

MATERIAL SAFETY DATA SHEET  
Revised January 02, 2014

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

**Product Name:** Dynamic Descaler

**Manufactured by:**

Precision Dynamics, Inc.  
P.O. Box 1595, Burseson Texas 76097 U.S.A.  
Telephone 817-447-9898  
Fax 817-447-1126  
Toll free 1-800-388-5818  
For chemical emergency, call Infotrac at 1-800-535-5053 (outside U.S. and Canada, call collect 1-352-323-3500)

SECTION 2: HAZARDS IDENTIFICATION

Components:			OSHA	ACGIH	Other
Specific Chemical Identity	CAS	% Weight	PEL	TLV	Limits
Aqueous Hydrogen Chloride	7647-01-0	9.0	5 ppm (ceiling)	2 ppm (ceiling)	N/A

**Health Hazards:** If used as directed, should not be considered hazardous. Not a carcinogen.

NFPA: Health-1, Flammability-0, Reactivity-0

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Cleaning Descaling Compound  
Formula: Proprietary

SECTION 4: FIRST AID MEASURES

**Eye contact:** Flush eyes immediately with large quantities of water for at least 15 minutes holding eyelids apart to ensure flushing of the entire surface. Washing eyes within one (1) minute is necessary to achieve maximum effectiveness. If irritation persists, get medical attention.

**Skin contact:** Wash with plenty of water for 15 minutes. Remove contaminated clothing and wash before reuse. Seek medical attention if symptoms are present.

**Ingestion:** Never give anything by mouth to an unconscious person. If swallowed, do not induce vomiting. Give large quantities of water or milk of magnesia; if available, several glasses of milk.

**Inhalation:** Remove to fresh air. If person is not breathing, administer mouth-to-mouth resuscitation. Seek medical attention if loss of consciousness occurs or breathing stops. Seek medical attention if irritation persists.

SECTION 5: FIRE FIGHTING MEASURES

**Flash Point:** N/A

**Flammable Limits:** N/A

**Extinguishing Media:** Water spray, foam, CO<sub>2</sub>

**Special Fire Fighting Procedures:** Use NIOSH/MSHA approved self-contained breathing apparatus in areas where this material is involved in a fire. This product is nonflammable.

**Unusual Fire Fighting and Explosion Hazards:** Protective clothing for skin and eye protection should be worn.

SECTION 6: ACCIDENTAL RELEASE MEASURES

**Steps to be taken if material is spilled or released:** This material is biodegradable. Use appropriate protection—rubber gloves, goggles or safety glasses. Contain spill. Neutralize with copious amounts of water. Slowly add a soda ash mixture to the residue. This mixture should be 10 pounds of soda ash to 5 gallons of water. This should bring the spill residue within normal pH range of 6-8.

SECTION 7: HANDLING AND STORAGE

This product has a wide temperature storage range (-15°C to 82°C). Make sure containers are sealed in storage when not used. Shelf life is 4 (four) years.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

**Respiratory Protection:** None require under normal conditions with adequate general ventilation.

**Protected Clothing:** Rubber may be used.

**Ventilation:** Mechanical (general).

**Eyes:** Safety glasses, goggles.

**Other Protective Clothing or Equipment:** Standard work clothes should be worn. Wash soiled clothing in soap and water and dry before reuse. Eyewash facilities should be accessible.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

**Boiling Point:** 108°C

**Specific Gravity (H<sub>2</sub>O=1):** 1.06

**Vapor Pressure (mm. Hg):** 20 Torr

**Melting Point:** -17°C

**Vapor Density (air=1):** N/A

**Evaporation Rate:** N/A

**Solubility in Water:** Complete

**Appearance and Odor:** Amber, Citrus Odor

**pH:** < 2

SECTION 10: STABILITY AND REACTIVITY

**Conditions contributing to instability:** Under normal conditions this product is stable.

**Incompatibility:** Do not mix with alkaline products.

**Hazards Decomposition Products:** None

**Conditions Contributing to Hazardous Polymerization:** None.

#### **SECTION 11: TOXICOLOGICAL INFORMATION**

This product has been approved by the U.S. Navy, British Royal Navy, Ford Motor Company, Dow Chemical and General Motors Corp., following complete toxicological and environmental health evaluations.

