# Section 1: Identification

| | |
|---|---|
| **COMPANY:** | Sportsman Consulting, LLC DBA Vinmetrica<br>6084 Corte del Cedro, Suite 105<br>Carlsbad, CA 92011 |
| **PRODUCT NAME:** | SO2 Acid Solution, PN: SC-100-15, SC-100-15-450 |
| **SYNONYMS:** | Hydrochloric Acid, 2N; Hydrochloric acid; Hydrogen chloride; Muriatic acid |
| **Recommended Use** | Laboratory Chemicals |
| **Uses advised against:** | Not for food, drug, pesticide or biocidal product use |
| **EMERGENCY PHONE:** | 408-887-9230 |
| **INFORMATION PHONE:** | 760-494-0597 x 102 |

# Section 2: Hazard(s) Identification

**Classification:**
This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Corrosive to metals: Category 1
Skin corrosion/Irritation: Category 2
Serious Eye Damage/Eye Irritation: Category 2
Specific target organ toxicity (single exposure): Category 3
Target Organs – Respiratory system

**SIGNAL WORD:** Warning

**HAZARD STATEMENTS:**
May be corrosive to metals
Causes skin irritation
Causes serious eye irritation
May cause respiratory irritation

**Precautionary Statement(s):**

**Preventions:**
Wash face, hands and any exposed skin thoroughly after handling

Wear protective gloves/protective clothing/eye protection/face protection
Do not breathe dust/fume/gas/mist/vapors/spray.
Use only outdoors or in a well-ventilated area.
Keep only in original container.

**Response:**
Get medical advice/attention if you feel unwell.
IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.
Immediately call a POISON CENTER or doctor/physician if you feel unwell.
IF ON SKIN: Wash with plenty of soap and water.
If skin irritation occurs: Get medical advice/attention
Take off contaminated clothing and wash before reuse.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do so. Continue rinsing.
Immediately call a POISON CENTER or doctor/physician
SPILL: Absorb spillage to prevent material damage.

S**torage:**
Store in a well-ventilated place. Keep container tightly closed.
Store locked up.
Store in corrosive resistant polypropylene container with resistant inliner.
Store in a dry place.

**Disposal:**
Dispose of contents/container according to Federal, State and Local Regulations.

**Hazards not otherwise classified (HNOC):**
None identified.

## Section 3: Composition/Information on Ingredients

| CHEMICAL | CAS NUMBER | WEIGHT % |
|---|---|---|
| Water | 7732-18-5 | 92.7% |
| Hydrochloric Acid | 7647-01-0 | 7.3% |

## Section 4: First Aid Measures
**General Advice**: If symptoms persist, call a physician.
**Inhalation:**
Remove from exposure and move to fresh air immediately. If breathing is difficult, give oxygen. Get medical aid if cough or other symptoms appear.
**Ingestion:** Do not induce vomiting. Get medical aid.
**Skin Contact:** Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical aid if irritation develops or persists.
**Eye Contact:** Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid.
**Most important symptoms and effects**: May cause skin irritation and/or dermatitis.
**Notes to Physician**: Treat symptomatically

## Section 5: Fire Fighting Measures

**Suitable Extinguishing Media:** Substance is nonflammable; use agent most appropriate to extinguish surrounding fire.
**Unsuitable Extinguishing Media:** No information available
**Flash Point:** Not applicable
**Method:** No information
**Autoignition Temperature:** No information available
**Explosion Limits**
**Upper:** No data available
**Lower:** No data available
**Sensitivity to Mechanical Impact:** No information available
**Sensitivity to Static Discharge:** No information available
**Specific Hazards Arising from the Chemical:** Thermal decomposition can lead to release of irritating gases and vapors. In the event of fire and/or explosion do not breathe fumes.

**Hazardous Combustion Products:** Hydrogen chloride gas. Thermal decomposition can lead to release of irritating gases and vapors.

