

## Safety Data Sheet

**REVISION DATE:** 06/19/2017

### SECTION 1 - PRODUCT & COMPANY IDENTIFICATION

**PRODUCT NAME:** Descaler  
**USE:** Removes water scale  
**DESCRIPTION:** Concentrated descaler solution  
**MANUFACTURER:** Mainstream Engineering Corporation  
 200 Yellow Place  
 Rockledge, Florida 32955

**INFORMATION TELEPHONE:** 321-631-3550

**EMERGENCY TELEPHONE:** 800-424-9300

### SECTION 2 - HAZARDS IDENTIFICATION

#### GHS CLASSIFICATION IN ACCORDANCE WITH 29 CFR 1910

##### (OSHA HCS):

Skin irritation (Category 2)

Eye irritation (Category 2B)

#### HAZARD STATEMENT(S):

H316 Causes mild skin irritation.

H320 Causes eye irritation.

**PICTOGRAM(S):** None

**SIGNAL WORD:** Warning

#### PRECAUTIONARY STATEMENT(S):

P102 Keep out of reach of children.

P103 Read label before use.

P264 Wash skin thoroughly after handling.

P280 Wear protective gloves and eye protection.

P302 + P352

IF ON SKIN: Wash with plenty of soap and water.

P305 + P351 + P338

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P332 + P313

If skin irritation or a rash occurs: Get medical advice/attention.

P337 + P313

If eye irritation persists: Get medical advice/attention.

**HAZARDS NOT OTHERWISE CLASSIFIED BY GHS:** none

### SECTION 3 - PRODUCT COMPOSITION INFORMATION

COMPONENT	CAS #	AMOUNT
Water	7732-18-5	98%
Hydrochloric Acid	7647-01-0	<2%
Other*	-	<1%

\* TRADE SECRET - PROPRIETARY FORMULA. Specific chemical identities are withheld as a trade secret under the provisions of OSHA hazard communication standard 29 CFR 1910.1200.

### SECTION 4 - EMERGENCY & FIRST-AID PROCEDURES

**EYE:** Immediately flush eyes with water; remove contact lenses, if present, after the first 5 minutes, then continue flushing eyes for at least 15 minutes, occasionally lifting the upper and lower lids. Get medical aid immediately, preferably from an ophthalmologist.

**SKIN:** Remove contaminated clothing. Wash exposed area with soap and water. If symptoms persist, seek medical attention.

**INGESTION:** Seek medical attention. If individual is drowsy or unconscious, do not give anything by mouth. Drink milk or egg whites as indicated by a physician, medical facility, or poison control center.

**INHALATION:** If symptoms develop, immediately move individual away from exposure and into fresh air. Seek immediate medical attention.

**NOTICE TO PHYSICIANS:** No additional measures are noted.

### SECTION 5 - FIRE-FIGHTING MEASURES

**EXTINGUISHING MEDIA:** This material is an *aqueous* mixture and is considered non-flammable. Thus, the choice of extinguishing media should be made with consideration of the *surrounding* fire.

**HAZARDOUS DECOMPOSITION PRODUCTS:** No hazardous decomposition products are anticipated. Evaporation of the product, however, can result in the generation of gaseous hydrogen chloride.

**UNUSUAL FIRE AND EXPLOSION HAZARDS:** No explosion hazards are presented by this product.

**SPECIAL FIRE FIGHTING PROCEDURES:** Wear self-contained breathing apparatus and protective clothing.



## SECTION 6 – ACCIDENTAL RELEASE MEASURES

### PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES:

Use personal protective equipment outlined in section 8 for normal handling of this material. In the event of a spill, large amounts of water can be used to dilute the acid to safe levels. Ideally, sodium bicarbonate (*i.e.*, baking soda) should be used to neutralize the acid.

**ENVIRONMENTAL PRECAUTIONS:** Prevent release of unused product to the environment if possible. Only spent and neutralized product should be allowed to enter drains or sewer lines.

