

Material Safety Data Sheet

Isopure Corp.

141 Citizens Blvd Simpsonville, KY 40067 Phone (502) 722-1000

Fax (502) 722-2244 www.isopure.com

Health:	3- Hazardous
Fire:	0- Minimal
Reactivity:	0- Minimal

Product: Step 1 Cleaner MD400 Series

MSDS: 215026

Preparation Date: 2/15/02

Rev B

Section 1 – Chemical Product and Company Identification

Product Chemical Name: A chemical mixture

Chemical Formula: HCL

CAS No.: 7647-01-0

Manufacture: Red Bird Services

For Emergency, Call Chemtrec 24 hrs a day (800) 424-9300

Synonyms: Not Listed

Catalog# 877600

Section 2 – Composition/Information on Ingredients

Ingredient	CAS Number	% Wt or N
Hydrochloric Acid	7647-01-0	-5 –10
Deionized Water	7732-18-5	Balance

Material Safety Data Sheet

Product: Step 1 Cleaner MD400 Series

MSDS: 215026

Preparation Date: 2/15/02

Rev: B

Section 2 – Composition/Information on Ingredients

OSHA PEL		ACGIH TLV		NIOSH REL		NIOSH
TWA	STEL	TWA	STEL	TWA	STEL	IDLH
7 mg/m ³	7 mg/m ³	7.5 mg/m ³	Not Listed	Not Listed	Not Listed	50 ppm
Not Listed	Not Listed	Not Listed	Not Listed	Not Listed	Not Listed	Not Listed

Section 3 – Hazard Information

***** Emergency Overview – Potential Health Effects*****

Primary Entry Route: Inhalation, Digestion, and Skin Contact

Target Organs: Eyes, Skin, Respiratory System

Acute Effects: Irritation of nose, eyes, skin, and mouth to sever burns and ulcerations.

Inhalation: Irritant to sever burns

Eye: Irritant to sever burns and/or blindness

Skin: Irritant to sever burns

Ingestion: Irritant to dangerous

Carcinogenicity: Not considered to be.

Medical Conditions: None Listed

Chronic Effects: Sever burns to toxic.

Material Safety Data Sheet

Product: Step 1 Cleaner MD400 Series

MSDS: 215026

Preparation Date: 2/15/02

Rev: B

Section 4 – First Aid Measures

Inhalation: Move to fresh air, give oxygen if difficulty in breathing.
GET MEDICAL ATTENTION.

Eye Contact: Flush with water for 15 minutes, including under eyelids
GET MEDICAL ATTENTION

Skin Contact: Flush with water for 15 minutes. If irritation persists,
GET MEDICAL ATTENTION

Ingestion: Give water to drink to dilute material. INDUCE VOMITING.
Never give anything by mouth to anyone who is unconscious or
convulsing. GET MEDICAL ATTENTION.

Special Precautions: N/A

Section 5 – Fire Fighting Measures

Flash Point: Nonflammable

Burning Rate: N/A

Auto Ignition: N/A

Temperature:

LEL: N/A

UEL: N/A

Flammability: 0

Classification:

Extinguishing Media: Use that of surrounding fire

Unusual Fire/Explosion Hazards: N/A

Hazardous Combustion Products: None Listed

Instructions: Do not release runoff from fire control methods to sewers or waterways.

Equipment: Because fire may produce toxic thermal decomposition products, wear a self-contained breathing apparatus (scba) with a full-face piece with pressure demand or positive-pressure mode.

Material Safety Data Sheet

Product: Step 1 Cleaner MD400 Series

MSDS: 215026

Preparation Date: 2/15/02

Rev: B

Section 6 – Accidental Release Measures

Spill/Leak Procedure: Cover with dry earth, dry sand, or non-combustible material followed by plastic sheet to minimize spreading.

Small Spills: N/A

Large Spills: For containment; dike far ahead of the spill. Cover with dry earth, dry sand, or non-combustible material. Do not release into sewer or waterways.

Regulatory Requirement: Follow applicable OSHA regulation (29 CFR 1910.120).

Section 7 – Handling and Storage

Handling Precaution: Wear safety glasses, goggles, or face shield, safety gloves, personal protective clothing, or respirator or airlines as required in section 8 in this MSDS.

Storage Requirement: Store in closed container, cool, dry, in well-ventilated area, away from source of heat, and incompatible materials.

Regulatory Requirement: See section 15 of this MSDS.

Material Safety Data Sheet

Product: Step 1 Cleaner MD400 Series

MSDS: 215026

Preparation Date: 2/15/02

Rev: B

Section 8 – Exposure Controls/Personal Protection

Engineering Controls:

N/A

Ventilation:

Provide general or local exhaust ventilation systems to maintain airborne concentrations below OSHA PELs (Sec 2). Local exhaust ventilation is preferred because it prevents contaminant dispersion into the work area by controlling it at its source.

Administrative Controls:

N/A

Respiratory Protection:

Seek professional advice prior to respirator selection and use. Follow OSHA respirator regulations (29 CFR 1910.134) and if necessary, wear a MSHA/NIOSH approved respirator. Select respirator based on its suitability to provide adequate worker protection for given working conditions, level of airborne contamination, and presence of sufficient oxygen. For emergency or nonroutine operations (Cleaning spills, reactor vessels or storage tanks), wear an SCBA. Warning! Air purifying respirators do not protect workers in oxygen-deficient atmospheres. If respirators are used, OSHA requires a written respiratory protection program that includes at least: medical certification, training, testing, periodic environmental monitoring, maintenance, inspection, cleaning, and convenient, sanitary storage areas.

