MATERIAL SAFETY DATA SHEET

This MSDS complies with OSHA'S Hazard Communication Standard 29 CFR 1910.1200 and OSHA Form 174

IDENTITY AND MANUFACTURER'S INFORMATION

NFPA Rating: Health-3; Flammability-0; Reactivity-0; Special- -	**HMIS Rating:** Health-3; Flammability-0; Reactivity-0; Personal Protection-B
Manufacturer's Name: H & B Industries, Inc. Address: 9758 Abernathy Ave. Dallas, TX 75220	**DOT Hazard Classification:** Corrosive Material 8 **Identity** (trade name as used on label): **HB-199J DELIME SCALE REMOVER**
Date Prepared: 02/05/05 Prepared By: ED	MSDS Number: **HB199J** Revision - 2
Information Calls: (800) 466-0855 **EMERGENCY RESPONSE NUMBER: (800) 535-5350**	NOTICE: JUDGEMENT BASED ON INDIRECT TEST DATA

SECTION 1 - MATERIAL IDENTIFICATION AND INFORMATION

COMPONENTS-CHEMICAL NAMES AND COMMON NAMES (Hazardous Components 1% or greater; Carcinogens 0.1% or greater)	CAS Number	SARA III LIST	OSHA PEL (ppm)	ACGIH TLV (ppm)	Carcinogen Ref. Source **
HYDROCHLORIC ACID	7647-01-0	Yes	5	5	d

SECTION 2 - PHYSICAL/CHEMICAL CHARACTERISTICS

Boiling Point: >212 º F	**Specific Gravity** (H2O=1): 1.06-1.08
Vapor Pressure: PSIG @ 70°F (Aerosols): N/A	**Vapor Pressure** (Non-Aerosols)(mm Hg and Temperature) 75º F: 26m
Vapor Density (Air = 1): N/A	**Evaporation Rate (** water = 1): 1.0
Solubility in Water: Total	**Water Reactive:** No

Appearance and Odor: Clear, amber fluid with chlorine odor.

SECTION 3 - FIRE AND EXPLOSION HAZARD DATA

FLAMMABILITY as per USA FLAME PROJECTION TEST (aerosols) N/A	Auto Ignition	Temperature N/A	Flammability Limits in Air by % in Volume: % LEL: N/A % UEL: N/A

FLASH POINT AND METHOD USED (non-aerosols): None **SPECIAL FIRE FIGHTING PROCEDURES:** None	**EXTINGUISHER MEDIA:** Non-combustible

Unusual Fire & Explosion Hazards: Avoid exposure to metals, oxidants which might produce flammable hydrogen gas.

SECTION 4 - REACTIVITY HAZARD DATA

STABILITY **[** X] STABLE [ ] UNSTABLE	**HAZARDOUS POLYMERIZATION [ ]** WILL [X] WILL NOT OCCUR
Incompatibility (Mat. to avoid): Bases, metals, mercuric sulfate, carbides of Ca, Cs, Rb.	**Conditions to Avoid:** Contact with strong bases can cause violent reaction generating large amounts of heat.

Hazardous Decomposition Products: Hydrogen gas.

SECTION 5 - HEALTH HAZARD DATA

PRIMARY ROUTES OF ENTRY: **[** X] INHALATION [ ] INGESTION [X] SKIN ABSORPTION [X] EYE [ ] NOT HAZARDOUS

ACUTE EFFECTS

Inhalation: Irritant causing burning, choking, coughing, headaches.

Eye Contact: Irritation, severe burns & permanent damage including blindness.	**Skin Contact:** Burning, irritation and dermatitis.

Ingestion: Unlikely route, causes severe burns to internal organs.

CHRONIC EFFECTS: None known.

Medical Conditions Generally Aggravated by Exposure: Skin, eye, mucous membrane irritation.

EMERGENCY FIRST AID PROCEDURES

Eye Contact: Flush with water for 15 minutes. Get medical attention.

Skin Contact: Remove contaminated clothing. Wash with water for 15 minutes.

Inhalation: Remove to fresh air. Get medical attention.

Ingestion: DO NOT INDUCE VOMITING. Drink large quantity of water. Get immediate medical attention.

SECTION 6 - CONTROL AND PROTECTIVE MEASURES

Respiratory Protection (specify type): Approved self-contained breathing apparatus when air concentrations exceed 100 ppm HCL vapors.

Protective Gloves: Neoprene **Eye Protection:** Chemical goggles and/or face shield.

Ventilation Requirements: As necessary to maintain HCL vapors below 5 ppm at all times.

Other Protective Clothing & Equipment: Neoprene or PVC rain suit & boots in case of fire.

Hygienic Work Practices: Do not eat, drink or smoke in work area. Wash hands after handling.

SECTION 7 - PRECAUTIONS FOR SAFE HANDLING AND USE

Steps To Be Taken If Material Is Spilled Or Released: Contain fluid by diking. Neutralize with soda ash or diluted caustic soda.

Waste Disposal Methods: Wash neutralized material down the sewer.

Precautions To Be Taken In Handling & Storage: Store in original container or acid-resistant containers. Keep container sealed when not in use. Shelf life one year. Store in cool, bare metal free area.

Other Precautions &/or Special Hazards: KEEP OUT OF REACH OF CHILDREN. Read and follow label directions. Do not store near strong alkalies or other reactive metals.

We believe the statements, technical information and recommendations contained herein are reliable, but they are given without warranty or guarantee of any kind.

** Chemical Listed as Carcinogen or Potential Carcinogen. [a] NTP [b] IARC Monograph [c] OSHA [d] Not Listed [e] Animal Data Only