**MATERIALS FOR CONTAINMENT AND CLEAN-UP:** Use large amounts of water to dilute the acid during clean up, or use sodium bicarbonate (*i.e.*, baking soda) to neutralize any spilled product. Dispose according to local regulations.

**REFERENCE TO OTHER SECTIONS:** For additional disposal directions and reporting requirements, please refer to Section 13.

## SECTION 7 – HANDLING AND STORAGE

**PRECAUTIONS FOR SAFE HANDLING:** Keep container closed when not in use. Use good personal hygiene practices in accordance with this material. Avoid getting the product in eyes or on skin. Remove contaminated clothing and clean before re-use. Wash hands before eating or drinking.

Avoid inhalation of vapors or mist.

Please wear appropriate personal protective equipment for handling of this product as outlined in Section 8.

**STORAGE:** Store in a cool, dry location. Keep container tightly closed. Maintain adequate ventilation.

**SPECIAL STORAGE CONSIDERATIONS:** Monitor container periodically for damage. Do not transfer product to a metal container. Hydrochloric acid can react unfavorably with some alloys of aluminum, magnesium and zinc.

## SECTION 8 – EXPOSURE CONTROLS AND PERSONAL PROTECTION MEASURES

**EXPOSURE LIMITS:** For the component, hydrochloric acid, CAS #7647-01-0:

ACGIH	TLV	2 PPM
NIOSH	REL	5 PPM
OSHA	PEL	5 PPM

**ENGINEERING CONTROLS:** Handle product in accordance with good industrial hygiene and safety practice. Wash

hands thoroughly after possible contact with this material.

**PERSONAL PROTECTIVE EQUIPMENT:** Please wear appropriate person protective equipment for handling of this product as indicated below.

**EYE PROTECTION:** Chemical splash goggles are advised.

**SKIN PROTECTION:** Use gloves of an appropriate material (nitrile or neoprene gloves recommended) to minimize exposure.

**RESPIRATORY PROTECTION:** Normal intended use of this product should not result in a respiratory hazard. If there is a reason for workplace exposure limits to be exceeded, a NIOSH/MSHA approved air supplied respirator is advised.

## SECTION 9 - PHYSICAL AND CHEMICAL DATA

<b>APPEARANCE:</b>	Clear, red liquid
<b>ODOR:</b>	Slight odor
<b>ODOR THRESHHOLD:</b>	No data available
<b>pH:</b>	0.3 - 0.4
<b>FLASH POINT:</b>	None
<b>AUTOIGNITION TEMPERATURE:</b>	None
<b>FLAMMABILITY:</b>	Nonflammable
<b>EXPLOSION LIMITS:</b>	None
<b>MELTING POINT:</b>	~0 °C (32 °F)
<b>BOILING POINT (760 mm Hg):</b>	~100 °C (212 °F)
<b>VAPOR PRESSURE:</b>	No data available
<b>VAPOR DENSITY (AIR = 1):</b>	No data available
<b>SPECIFIC GRAVITY (WATER = 1):</b>	1.01
<b>SOLUBILITY:</b>	Miscibility with water
<b>PARTITION COEFFICIENT: (N-OCTANOL/WATER)</b>	No data available
<b>DECOMPOSITION TEMPERATURE:</b>	No data available
<b>VISCOSITY:</b>	No data available
<b>VOC CONTENT:</b>	0%
<b>EVAPORATION RATE: (N-BUTYL ACETATE = 1)</b>	No data available

## SECTION 10 – STABILITY AND REACTIVITY

**REACTIVITY:** No data available.

**CHEMICAL STABILITY:** Stable when handled or stored under the recommended conditions.

**POSSIBILITY OF HAZARDOUS REACTIONS:** Product contains hydrochloric acid which readily corrodes some alloys containing aluminum, magnesium, or zinc.