This product does not contain any material shown to be carcinogen by the National Toxicology Program (NTP) or The International Agency for Research in Cancer (IRAC).

While no data is currently available on the ecology of this formulation as a whole, empirically we know that the components of Dynamic Descaler are not bio accumulate in animal or plant tissue. It is know that these compounds quickly are broken down or biodegraded into compounds such as carbon dioxide (CO<sub>2</sub>) and water (H<sub>2</sub>O).

#### **SECTION 12: ECOLOGICAL INFORMATION**

This product is biodegradable. This product neutralizes in use and is non-toxic in that state.

#### **SECTION 13: DISPOSAL CONSIDERATIONS**

**Waste Disposal Method:** This product is diluted and expended during use. It is recommended that it be pumped back into the delivery container and disposed of with non-hazardous by-products and production residues. Residues can also be disposed of through normal sump and sewage treatment systems.

**Precautions to be Taken in Handling and Storage:** Good industrial hygiene practices should be adhered to when storing and handling this product. Avoid contact with undiluted product. This material when used or completely spent is non-hazardous. It neutralizes itself in use.

#### **SECTION 14: TRANSPORT INFORMATION**

**U.S. DOT Proper Shipping Name:** Cleaning Preparation, NMFC No. 48580-03

**For Overseas Shipments:** Use No. 3402.90.5030

#### **SECTION 15: REGULATORY INFORMATION**

This product complies with current Workplace Hazardous Information Systems. This product is NSF Registered, category A3. NSF Registered for use in beverage, pharmaceutical, bottling, poultry, and other food processing operations, but not intended for direct food contact. Non-reported under SARA Title: 3 Section 311/312/313 Categorization.

**U.S. Superfund Amendments and Reauthorization Act (SARA) Title 3:** Reportable elements: Hydrochloric Acid, CAS# 7647-01-0

**U.S. Toxic Substance Control Act:** All ingredients contained in this product have been registered under the Toxic Substance Control Act. This product contains one substance that is subject to reporting—CAS# 7647-01-0 Hydrochloric Acid. This product does not contain any Class I or Class II ozone depleting substance. Neutralization of the product and clean up the area of spillage is undertaken by flooding with copious amount of water and neutralization.

**Waste Classification Non-Hazardous:** This product neutralizes itself in operation.

#### **SECTION 16: OTHER INFORMATION:**

This information contained herein is relative to the product as shipped and used as prescribed dilutions ratios on site.

HMIS Health 1, Flammability 0, Reactivity 0

Do not circulate this product for more than a four (4) hour period without consulting the manufacturer or your local representative. Most cleaning cycles can be accomplished within a two (2) to four (4) hour cycle. This material should be used only as directed. Use at ambient temperatures. Increase in temperature places personnel at risk.

This Material Safety Data Sheet was prepared in accordance with 29 CFR 1910:1200 and the ANSI Z400.1 sixteen-part format. All information, recommendations and suggestions appearing herein concerning our product are based upon tests and data believed to be reliable; however it is the user's responsibility to determine the safety, toxicity and suitability for their own use of the product described herein. Since actual use by others is beyond our control, no guarantees, expressed or implied, are made by Precision Dynamics, Inc. and its representatives as to the effects of such use, the results to be obtained or the safety and toxicity of the product, nor does Precision Dynamics, Inc. or its representatives assume any liability arising out of the use by others of the product referred herein. The information herein is not be construed as absolutely complete since additional information may be necessary or desirable when particular or exceptional conditions or circumstances exist or because of applicable laws of government regulations.