SECTION I - IDENTIFICATION

MANUFACTURER'S NAME ........................................ Haviland Consumer Products Incorporated
MANUFACTURER'S ADDRESS ................................ 421 Ann St, N.W., Grand Rapids, MI 49504
PHONE NUMBER .................................................. (616) 361-6691
EMERGENCY PHONE NUMBER ......................... CHEMTREC (800) 424-9300
EFFECTIVE DATE ...................................................... 4/4/99
TRADE NAME .............................................................. RUST AND SCALE CONTROL
CHEMICAL FAMILY .................................................. Miscellaneous Blend

SECTION II - HAZARDOUS INGREDIENTS

HAZARDOUS INGREDIENTS OSHA PEL TLV (Units) CAS NUMBER
(1-Hydroxyethylidene-1) 1-Diphosphonic Acid Not Established Not Established 2809-21-4

SECTION III - PHYSICAL DATA

BOILING POINT .......................................................... >212°F
FREEZING POINT .......................................................... No Information Available
VAPOUR PRESSURE ...................................................... No Information Available
VAPOUR DENSITY (air=1) ........................................ No Information Available
SOLUBILITY IN H2O ...................................................... Completely
ODOUR AND APPEARANCE ........................................... Clear, colorless to pale yellow liquid; Mild vinegar-like odor.
SPECIFIC GRAVITY ...................................................... 1.24 @ 68°F
pH ................................................................. 1% Solution: <2

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASHPOINT AND METHOD OF DETERMINATION ........... >212°F
LOWER EXPLOSIVE LIMIT (% by Volume) .................. Not Applicable
UPPER EXPLOSIVE LIMIT (% by Volume) .................. Not Applicable
MEANS OF EXTINCTION .............................................. Water fog, carbon dioxide, foam, dry chemical.
SPECIAL FIRE FIGHTING PROCEDURES ........................ Self-contained breathing apparatus is required. Water spray may be used to cool containers.
UNUSUAL FIRE HAZARD ............................................... None Currently Known

SECTION V - HEALTH HAZARD DATA

CARCINOGENICITY, REPRODUCTIVE EFFECTS .............. None
NTP? ................................................................. No
IARC MONOGRAPHS? ............................................... No
OVER EXPOSURE EFFECTS ......................................... Irritation to eyes.
PRIMARY ROUTE(S) OF ENTRY .................................... Inhalation; Eye Contact
SPECIFIC FIRST AID PROCEDURES ............................... In case of eye contact: Flush immediately with plenty of water for at least 15 minutes and get medical attention; For skin, wash thoroughly with soap and water; wash contaminated clothing before reuse. If inhaled: Remove to fresh air. If ingested: DO NOT INDUCE VOMITING. Rinse with copious amounts of milk or water, first. Irrigate
Material Safety Data Sheet

EXPOSURE AGGRAVATED MEDICAL CONDITIONS

esophagus and dilute stomach contents by slowly giving one or two
glasses of water or milk. Seek medical attention.
None Currently Known

SECTION VI - REACTIVITY DATA

CHEMICAL STABILITY ....................... Stable
CONDITIONS TO AVOID ....................... Avoid contact with concentrated caustic; will result in evolution of heat.
INCOMPATIBLE MATERIALS .................... Strong alkali, strong oxidizers
HAZARDOUS DECOMPOSITION PRODUCTS ...... Oxides of phosphorus and carbon, acids of phosphorus
HAZARDOUS POLYMERIZATION ............... Will Not Occur
POLYMERIZATION AVOID ..................... Not Applicable

SECTION VII - SPILL OR LEAK PROCEDURE

LEAK AND SPILL PROCEDURES .................. Flush with water or neutralize with lime or soda ash and flush to sewer.
WASTE DISPOSAL ......................... Comply with all federal, state and local regulations.

SECTION VIII - SPECIAL PROTECTION

RESPIRATORY PROTECTION ..................... None Required for Normal Use
VENTILATION............................... None Required for Normal Use
PROTECTIVE GLOVES ....................... Rubber or other impervious materials.
EYE PROTECTION............................. Chemical splash proof goggles.
OTHER PROTECTIVE EQUIPMENT ................. A safety shower and eye bath should be available. For operations where spills
or splashing may occur, use an impervious body covering and boots.

HANDLING PROCEDURES AND EQUIPMENT ........ Store in cool, dry, well ventilated area.

SECTION IX - SPECIAL PRECAUTIONS

HAZARD CLASS ....................... Corrosive, 8, PG II
DOT SHIPPING NAME ..................... CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (1-Hydroxyethylidene)
........................................ Diposphonic Acid
UN NUMBER ..................... UN3265
REPORTABLE QUANTITY (RQ) ............... N/A

REFERENCES........... ZZIRTSCL HMIS H-2 F-1 R-1

4/29/02