



## 安全資料表

### 危害物料資料

|  |   |   |   |   |   |   |   |
|--|---|---|---|---|---|---|---|
| <b>1. 產品與用途</b>                          |   |   |   |   |   |   |   |
| 1.1 物料名稱                                 | Acidic Additive (增酸劑) (Sulphuric Acid)  |   |   |   |   |   |   |
| 1.2 用途                                   | 增酸劑   |   |   |   |   |   |   |
| <b>2. 危害成份</b>                           |   |   |   |   |   |   |   |
| 2.1 危害分類及標籤                              |  |  |  |  |  |  |  |
|  | 有害  | 有毒  | 腐蝕性   | 易燃  | 刺激性   | 爆炸性   | 助燃  |
|  | ( )   | ( )   | (✓)   | ( )   | ( )   | ( )   | ( )   |
| 2.2 酸鹼值(pH)                              | 無資料   |   |   | 2.3 曝露限制(OEL)   | 無資料   |   |   |
| 2.4 致癌物質                                 | 無資料   |   |   | 2.5 其他危害  | 刺激性   |   |   |
| 2.5 潛在危害                                 | 引致灼傷<br>刺激眼睛，皮膚及呼吸道   |   |   |   |   |   |   |
| <b>3. 火警和爆炸資料</b>                        |   |   |   |   |   |   |   |
| 3.1 燃燒物成份比例                              | 無資料   | 3.2 沸點  | 無資料   | 3.3 溶點  | 無資料   |   |   |
| 3.4 閃點( )                                | 無資料   | 3.5 比重  | 無資料   | 3.6 氣壓力   | 無資料   |   |   |
| 3.7 爆炸極限(濃度)                             | 無資料   | 3.8 溶解度   | 無資料   | 3.9 氣味  | 無資料   |   |   |
| 3.10 滅火設備                                | 不適用   |   |   |   |   |   |   |
| <b>4. 急救處理</b>                           |   |   |   |   |   |   |   |
| 4.1 眼睛接觸                                 | 用大量清水沖洗,並尋求醫療護理。  |   |   |   |   |   |   |
| 4.2 皮膚接觸                                 | 用大量清水沖洗,如持續有刺激感覺,請尋求醫療護理。   |   |   |   |   |   |   |
| 4.3 吸入                                   | 把傷者移到空氣流通的地方,並召醫生急救。  |   |   |   |   |   |   |
| 4.4 食入                                   | 喝下清水並盡早求醫,不要強行嘔吐出來,請尋求醫療護理。   |   |   |   |   |   |   |
| <b>5. 個人防護裝備</b>                         |   |   |   |   |   |   |   |
| <input checked="" type="checkbox"/> 橡膠手套 |   | <input checked="" type="checkbox"/> 護眼罩   |   |   | <input checked="" type="checkbox"/> 口罩  |   |   |
| <b>6. 處理及使用應知事項</b>                      |   |   |   |   |   |   |   |
| 6.1 儲存注意事項:                              | • 應存於密封器材內  |   |   |   |   |   |   |
| 6.2 意外洩漏處理的方法:                           | 用毛巾或沙圍起洩漏範圍及吸起,將吸滿液體之毛巾或沙收集並存放在膠袋內妥善處理  |   |   |   |   |   |   |
| <b>7. 其他資料</b>                           |   |   |   |   |   |   |   |
| - 嚴禁飲食或吸煙<br>- 切勿把水加入這產品內                |   |   |   |   |   |   |   |

# Hydrochloric Acid

## MATERIAL SAFETY DATA SHEET

|  |                  |   |
|--|------------------|---|
| <b>SECTION 1</b><br>Chemical<br>Product and<br>Company<br>Identification | Commercial Name  | Hydrochloric Acid   |
|  | Application      | Acid Additive   |
|  | Manufacturer     | Joneson Environmental Technologies Ltd.   |
|  | Address          | Flat A, 8/F., Chai Wan Industrial Centre,<br>20 Lee Chung Street,<br>Chaiwan, Hong Kong |
|  | Telephone Number | 852- 2889 8220  |
|  | Facsimile Number | 852- 2889 3646  |
|  | E-mail           | jet@fsenv.com.hk  |

|  |                   |            |               |
|--|-------------------|------------|---------------|
| <b>SECTION 2</b><br>Composition<br>Information<br>on Ingredients | Chemical Name     | CAS Number | Concentration |
|  | Hydrochloric Acid | 7647-01-0  | 30-35 %       |

