

SDS	EFFECTIVE DATE 2/23/15	ISOPURE 	REV C	SDS-215026
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**SAFETY DATA SHEET: Step 1 (3,000 – 22,000 G.P.D.)**



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## Safety Data Sheet

### Step 1 Cleaner MD400 Series

**Product:** Step 1 Cleaner MD400 Series

**SDS:** 215026

**Preparation Date:** 02/02/2015

**Rev** C

#### *Section 1 – Product and Company Identification*

**Product Chemical Name:** Hydrochloric Acid USP Reagent Grade

**Chemical Formula:** HCL

**Recommended Use:** Laboratory use


**In Case of Emergency Call:** CHEMTREC – 800-424-9300 or 703-527-3887

**Synonyms:** None

#### *Section 2 – Hazard(s) Identification*

#### **\*\*\* Emergency Overview – Potential Health Effects\*\*\***

**OSHA Hazards:** Corrosive

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**Target Organs:** None

**Signal Words:** Danger

**Pictograms:**



**GHS Classification:**

Skin corrosion	Category 1B
Serious eye damage	Category 1
Specific target organ toxicity-single exposure	Category 3

**GHS Label Elements, including Precautionary statements:**

**Hazard Statements:**

H314	Causes severe skin burns and eye damage.
H335	May cause respiratory irritation.

**Precautionary Statements:**

P261	Avoid breathing dust/fumes/gas/mist/vapors/spray.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do so. Continue rinsing.
P310	Immediately call a POISON CENTER or doctor/physician.

**Potential Health Effects**


<b>Eyes</b>	Causes eye burns.
<b>Inhalation</b>	Toxic if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract.
<b>Skin</b>	Harmful if absorbed through skin. Causes skin burns.
<b>Ingestion</b>	Harmful if swallowed.

**NFPA Ratings**

<b>Health</b>	3
<b>Flammability</b>	0
<b>Reactivity</b>	1
<b>Specific hazard</b>	Not Available

**HMIS Ratings**

<b>Health</b>	3
<b>Fire</b>	0
<b>Reactivity</b>	1
<b>Personal</b>	J

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***Section 3 - Composition/Information on Ingredients***

Component	Weight %	CAS #	EINECS# / ELINCS#	Formula	Molecular Weight
Hydrochloric Acid	30-32	7647-01-0	231-595-7	HCl	36.46 g/mol
Water	Balance	7732-18-5	231-791-2	H <sub>2</sub> O	18.00 g/mol

***Section 4 - First-Aid Measures***


<b>Eyes</b>	In case of eye contact, rinse with plenty of water and seek medical attention immediately.
<b>Inhalation</b>	Move casualty to fresh air and keep at rest. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Get medical attention immediately.
<b>Skin</b>	Immediately flush with plenty of water for at least 15 minutes while removing contaminated clothing and wash using soap. Get medical attention immediately.
<b>Ingestion</b>	<b>Do Not Induce Vomiting!</b> Never give anything by mouth to an unconscious person. If conscious, wash out mouth with water. Get medical attention immediately.

***Section 5 - Fire-Fighting Measures***

<b>Suitable (and unsuitable) extinguishing media</b>	Product is not flammable. Use appropriate media for adjacent fire. Cool containers with water.
<b>Special protective equipment and precautions for firefighters</b>	Wear self-contained, approved breathing apparatus and full protective clothing, including eye protection and boots.
<b>Specific hazards arising from the chemical</b>	Emits toxic (hydrogen chloride gas) fumes under fire conditions. (See also Stability and Reactivity section).

***Section 6 - Accidental Release Measures***

<b>Personal precautions, protective equipment and</b>	See section 8 for recommendations on the use of personal protective equipment.
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<b>emergency procedures</b>	
<b>Environmental precautions</b>	Prevent spillage from entering drains. Any release to the environment may be subject to federal/national or local reporting requirements.
<b>Methods and materials for containment and cleaning up</b>	Neutralize spill with sodium bicarbonate or lime. Absorb spill with noncombustible absorbent material, then place in a suitable container for disposal. Clean surfaces thoroughly with water to remove residual contamination. Dispose of all waste and cleanup materials in accordance with regulations.

***Section 7 - Handling and Storage***

**Precautions for safe handling**

See section 8 for recommendations on the use of personal protective equipment. Use with adequate ventilation. Wash thoroughly after using. Keep container closed when not in use. Avoid formation of aerosols.

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

Store in cool, dry well ventilated area. Keep away from incompatible materials (see section 10 for incompatibilities).

***Section 8 - Exposure Controls / Personal Protection***

**Occupational exposure controls:**

Component	Exposure Limits	Basis	Entity
Hydrogen Chloride	2 ppm 2.98 mg/m <sup>3</sup>	CEIL	ACGIH
	5 ppm 7 mg/m <sup>3</sup>	CEIL	OSHA
	5 ppm 7 mg/m <sup>3</sup>	CEIL	NIOSH
	50 ppm	IDLH	OSHA

<b>TWA</b>	Time Weighted Average over 8 hours of work.
<b>TLV</b>	Threshold Limit Value over 8 hours of work.
<b>REL</b>	Recommended Exposure Limit.
<b>PEL</b>	Permissible Exposure Limit
<b>STEL</b>	Short term Exposure Limit during x minutes.
<b>IDLH</b>	Immediately Dangerous to Life or Health.
<b>WEEL</b>	Workplace Environmental Exposure Levels.

