

1. PRODUCT AND COMPANY IDENTIFICATION

NAME: ENDURE
 USE: MECHANICAL DISH DETERGENT
 LABEL BRAND: U S CHEMICAL
 MSDS # 102036 CODE # 057769

U S CHEMICAL, 316 HART STREET, WATERTOWN, WI 53094 USA
 MEDICAL EMERGENCY #: 1-866-923-4913 USA
 SPILL EMERGENCY #: 1-800-424-9300 USA
 PRODUCT INFORMATION #: 1-800-558-9566 (8 A.M. TO 5 P.M. CST MONDAY TO FRIDAY)
 INTERNET ADDRESS: WWW.USCHEMICAL.COM
 REVIEWED 4-1-10 REVISED 4-1-10 SECTION REVISED: 1

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW:
 DANGER. CORROSIVE. CAUSES EYE AND SKIN BURNS.
 HARMFUL OR FATAL IF SWALLOWED.



PRINCIPLE ROUTES OF EXPOSURE: EYES, SKIN, INGESTION, INHALATION.

POTENTIAL ACUTE HEALTH EFFECTS

EYES: CORROSIVE. CAUSES EYE BURNS. MAY CAUSE PERMANENT DAMAGE INCLUDING BLINDNESS WITHOUT IMMEDIATE FIRST AID TREATMENT.

SKIN: CORROSIVE. CAUSES SKIN BURNS. MAY CAUSE PERMANENT DAMAGE. HARMFUL CONTACT MAY NOT CAUSE IMMEDIATE PAIN.

INHALATION: CORROSIVE. INHALATION OF DUST OR MISTS MAY CAUSE CORROSIVE EFFECTS TO NOSE, THROAT AND RESPIRATORY SYSTEM.

INGESTION: CORROSIVE. MAY CAUSE BURNS TO MOUTH, THROAT AND STOMACH. HARMFUL OR FATAL IF SWALLOWED.

MEDICAL CONDITIONS AGGRAVATED: NONE KNOWN.

3. COMPOSITION / INFORMATION ON INGREDIENTS

HAZARDOUS INGREDIENT	CAS #	% BY WT	LC50/LD50
SODIUM HYDROXIDE	1310-73-2	10.0 - 30.0	SEE 11.0
SODIUM DICHLORO-S-TRIAZINETRIONE	2893-78-9	1.0 - 5.0	N.A.V.
SODIUM CARBONATE	497-19-8	30.0 - 60.0	N.A.V.

STATE RIGHT TO KNOW: THIS PRODUCT CONTAINS:
 SODIUM CARBONATE/497-19-8, SODIUM HYDROXIDE/1310-73-2, SODIUM CHLORIDE/7647-14-5,
 SODIUM TRIPOLYPHOSPHATE/7758-29-4, SODIUM DICHLORO-S-TRIAZINETRIONE/2893-78-9

ENDURE

4. FIRST AID MEASURES

EYES: IMMEDIATELY FLUSH EYES WITH RUNNING WATER FOR 15-20 MINUTES, KEEPING EYEID OPEN. SKIN: IMMEDIATELY FLUSH WITH PLENTY OF WATER FOR 15-20 MINUTES. REMOVE AND WASH CONTAMINATED CLOTHING AND FOOTWEAR BEFORE RE-USE.
 IF SWALLOWED: RINSE MOUTH. GIVE A CUPFUL OF WATER OR MILK. THEN IMMEDIATELY CONTACT A PHYSICIAN OR POISON CENTER. DO NOT INDUCE VOMITING UNLESS DIRECTED TO DO SO BY MEDICAL PERSONNEL. NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON.
 INHALATION: IF BREATHING IS AFFECTED, REMOVE TO FRESH AIR.
 ADMINISTER FIRST AID TREATMENT AS STATED ABOVE, THEN CALL 1-866-923-4913 OR CONTACT PHYSICIAN FOR FURTHER MEDICAL INSTRUCTIONS.
 NOTE TO PHYSICIAN: CALL 1-866-923-4913 FOR ASSISTANCE WITH THE MANAGEMENT OF EXPOSURE