Concentration ranges is provided to assist users in providing appropriate protections.

|   |                                |   |
|---|--------------------------------|---|
| <b>SECTION 3</b><br>Hazards<br>Identification | Classes                        | Corrosive to metals cat 1.<br>Skin corrosion / irritation cat 1 B.<br>Serious eye damages / eye irritation cat 1.<br>Respiratory system toxicity (single exposure) cat 3.   |
|   | Hazard Statements              | May be corrosive to metals.<br>Causes severe skin burns and eye damage.<br>May cause respiratory irritation.  |
|   | <b>Precautionary Statement</b> |   |
|   | Prevention                     | Do not breathe dust/fume/gas/mist/vapors/spray.<br>Wash face, hands and any exposed skin thoroughly after handling.<br>Wear protective gloves/protective clothing/eye protection/face protection.<br>Use only outdoors or in a well-ventilated area.<br>Keep only in original container.  |
|   | Response                       | Absorb spillage to prevent material damage.<br>IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.<br>IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower<br>Wash contaminated clothing before reuse.<br>IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.<br>IF SWALLOWED: Rinse mouth. DO NOT induce vomiting. |
|   | Storage                        | Store locked up.<br>Store in a well-ventilated place. Keep container tightly closed.<br>Store in corrosive resistant polypropylene container with a resistant liner.<br>Store in a dry place.   |
|   | Disposal                       | Dispose of contents/container to an approved waste disposal plant.  |

# Hydrochloric Acid

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### SECTION 4

First Aid Measures

|               |   |
|---------------|---|
| Eye Contact:  | Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Immediate medical attention is required.   |
| Skin Contact: | Wash off immediately with plenty of water for at least 15 minutes. Immediate medical attention is required.   |
| Ingestion:    | Do NOT induce vomiting. Call a physician immediately.   |
| Inhalation:   | Remove to fresh air. If breathing is difficult, give oxygen. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Immediate medical attention is required. |

### SECTION 5

Fire-fighting Measures

|                                   |  |
|-----------------------------------|--|
| Fire and Explosion Hazards        | Corrosive material. Causes burns by all exposure routes. Thermal decomposition can lead to release of irritating gases and vapors. |
| Suitable Extinguishing Substances | Substance is nonflammable; use agent most appropriate to extinguish surrounding fire.  |
| Product of Combustion             | Hydrogen chloride gas.   |

### SECTION 6

Accidental Release Measures

#### Personal Precautions

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

#### Emergency Procedures

Should not be released into the environment.

#### Clean-up Method

Soak up with inert absorbent material. Keep in suitable, closed containers for disposal.

### SECTION 7

Storage & Handling

#### Handling

Wear personal protective equipment/face protection. Do not breathe mist / vapors / spray. Do not get in eyes, on skin, or on clothing. Do not ingest. If swallowed then seek immediate medical assistance.

#### Storage

Keep containers tightly closed in a dry, cool and well-ventilated place. Corrosives area. Incompatible Materials. Metals. Strong oxidizing agents. Bases. Sodium hypochlorite. Amines. Fluorine. Cyanides. Alkaline.

### SECTION 8

Protection & Personnel Protection Equipment

#### Control Parameters

| Ingredient        | ACGIH TLV                   |
|-------------------|-----------------------------|
| Hydrochloric acid | Ceiling: 2mg/m <sup>3</sup> |

#### Legend

ACGIH – American Conference of Government Industrial Hygienists

#### Engineering Controls

Ensure that eyewash stations and safety showers are close to the workstation location.

#### Personal Protective Equipment

|                |  |
|----------------|--|
| General        | Handle in accordance with good industrial hygiene and safety practice. |
| Eye Protection | Wear appropriate protective eyeglass or chemical safety goggle         |