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<b>CEIL</b>	Ceiling
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#### Personal Protection


<b>Eyes</b>	Wear Chemical safety glasses or goggles, and face shield.
<b>Inhalation</b>	Provide local exhaust, preferably mechanical. If exposure levels are excessive, use an approved respirator.
<b>Skin</b>	Wear nitrile or rubber gloves, and full body suit. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.
<b>Other</b>	Not Available

#### Other Recommendations

Provide eyewash stations, quick-drench showers and washing facilities accessible to areas of use and handling.

### *Section 9 - Physical and Chemical Properties*

Appearance (physical state, color, etc.)	Light yellow liquid.
Oder	Strong pungent odor.
Oder threshold	0.25-10 ppm
PH	Acidic
Melting point/freezing point	-30° C (-22° F)
Initial boiling point and boiling range	50.5° C (122.9° F)
Flash point	Not Flammable
Evaporation rate	Not Available
Flammability (solid, gas)	Not Flammable
Upper/lower flammability or explosive limit	Not Explosive
Vapor pressure	227 hPa (170 mmHg) at 21.1° C (70° F) 547 hPa (410 mmHg) at 37.7° C (99.9° F)
Vapor density	1.267 (air=1)
Density	1.19 g/cm <sup>3</sup>
Solubility (ies)	Soluble in water, diethyl ether
Partition coefficient: n-octanol/water	Not Available
Auto-ignition temperature	Not Available
Decomposition temperature	Not Available

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***Section 10 - Stability and Reactivity***

<b>Chemical Stability</b>	Stable
<b>Possibility of Hazardous Reactions</b>	Will not occur
<b>Conditions to Avoid</b>	Not Available
<b>Incompatible Materials</b>	Metals, oxidizing agents, organic materials, alkalis, water.
<b>Hazardous Decomposition Products</b>	Hydrogen chloride gas.

***Section 11 – Toxicological Information***

**Acute Toxicity**

<b>Skin</b>	Not Available
<b>Eyes</b>	Not Available
<b>Respiratory</b>	Not Available
<b>Ingestion</b>	LD50 – Rabbit – 900 mg/kg


**Carcinogenicity**

<b>IARC</b>	3: Not classifiable as to its carcinogenicity to humans.
<b>ACGIH</b>	A4: Not classifiable as a human carcinogen.
<b>NTP</b>	No components of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
<b>OSHA</b>	No components of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

**Signs & Symptoms of Exposure**

<b>Skin</b>	Irritation and burns.
<b>Eyes</b>	Severe eye irritation, conjunctivitis, burns, corneal necrosis.
<b>Respiratory</b>	Irritation, pain, inflammation of upper respiratory tract and mucous membranes, coughing, sneezing, choking.
<b>Ingestion</b>	Irritation, burning, ulceration, fever, vomiting, nausea, diarrhea, thirst, difficulty swallowing, salivation.

<b>Chronic Toxicity</b>	May damage organs.
<b>Teratogenicity</b>	Not Available
<b>Mutagenicity</b>	May alter genetic material.
<b>Embryotoxicity</b>	Not Available
<b>Specific Target Organ Toxicity</b>	Kidneys, liver, mucous membranes, upper respiratory tract, skin, eyes, circulatory system, teeth.

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***Section 12 – Ecological Information***

**Ecotoxicity**

<b>Aquatic Vertebrate</b>	LC50 – Gambusia affinis – 282 mg/L – 96h
<b>Aquatic Invertebrate</b>	Not Available
<b>Terrestrial</b>	Not Available
<b>Persistence and Degradability</b>	Not Available
<b>Bioaccumulative Potential</b>	Not Available
<b>Mobility in soil</b>	Not Available
<b>PBT and vPvB Assessment</b>	Not Available
<b>Other Adverse Effects</b>	Not Available

***Section 13 – Disposable Considerations***

<b>Waste Residues</b>	User should review their operations in terms of the applicable federal/national or local regulations and consult with appropriate regulatory agencies if necessary before disposing of waste product container.
<b>Product Containers</b>	Users should review their operations in terms of the applicable federal/national or local regulations and consult with appropriate regulatory agencies if necessary before disposing of waste product container.

The information offered in section 13 is for the product as shipped. Use and/or alterations to the product may significantly change the characteristics of the material and alter the waste classification and proper disposal methods.

***Section 14 – Transportation Information***

<b>US DOT</b>	UN1789, Hydrochloric acid, 8, PG II
<b>TDG</b>	UN1789, HYDROCHLORIC ACID, 8, PG II
<b>IMDG</b>	UN1789, HYDROCHLORIC ACID, 8, PG II
<b>Marine Pollutant</b>	No
<b>IATA/ICAO</b>	UN1789, Hydrochloric acid, 8, PG II

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*Section 15 – Regulatory Information*

<b>TSCA Inventory Status</b>	All ingredients are listed on the TSCA inventory
<b>DSCL (EEC)</b>	All ingredients are listed on the DSCL inventory
<b>California Proposition 65</b>	Not Listed
<b>SARA 302</b>	Not Listed
<b>SARA 304</b>	Not Listed
<b>SARA 311</b>	Hydrochloric acid
<b>SARA 312</b>	Hydrochloric acid
<b>SARA 313</b>	Listed: Hydrochloric acid
<b>WHMIS Canada</b>	Class D-1A: Material causing immediate and serious toxic effects (VERY TOXIC). Class E: Corrosive material.