**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.

**NFPA Rating:**
Health: 2 Flammability: 0 Instability: 1 Physical Hazards: n/a

## Section 6: Accidental Release Measures

**Personal Precautions:** Use personal protective equipment. Ensure adequate ventilation. Avoid contact with skin, eyes, and clothing.
**Environmental Precautions:** Avoid release into the environment. See section 12 for additional ecological information.
**Methods for Containment and Clean Up:** Soak up with inert absorbent material. Keep in suitable, closed containers for disposal.

## Section 7: Handling and Storage

**Handling:** Wear personal protective equipment. Ensure adequate ventilation. Do not breathe vapors or spray mist. Avoid contact with skin, eyes, and clothing. Avoid ingestion and inhalation.

**Storage:** Keep containers tightly closed in a dry, cool and well ventilated place. Corrosives area.

## Section 8: Exposure Controls/ Personal Protection

Exposure Guidelines:

| Component | ACGIH TLV | OSHA PEL | NIOSH IDLH | Mexico OEL (TWA) |
|---|---|---|---|---|
| Hydrochloric Acid | Ceiling: 2 ppm | Ceiling: 5 ppm<br>Ceiling: 7 mg/m3<br>(Vacated) Ceiling: 5 ppm<br>(Vacated) Ceiling: 7 mg/m3 | IDLH: 50 ppm<br>Ceiling: 5 ppm<br>Ceiling: 7 mg/m3 | Ceiling: 5 ppm<br>Ceiling: 7 mg/m3 |

**Engineering Measures:** Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations and safety showers are close to the workstation location.

**Personal Protective Equipment:**

**Eye/Face Protection:** Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

**Skin and Body Protection:** Wear appropriate protective gloves and clothing to prevent skin exposure.

**Respiratory Protection:** Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

**Hygiene Measures:** Handle in accordance with good industrial hygiene and safety practice.

## Section 9: Physical and Chemical Properties

**Physical State:** Liquid
**Appearance:** Clear
**Odor:** pungent
**Odor Threshold:** No information available
**pH:** 1
**Melting Point:** Not available
**Boiling Point:** The lowest known value is 100˚C (212˚F) (Water).

**Flash Point:** Not applicable
**Evaporation Rate:** No information available
**Flammability (solid, gas):** None
**Flammability or Explosive limits:**
**Upper:** No data available
**Lower:** No data available
**Vapor Pressure:** Highest known value is 2.3kPa (@ 20˚C) (water)

**Vapor Density:** Highest known value is 0.62 (Air = 1.0) (water)
**Specific Gravity:** 1.16 (H2O = 1)
**Solubility:** Soluble in water
**Partition coefficient, n-octabol/water:** No data available
**Autoignition Temperature:** No information available
**Decomposition Temperature:** No information available
**Viscosity:** No information available
**Molecular Formula**: HCl
**Molecular Weight**: 36.46

## Section 10: Stability and Reactivity

**Stability:** The product is stable.

**Instability Temperature:** Not available.

**Conditions of Instability:** Incompatible materials

**Incompatibility with various substances:**
Reactive with alkalis. Slightly reactive to reactive with oxidizing agents, organic materials, metals.

**Corrosivity:**
Extremely corrosive in presence of aluminum, of copper, of stainless steel(304), of stainless steel(316). Non-corrosive in presence of glass.

**Special Remarks on Reactivity:**
Reacts violently (moderate reaction with heat of evolution) with water especially when water is added to the product. Isolate hydrogen chloride from heat, direct, alkalies (reacacts vigorously), organic materials, and oxidizers (especially nitric acid and chlorates), amines, copper and alloys (e.g. brass), hydroxides, zinc (galvanized materials). Hydrogen chloride causes aldehydes and epoxides to violently polymerize. It reacts with oxidizers releasing chlorine gas. (Hydrogen chloride) It reacts with oxidizers releasing chlorine gas. Incompatible with alkalis, amines, metals [copper and alloys (brass), zinc (galvanized materials)], hydroxides, organic materials, alkali metals, carbides, borides, metal oxides, vinyl acetate, acetylides, sulphides, phosphides, cyanides, carbonates, It can react with formaldehyde. Reacts with most metals to produce flammable Hydrodgen gas.

