------|----------|-------------------------------|
| Hydrochloric acid - 7647-01-0 | 7647-01-0 | 8        | 1.0                           |

**SARA 311/312 Hazard Categories**

Acute health hazard Not classified  
 Chronic Health Hazard Not classified

|                                          |                |
|------------------------------------------|----------------|
| <b>Fire hazard</b>                       | Not classified |
| <b>Sudden Release of Pressure Hazard</b> | No             |
| <b>Reactive Hazard</b>                   | Not classified |

**Clean Water Act**

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

| Chemical name                  | CWA - Reportable Quantities | CWA - Toxic Pollutants | CWA - Priority Pollutants | CWA - Hazardous Substances |
|--------------------------------|-----------------------------|------------------------|---------------------------|----------------------------|
| Hydrochloric acid<br>7647-01-0 | 5000 lb                     |                        |                           | X                          |

**CERCLA**

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

| Chemical name                  | Hazardous Substances RQs | Extremely Hazardous Substances RQs | RQ                                         |
|--------------------------------|--------------------------|------------------------------------|--------------------------------------------|
| Hydrochloric acid<br>7647-01-0 | 5000 lb                  | 5000 lb                            | RQ 5000 lb final RQ<br>RQ 2270 kg final RQ |

**U.S. State Regulations****California Proposition 65**

This product does not contain any Proposition 65 chemicals

**U.S. State Right-to-Know Regulations**

| Chemical name                  | New Jersey | Massachusetts | Pennsylvania |
|--------------------------------|------------|---------------|--------------|
| Hydrochloric acid<br>7647-01-0 | X          | X             | X            |

**U.S. EPA Label Information****16. OTHER INFORMATION**

Revision Date 03-Nov-2020

**Revision Note**

No information available

**Disclaimer**

The information provided on this SDS is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

End of SDS