

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 2 Cleaner MD400 Series

MSDS: 215028

Preparation Date: 2/15/02

Rev B

Section 1 – Chemical Product and Company Identification

Product Chemical Name: A chemical mixture

Chemical Formula: NaOH

CAS No.: 1310-73-2

Manufacture: Red Bird Services

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

Synonyms: Not Listed

Catalog # 961300

Section 2 – Composition/Information on Ingredients

Ingredient	CAS Number	% Wt or N
Sodium Hydroxide	1310-73-2	>3.0
Deionized Water	7732-18-5	Balance

Isopure Corp	Page 1 of 10	MSDS MD 400 STEP 2 CLEANER	Written & Approved By: SG
Approved By: KG		Issue Date: 2/15/02	Revision B MSDS 215028

Printed Copies are Uncontrolled

Material Safety Data Sheet

Section 2 – Composition/Information on Ingredients

OSHA PEL		ACGIH TLV		NIOSH REL		NIOSH
TWA	STEL	TWA	STEL	TWA	STEL	IDLH
2 mg/m ³	2 mg/m ³	2 mg/m ³	2 mg/m ³	2 mg/m ³	2 mg/m ³	10mg/m ³
Not Estab	Not Estab	Not Estab	Not Estab	Not Estab	Not Estab	Not Estab

Section 3 – Hazard Information

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

Primary Entry Route:	Inhalation, Digestion, and Skin Contact
Target Organs:	Eyes, Skin, Respiratory System, and Digestion Track
Acute Effects:	Irritation to dangerous. Sodium Hydroxide is very destructive to human tissue.
Inhalation:	Irritant to dangerous
Eye:	Irritant to dangerous
Skin:	Irritant to dangerous
Ingestion:	Irritant to dangerous
Carcinogenicity:	Not considered to be.
Medical Conditions:	None Listed
Chronic Effects:	None Listed

Isopure Corp	Page 2 of 10	MSDS MD 400 STEP 2 CLEANER	Written & Approved By: SG	
Approved By: KG		Issue Date: 2/15/02	Revision B	MSDS 215028

Printed Copies are Uncontrolled

Material Safety Data Sheet

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 Temperature:** N/A
- LEL:** N/A
- UEL:** N/A
- Flammability Classification:** 0
- Extinguishing Media:** Use that of surrounding fire
- Unusual Fire/Explosion Hazards:** None Listed
- Hazardous Combustion Products:** None Listed
- Instructions:** None Listed.

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.

Isopure Corp	Page 3 of 10	MSDS MD 400 STEP 2 CLEANER	Written & Approved By: SG	
Approved By: KG		Issue Date: 2/15/02	Revision B	MSDS 215028

Printed Copies are Uncontrolled

Material Safety Data Sheet

Section 6 – Accidental Release Measures

Spill/Leak Procedure:

Small Spills: Absorb with non-flammable material, collect for proper disposal

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.

Isopure Corp	Page 4 of 10	MSDS MD 400 STEP 2 CLEANER	Written & Approved By: SG	
Approved By: KG		Issue Date: 2/15/02	Revision B	MSDS 215028

Printed Copies are Uncontrolled

Material Safety Data Sheet

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.

Isopure Corp	Page 5 of 10	MSDS MD 400 STEP 2 CLEANER	Written & Approved By: SG	
Approved By: KG		Issue Date: 2/15/02	Revision B	MSDS 215028

Printed Copies are Uncontrolled

Material Safety Data Sheet

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.

Isopure Corp	Page 6 of 10	MSDS MD 400 STEP 2 CLEANER	Written & Approved By: SG	
Approved By: KG		Issue Date: 2/15/02	Revision B	MSDS 215028

Printed Copies are Uncontrolled

Material Safety Data Sheet

Section 9 – Physical and Chemical Properties

Physical State:	liquid	pH:	N/A
Odor Threshold:	N/A	Boiling Point:	ca 100 C
Vapor Press:	N/A	Freezing/ Melting Point:	N/A
Vapor Density	N/A	Viscosity:	N/A
Formula Wgt:	N/A	Refract Index:	N/A
Density:	N/A	Surface Tension:	N/A
Spec Gravity:	As Water	% Volatile:	N/A
Appearance Odor:	Clear, colorless liquid with acidic odor.		
Other Solubility:	N/A		
Evaporation Rate:	N/A		
Water Solubility:	Complete		

Section 10 – Stability and Reactivity

Stability:	Stable
Polymerization:	Cannot not occur
Chemical Incompatibilities:	Acids, strong oxidizers, most metals
Conditions to Avoid:	Incompatibilities
Hazardous Decomposition Products:	Toxic and corrosive fumes

Isopure Corp	Page 7 of 10	MSDS MD 400 STEP 2 CLEANER	Written & Approved By: SG	
Approved By: KG		Issue Date: 2/15/02	Revision B	MSDS 215028

Printed Copies are Uncontrolled

Material Safety Data Sheet

Section 11 – Toxicological Information

Eye Effect: Irritation

Skin Effect: Irritation

Acute Inhalation Effects: None Listed

Acute Oral Effects: None Listed

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: May be flushed to drain

Disposal Regulatory Requirements: See section 6 of this MSDS

Container Cleaning And Disposal: N/A

Isopure Corp	Page 8 of 10	MSDS MD 400 STEP 2 CLEANER	Written & Approved By: SG
Approved By: KG		Issue Date: 2/15/02	Revision B MSDS 215028

Printed Copies are Uncontrolled

Material Safety Data Sheet

Section 14 – Transport Information

DOT Transportation Data (49 CFR 172.101)

Shipping Name: Sodium Hydroxide Solution

Shipping Symbols: N/A **Non-Bulk Packaging:** N/A

Hazard Class: 8 **Bulk Packaging:** N/A

ID No: UN 1824 **Quantity Limitations:**

Packing Group: II **Passenger, Air, or Rail:** N/A

Label: Corrosive **Cargo Aircraft Only:** N/A

Special Provision: N/A **Vessel Stowage Requirements:**

Packaging Exceptions: N/A **Vessel Stowage:** N/A
Other: N/A

Section 15 – Regulatory Information

EPA Regulation:

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

RCRA hazardous waste classification: (40 CFR 261.): Not 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: Sec 12

CERCLA Reportable Quality (RQ):

SARA 311-312 Codes:

SARA Toxic Chemical (40 CFR 372.65):

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

OSHA Regulation:

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.):

ACGIH Threshold Limit Value:

MAK: Not listed.

TSCA: Not listed.

ANNEX 1: Not listed.

Isopure Corp	Page 9 of 10	MSDS MD 400 STEP 2 CLEANER	Written & Approved By: SG	
Approved By: KG		Issue Date: 2/15/02	Revision B	MSDS 215028

Printed Copies are Uncontrolled

Material Safety Data Sheet

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.

Isopure Corp	Page 10 of 10	MSDS MD 400 STEP 2 CLEANER	Written & Approved By: SG	
Approved By: KG		Issue Date: 2/15/02	Revision B	MSDS 215028

Printed Copies are Uncontrolled