**Special Remarks on Corrosivity:** Severe corrosive effect on bronze

**Polymerization:** Will not occur.

## Section 11: Toxicological Information

**Routes of Entry:** Absorbed through skin. Dermal contact. Eye contact. Inhalation. Ingestion.

**Toxicity to Animals:**
Hydrochloric Acid Acute oral toxicity (LD50): 900 mg/kg [Rabbit]. Acute toxicity of the vapor (LC50): 1108 1 hours [Mouse]. Acute toxicity of the vapor (LC50): 3124 1 hours [Rat].

**Chronic Effects on Humans:**
CARCINOGENIC EFFECTS: Classified 3 (Not classifiable for human.) by IARC [Hydrogen chloride]. Contains material which may cause damage to the following organs: kidneys, liver, mucous membranes, upper respiratory tract, skin, eyes, , teeth.

**Other Toxic Effects on Humans:**
Very hazardous in case of skin contact (irritant). Hazardous in case of ingestion, of inhalation (lung corrosive). Slightly hazardous in case of skin contact (corrosive, permeator), of eye contact (corrosive), .

**Special Remarks on Toxicity to Animals:** Not available.

**Special Remarks on Chronic Effects on Humans:**
May affect genetic material (mutagenic). May cause adverse reproductive effects (fetotoxicity).

**Special Remarks on other Toxic Effects on Humans:**

## Section 12: Ecological Information

**Ecotoxicity:** Not available
**BOD5 and COD**: Not available
**Products of Biodegradation**: Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.
**Toxicity of the products of Biodegradation**: The product itself and its products of degradation are not toxic.
**Special Remarks:** Not available.

## Section 13: Disposal Considerations

**Waste Disposal Methods:** Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous water regulations to ensure complete and accurate classification.

## Section 14: Transport Information

**DOT:** Class 8: Corrosive material
**Identification:** Hydrochloric Acid solutions UNNA: 1789 PG: II
**Special Provisions for transport:** None available

## Section 15: Regulatory Information

**Federal and State Regulations:**
Connecticut hazardous material survey.: Hydrochloric acid Illinois toxic substances disclosure to employee act: Hydrochloric acid Illinois chemical safety act: Hydrochloric acid New York release reporting list: Hydrochloric acid Rhode Island RTK hazardous substances: Hydrochloric acid Pennsylvania RTK: Hydrochloric acid Minnesota: Hydrochloric acid Massachusetts RTK: Hydrochloric acid Massachusetts spill list: Hydrochloric acid New Jersey: Hydrochloric acid New Jersey spill list: Hydrochloric acid Louisiana RTK reporting list: Hydrochloric acid

**Other Regulations:** OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200).

**Other Classifications:**

**WHMIS (Canada):**
CLASS D-1A: Material causing immediate and serious toxic effects (VERY TOXIC). CLASS E: Corrosive liquid.

**DSCL (EEC):**
R34- Causes burns. S26- In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. S28- After contact with skin, wash immediately with plenty of water. S36/37/39- Wear suitable protective clothing, gloves and eye/face protection.

**HMIS (U.S.A.):**

**Health Hazard:** 3

**Fire Hazard:** 0

**Reactivity:** 0

**Personal Protection:**

**National Fire Protection Association (U.S.A.):**

**Health:** 2

**Flammability:** 0

**Reactivity:** 0

**Specific hazard:**

**Protective Equipment:**
Gloves (impervious). Chemical resistant apron. Wear appropriate vapor respirator when ventilation is inadequate. Face shield.

## Section 16: Other Information

**Product Use:** Laboratory Reagent.

**Disclaimer:**

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