

# MATERIAL SAFETY DATA SHEET

Conforms to ANSI Z400.1 and is in compliance with 29 CFR 1910

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## Section 1: Product Identification

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### Product name:

VC-100 Titration Acid

### Synonyms:

Hydrochloric Acid (HCl) Solution ( $\leq 2.0N$ )

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## Section 2: Composition

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| CAS #     | Hazardous Component | % by weight  |
|-----------|---------------------|--------------|
| 7732-18-5 | Water               | > 92.7%      |
| 7647-01-0 | Hydrochloric Acid   | $\leq 7.3\%$ |

**Carcinogenic Chemicals:** No Carcinogens identified

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## Section 3: Hazards Identification

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**Precautionary Statements:** Danger: Corrosive, Caustic, and Sensitizer

- Specific health risks:**  
Burns, irritation to exposed organs/areas
- Specific target organs:**  
Respiratory system, eyes, skin, circulatory system, mucous membranes
- Signs and symptoms of exposure:**  
May cause dermal irritation and burns  
May cause respiratory and digestive tract irritation with possible burns  
May cause eye injury  
Vapor or mist may cause irritation and burns  
May cause painful sensitization to light  
May cause conjunctivitis

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## Section 4: First Aid Measures

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**List specific first aid measures for:**

- Skin Contact** - Rinse exposed area with copious amounts of water for at least 15 minutes, while removing all contaminated clothing. Any contaminated clothing should be washed before reuse. Seek medical attention if skin irritation persists.
- Eye contact** - Flush eyes with copious amounts of water for at least 30 minutes. Ensure areas under eyelids are rinsed. Seek medical attention immediately.
- Ingestion** - Do NOT induce vomiting. If victim is conscious and alert, give plenty of water to drink. Never give anything by mouth to an unconscious person. Seek medical attention immediately.
- Inhalation** - Remove victim to fresh air. If not breathing; provide artificial respiration. Seek medical attention immediately.

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**Section 5: Fire Fighting Measures**

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|                                   |  |
|-----------------------------------|--|
| <b>Conditions of flammability</b> | N/A  |
| <b>Media to extinguish fire</b>   | Use water spray or fog                     |
| <b>Haz. Combustion products</b>   | Flammable Hydrogen gas                     |
| <b>Sensitivity to impact</b>      | N/A  |
| <b>Sensitivity to static</b>      | N/A  |
| <b>Flash point</b>                | N/A  |
| <b>Auto ignite temp</b>           | N/A  |
| <b>NFPA Rating (estimated)</b>    | Health: 2; Flammability: 0; Instability: 0 |

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**Section 6: Accidental Release Measures**

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**Spill clean-up procedure:**

Use absorbent material to soak up spill or leak. Keep segregated. Dispose of saturated absorbent material as required by local, state or federal laws.

**PPE needed for clean up:**

Chemical resistant gloves, lab coat or other items to protect any body areas or clothing that might come in contact with spill.

**Follow-up guidelines:**

Flush spill area with water.

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**Section 7: Handling and Storage**

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|                 |   |                 |  |
|-----------------|---|-----------------|--|
| <b>Handling</b> | Avoid contact with eyes, skin or clothing | <b>Storage</b>  | In a cool, dry, ventilated area  |
| <b>PPE</b>      | Gloves, face shield, lab coat             | <b>Temp</b>     | As indicated on packaging  |
| <b>Warnings</b> | Corrosive                                 | <b>To avoid</b> | Heat, flame, and direct sunlight. Store away from incompatible substances. |

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**Section 8: Exposure Control and Personal Protection Equipment (PPE)**

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**PPE:** Standard Laboratory: Gloves, face shield (or goggles), lab coat (or apron)

**Engineering control recommendations:** General room ventilation

**Additional suggestions for protective equipment:** N/A

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**Section 9: Physical and Chemical Properties**