Protective Clothing/Equipment:

Wear chemically protective gloves, boots, aprons, and gauntlets to prevent prolonged or repeated skin contact. Wear protective eyeglasses or chemical safety glasses. Per OSHA eye-and-face-protection regulations (29 CFR 1910.133).

Safety Stations:

Make emergency eyewash stations, safety/quick-drench showers and washing facilities available in work area.

Contaminated Equipment:

Separate contaminated work clothes from street clothes. Launder before reuse. Remove this material from your shoes and clean personal protective equipment.

Material Safety Data Sheet

Product: Step 1 Cleaner MD400 Series

MSDS: 215026

Preparation Date: 2/15/02

Rev: B

Section 8 – continued

Comments: Contact lenses are not safety protection; soft lenses absorb and all lenses concentrate exposure. Practice good personal hygiene after use of this material especially before eating, drinking, smoking, using the toilet or applying cosmetics. Never eat, drink, or smoke in work areas.

Material Safety Data Sheet

Product: Step 1 Cleaner MD400 Series

MSDS: 215026

Preparation Date: 2/15/02

Rev: B

Section 9 – Physical and Chemical Properties

Physical State:	liquid	pH:	N/A
Odor Threshold:	1-5	Boiling Point:	-120.89
Vapor Press:	40.5 ATM @ 20 C	Freezing/ Melting Point:	N/A
Vapor Density	1.30	Viscosity:	N/A
Formula Wgt:	36.46	Refract Index:	N/A
Density:	N/A	Surface Tension:	N/A
Spec Gravity:	N/A	% Volatile:	N/A
Appearance Odor:	Clear, colorless liquid with pungent irritation odor.		
Other Solubility:	N/A		
Evaporation Rate:	N/A		
Water Solubility:	67%		

Section 10 – Stability and Reactivity

Stability:	Stable
Polymerization:	Cannot not occur
Chemical Incompatibilities:	Most metals, forming hydrogen gases.
Conditions to Avoid:	Incompatibilities
Hazardous Decomposition Products:	Hydrogen gas

Material Safety Data Sheet

Product: Step 1 Cleaner MD400 Series

MSDS: 215026

Preparation Date: 2/15/02

Rev: B

Section 11 – Toxicological Information

Eye Effect: Irritation

Skin Effect: Irritation

Acute Inhalation Effects: Irritation to extremely dangerous or toxic

Acute Oral Effects: Irritation to extremely dangerous or toxic

Chronic Effects: See section 3 in this MSDS

Carcinogenicity: Not listed

Mutagenicity: Not listed

Teratogenicity: Not listed

Section 12 – Ecological Information

Ecotoxicity: N/A

Environmental Rate: N/A

Environmental Transport: N/A

Environmental Degradation: N/A

Soil Absorption Mobility: N/A

Section 13 – Disposal Conditions

Disposal: See section 6 of this MSDS

Disposal Regulatory Requirements: See section 15 of this MSDS

Container Cleaning And Disposal: N/A

Material Safety Data Sheet

Product: Step 1 Cleaner MD400 Series

MSDS: 215026

Preparation Date: 2/15/02

Rev: B

Section 14 – Transport Information

DOT Transportation Data (49 CFR 172.101)

Shipping Name: Corrosive Liquid, Inorganic, N.O.S. (hydrochloric Acid)

Shipping Symbols: N/A

Non-Bulk Packaging: N/A

Hazard Class: 8

Bulk Packaging: N/A

ID No: UN 3264

Quantity Limitations:

Packing Group: III

Passenger, Air, or Rail: 1 L

Label: Corrosive

Cargo Aircraft Only: 30L

Special Provision: N/A

Vessel Stowage Requirements:

Packaging N/A

Vessel Stowage: C

Exceptions:

Other: 8

Section 15 – Regulatory Information

EPA Regulation: listed

RCRA hazardous waste number: Not listed (40 CFR 261.33) listed.

RCRA hazardous waste classification: (40 CFR 261.77): classified.

CERCLA hazardous substance (40 CFR 302.4): not listed specific peer RCRA, Sec 3001; CWA, Sec 311 (b)(4);
Sec 307(a) listed.

CAA:

CERCLA Reportable Quality (RQ): listed.

SARA 311-312 Codes: listed.

SARA Toxic Chemical (40 CFR 372.65): listed.

SARA EHS (Extremely hazardous substance)(40 CFR 355): Not listed, Threshold Planning Quality (TPQ) listed.

OSHA Regulation: listed.

Air contaminant (29 CFR 1910.1000, Table Z-1-A):

OSHA Specifically Regulated Substance (29 CFR 1910.1000): listed.

State Regulation: STCC listed.

DOT (40 CFR 172.101 Append.): listed.

ACGIH Threshold Limit Value: listed.

MAK: listed.

TSCA: listed.

ANNEX 1: listed.

Material Safety Data Sheet

Product: Step 1 Cleaner MD400 Series

MSDS: 215026

Preparation Date: 2/15/02

Rev: B

Section 16 – Other Information

Disclaimer: Judgements as to suitability of information herein for purchaser's purposes Is necessarily purchaser's responsibility. Therefore, although reasonable care has been taken in the preparation of such information, Isopure Corp. service extends no warranties, suitability of such information for application to purchasers intended purposes or for the consequences of its use.

This product is manufactured for use in the Isopure MD Series of Reverse Osmosis machines. Isopure cannot validate the effectiveness of this product for use in other systems or applications.