# Hydrochloric Acid

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|  |   |   |
|--|---|---|
|  | Skin Protection                           | Wear appropriate protective gloves and clothing to prevent skin exposure.   |
|  | Respiratory Protection                    | Use an approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.    |
| <b>SECTION 9</b><br>Physical and Chemical Properties | Appearance                                | Colorless   |
|  | Odour                                     | Pungent   |
|  | pH  | <1  |
|  | Melting point                             | -35 (-31°F)   |
|  | Boiling point                             | 57°C (135°F)  |
|  | Flash point                               | Not available   |
|  | Upper/lower flammability limits           | Not available   |
|  | Vapour pressure                           | 125 mbar @20°C  |
|  | Vapour density                            | 1.27  |
|  | Specific Gravity                          | 1.18  |
|  | Solubility                                | Soluble in water  |
|  | Partition coefficient                     | Not available   |
|  | Auto-ignition temperature                 | Not available   |
|  | Decomposition temperature                 | Not available   |
|  | Viscosity                                 | 1.8cP @15°C   |
| <b>SECTION 10</b><br>Stability & Reactivity          | Reactivity                                | None know, based on information available.  |
|  | Chemical stability                        | Stable under normal conditions.   |
|  | Possibility of hazardous reactions        | Contact with metals may evolve flammable hydrogen gas. Hazardous polymerization does not occur.                   |
|  | Conditions to avoid                       | Incompatible products. Excess heat.   |
|  | Incompatible materials                    | Metals, Strong oxidizing agents, Bases, sodium hypochlorite, Amines, Fluorine, Cyanides, Alkaline.                |
|  | Hazardous decomposition products          | Hydrogen chloride gas.  |
| <b>SECTION 11</b><br>Toxicological Information       | <b><u>Possible Routes of Exposure</u></b> |   |
|  | Skin, Eye, Inhalation                     |   |
|  | <b><u>Health Effects/Symptoms</u></b>     |   |
|  | If ON SKIN:                               | Causes severe burns, causes poorly healing wounds   |
|  | If IN EYES:                               | Causes burns. Causes serious eye damage, risk of blindness  |
|  | If INHALED:                               | Irritation to respiratory tract, cough, dystonia, pulmonary oedema  |
|  | If SWALLOWED:                             | Danger of perforation of the esophagus and the stomach (strong corrosive effects)                                 |
|  | <b><u>Acute Toxicity</u></b>              |   |
|  | <b>Chemical Name</b>                      | <b>LD50 and LC50</b>  |
|  | Hydrochloric Acid                         | Oral LD50 (Rabbit) = 238-277mg/kg (Rat)<br>Dermal LD50: >5010mg/kg (Rabbit)<br>Inhalation LD50: 1.68mg/L (Rat) 1h |
|  | <b><u>Carcinogenicity</u></b>             |   |
|  | Not listed.                               |   |

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## MATERIAL SAFETY DATA SHEET

### SECTION 12 Ecological Information

#### Ecotoxicity

| Chemical Name     | Fish                                  | Aquatic Invertebrates       | Aquatic Plant |
|-------------------|---------------------------------------|-----------------------------|---------------|
| Hydrochloric Acid | LC50: 282mg/L (96h, Gambusia affinis) | EC50: 56mg/L (72h, Daphnia) | -             |

#### Persistence and Degradability

Persistence is unlikely

#### Bioaccumulation

No data available

#### Mobility in Soil

Will likely be mobile in the environment due to its water solubility

### SECTION 13 Disposal Considerations

#### Waste from Residuals

Dispose of in accordance with local regulations.

#### 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.

### SECTION 14 Transport Information

|                              |   |
|------------------------------|---|
| UN Number                    | UN1789  |
| Proper Shipping Name         | Hydrochloric Acid   |
| Transport Hazard Class       | 8   |
| Packing Group                | II  |
| Environmental Hazards        | Non environmental hazardous   |
| Special Precautions for User | Provisions for dangerous goods should be complied within the premises |

### SECTION 15 Regulatory Information

#### Safety; Health and Environmental Regulations

|                           |  |
|---------------------------|--|
| Guidance Notes            | This product meets the criteria for classification in accordance with dangerous substances |
| International Regulations | Classified in accordance with the hazard criteria of various countries regulations         |

### SECTION 16 Other information

|                   |  |
|-------------------|--|
| Prepared by:      | Joneson Environmental Technologies Ltd.<br>- Technical Department  |
| Date Issued:      | 20-Feb-2025  |
| Reason for issue: | Update the format  |
| Disclaimer:       | This product material safety data sheet provides health and safety information. The product is to be used in applications consistent with the product literature.<br>The information in the Material Safety Data Sheet was obtained either from sources which we believe are reliable, or based on the present state of our knowledge and is intended to describe our products from the point of view of technical know now. However, the information is provided without any warranty, express or implied, regarding its correctness. |