**HAZARDOUS POLYMERIZATION:** Product will not undergo hazardous polymerization



**CHEMICAL INCOMPATIBILITY:** Avoid contact with alloys of aluminum, magnesium or zinc. Avoid alkali metals and strongly caustic materials. Avoid excessive heating.  
**HAZARDOUS DECOMPOSITION PRODUCTS:** Product does not produce hazardous decomposition products. Excessive heating of the product should be avoided, however, as it may release acidic vapors.

**SECTION 11 - TOXICOLOGICAL INFORMATION**

**PRIMARY ROUTES OF ENTRY:** Skin contact, eye contact, ingestion.  
**INFORMATION ON TOXICOLOGICAL EFFECTS**  
**ACUTE SYMPTOMS:** Eye irritation, skin irritation, respiratory Irritation, intestinal irritation.  
**Eye:** Contact may cause serious irritation, redness, and pain.  
**Skin:** Prolonged contact may cause skin irritation.  
**Ingestion:** Large oral doses may cause gastrointestinal disturbances.  
**Inhalation:** High concentrations of mist may cause coughing and sneezing.  
**DELAYED EFFECTS:** No data available.  
**CHRONIC EFFECTS:** No data available.  
**MUTAGENICITY:** No evidence of a mutagenic effect.  
**TERATOGENICITY:** No evidence of a teratogenic effect (birth defect).  
**SENSITIZATION:** No evidence of a sensitization effect.  
**REPRODUCTIVE:** No evidence of negative reproductive effects.

**CHRONIC SYMPTOMS:** None

**CARCINOGENICITY**

IARC No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.  
NTP No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.  
OSHA No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

**SECTION 12 - ECOLOGICAL INFORMATION**

**TOXICITY:** No data available.  
**PERSISTENCE AND DEGRADABILITY:** No data available  
**BIOACCUMULATION:** No data available  
**SOIL TO GROUNDWATER MOBILITY:** No data available  
**OTHER ADVERSE EFFECTS:** No data available

**SECTION 13 – DISPOSAL CONSIDERATIONS**

**DISPOSAL METHODS:** Dispose in accordance with all applicable Federal, State and Local regulations. Always contact a permitted waste disposer to assure compliance.  
It is safe to dispose of product which is spent or neutralized (with sodium bicarbonate) into sewage systems with copious water.  
**SPECIAL CONSIDERATIONS FOR DISPOSAL:** None.

**SECTION 14 – TRANSPORT INFORMATION**

**DOT (US):** Non-regulated

**SECTION 15 – REGULATORY INFORMATION**

**SARA 302:** No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

**SARA 313:** The following components are subject to reporting levels established by SARA Title III, Section 313:

	CAS Number	Revision Date
Hydrochloric acid	7647-01-0	04-02-2015

**SARA 311/312 Hazards**

Acute Health Hazard

**Massachusetts Right To Know Components**

Hydrochloric acid	7647-01-0	04-02-2015
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**Pennsylvania Right To Know Components**

Water	7732-18-5	04-02-2015
Hydrochloric acid	7647-01-0	04-02-2015

**New Jersey Right To Know Components**

Water	7732-18-5	04-02-2015
Hydrochloric acid	7647-01-0	04-02-2015

**California Prop. 65 Components:** This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.



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## **SECTION 16 – OTHER INFORMATION**

### **HMIS RATING:**

Health hazard: 1  
Flammability: 0  
Physical Hazard: 0

### **NFPA RATING:**

Health: 1  
Flammability: 0  
Reactivity: 0

The information contained herein is believed to be accurate and is offered in good faith. The above information is, in part, based on material safety data sheets supplied by the vendors of the raw materials used in this product. Because product use is beyond our control, no warranty is given, expressed, or implied. Mainstream Engineering Corporation cannot assume any liability for the use of information contained herein or from damage resulting from handling or contact with the above product. To determine applicability or effect of any law or regulation with respect to the product, users should consult a legal advisor or appropriate governmental agency.

### **PREPARATION INFORMATION**

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