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|-------------------------|--------------------------|-------------------------|------------------------|
| <b>Physical state</b>   | Liquid                   | <b>Evaporation rate</b> | >1 (N-butyl Acetate=1) |
| <b>Odor/appearance</b>  | Pungent/Clear, colorless | <b>Boiling point</b>    | 81.5-110 °C @ 760mm Hg |
| <b>Specific gravity</b> | 1.16 (water=1)           | <b>Freezing point</b>   | -17°C                  |
| <b>Vapor pressure</b>   | 160mm Hg @ 20°C          | <b>pH</b>               | Acidic                 |
| <b>Vapor density</b>    | 1.26 (air=1)             |                         |                        |

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**Section 10: Stability and Reactivity**

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- Stability:**  
Stable
- Conditions under which the product is chemically unstable:**  
Excess heat, metals
- Substance or class of substance with which the product is incompatible:**  
Incompatible with bases and metals.
- Hazardous decomposition products:**  
Hydrogen gas, carbon dioxide, hydrogen chloride, chlorine, carbon monoxide

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**Section 11: Toxicological Properties**

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Under normal use, this product poses a negligible hazard. However, in keeping with standard laboratory safety practices, precautions should be taken to avoid exposure.

|                        |  |
|------------------------|--|
| <b>Route of entry</b>  | Skin, eye, respiratory or digestive tracts             |
| <b>Exposure</b>        | Physical reaction may be mild, but should be immediate |
| <b>Exposure limits</b> | OSHA Permissible Exposure Limit (PEL): 5 ppm (Ceiling) |
| <b>Carcinogenicity</b> | Not listed as carcinogens or suspect carcinogens       |
| <b>Irritancy</b>       | Can irritate with minimal exposure                     |

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**Section 12: Ecological Information**

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Ecological effects of this mixture have not been determined.

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**Section 13: Disposal Considerations**

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To the best of our knowledge, this material does not require special disposal considerations. Adhere to local, state and federal regulations with regard to disposal of this product.

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**Section 14: Transport Information**

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**Proper Shipping Name:** HYDROCHLORIC ACID

**Hazard Class:** 8

**UN/NA:** UN1789

**Packing Group:** III

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**Section 15: Regulatory Information**

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**U.S. Federal Regulations**

TSCA 8(b) inventory: Hydrochloric acid; Water  
SARA 302/304/311/312 extremely hazardous substances:  
Hydrochloric acid  
SARA 302/304 emergency planning and notification:  
Hydrochloric acid  
SARA 302/304/311/312 hazardous chemicals: Hydrochloric acid  
SARA 311/312 MSDS distribution - chemical inventory - hazard identification: Hydrochloric acid  
Sudden Release of Pressure, Immediate (Acute) Health Hazard, Delayed (Chronic) Health Hazard  
SARA 313 toxic chemical notification and release reporting.  
Hydrochloric acid 6.93%  
Clean Water Act (CWA) 307: No products were found  
Clean Water Act (CWA) 311: Hydrochloric acid  
Clean Air Act (CAA) 112 accidental release prevention:  
Hydrochloric acid  
Clean Air Act (CAA) 112 regulated flammable substances: No products were found  
Clean Air Act (CAA) 112 regulated toxic substances:  
Hydrochloric acid

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**WHMIS (Canada)**

Class D-2B: Material causing other toxic effects (TOXIC)  
CLASS E: Corrosive liquid  
CEPA DSL: Hydrochloric acid: Water  
This product has been classified in accordance with the hazard criteria of the Controlled Product Regulations and the MSDS contains all required information.

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**International Regulations****EINECS**

Hydrochloric acid 231-595-7  
Water 231-791-2

**DSCL (EEC)**

R34-Causes burns

**International Lists**

Australia (NICNAS): Hydrochloric acid; Water  
Japan (MITI): Hydrochloric acid; Water  
Korea (TCCL): Hydrochloric acid, Water  
Philippines (RA6969): Hydrochloric acid; Water  
China: No products were found

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**State Regulations**

Pennsylvania RTK: Hydrochloric acid: (environmental hazard, generic environmental hazard)  
Massachusetts RTK: Hydrochloric acid  
New jersey: Hydrochloric acid 2.000N  
California prop. 65: No products were found

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**Section 16: Other**

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This product is intended for use as supplied. Adulteration by dilution or addition of any materials to the product as supplied invalidates any diagnostic use of the product.

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