5. FIRE-FIGHTING MEASURES

FLAMMABILITY: NO HAZARD.
 FLASH POINT: N.A.P.
 PRODUCTS OF COMBUSTION: SEE SECTION 10.
 SUITABLE EXTINGUISHING MEDIA: FOR FIRES IN AREA, USE APPROPRIATE MEDIA. FOR EXAMPLE: WATER SPRAY, DRY CHEMICAL, CARBON DIOXIDE, OR ALCOHOL FOAM.
 SPECIFIC HAZARDS: CORROSIVE PRODUCT MAY REACT WITH CERTAIN METALS. SEE 8. AND 10. THIS PRODUCT MAY REACT VIOLENTLY WITH WATER.
 SPECIFIC METHODS: NORMAL FIRE FIGHTING PROCEDURES MAY BE USED.

6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS: CORROSIVE. PUT ON PERSONAL PROTECTIVE EQUIPMENT. SEE 8.
 SPILL RESPONSE: EVACUATE UNPROTECTED PERSONNEL FROM AREA. WEAR PROPER PROTECTIVE EQUIPMENT. CAREFULLY SWEEP UP AND SHOVEL INTO DRY CONTAINERS WITHOUT RAISING DUST. COVER CONTAINERS AND MOVE CONTAINERS OUT OF SPILL AREA. AFTER SPILL COLLECTION, FLUSH AREA WITH WATER AND FOLLOW WITH NORMAL CLEAN-UP PROCEDURES. BE CAREFUL AS SPILLS ARE SLIPPERY.

7. HANDLING AND STORAGE

HANDLING: FOLLOW ALL LABEL DIRECTIONS. INSTRUCT PERSONNEL ABOUT PROPER USE, HAZARDS, PRECAUTIONS, AND FIRST AID MEASURES. AVOID INHALATION, INGESTION, AND CONTACT WITH SKIN, EYES AND CLOTHING. DO NOT TASTE OR SWALLOW. REMOVE AND WASH CONTAMINATED CLOTHING AND FOOTWEAR BEFORE RE-USE. PRODUCT RESIDUE MAY REMAIN IN EMPTY CONTAINERS. HANDLE CAREFULLY TO AVOID DAMAGING CONTAINER.
 STORAGE: ROTATE STOCK REGULARLY. KEEP CONTAINER CLOSED WHEN NOT IN USE. AVOID TEMPERATURES ABOVE 120°F. STORAGE AT AMBIENT TEMPERATURES IN A DRY AREA OUT OF DIRECT SUNLIGHT IS RECOMMENDED. KEEP AWAY FROM FOOD AND DRINK. KEEP OUT OF CHILDREN'S REACH.

ENDURE

MSDS # 102036

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE LIMITS:
 SODIUM HYDROXIDE = 2 MG/M3 CEILING LIMIT (ACGIH), 2 MG/M3 TWA (OSHA)
 SODIUM DICHLORO-S-TRIAZINETRIONE = 0.5 PPM TWA AS CHLORINE, 1 PPM STEL AS CHLORINE (ACGIH), 1 PPM CEILING LIMIT (OSHA)
 ENGINEERING CONTROLS: NONE REQUIRED. GENERAL ROOM VENTILATION IS TYPICALLY ADEQUATE.

PERSONAL PROTECTION

EYES: SPLASH PROOF SAFETY GLASSES, SAFETY GOGGLES AND AN EYE WASH STATION.
 HANDS: CHEMICAL RESISTANT GLOVES: RUBBER OR NEOPRENE. LONG TYPE IF NEEDED.
 RESPIRATORY: WEAR DUST MASK IF HANDLING CREATES AIR-BORNE DUST.
 FEET: TYPICALLY NOT NEEDED. WEAR BOOTS DURING SPILL & WHEN EXPOSURE IS POSSIBLE.
 BODY: IF MAJOR EXPOSURE IS POSSIBLE, WEAR FULL-COVER PROTECTIVE CLOTHING.

9. PHYSICAL AND CHEMICAL PROPERTIES

COLOR: WHITE
 ODOR: CHLORINE
 pH CONCENTRATE: N.A.P.
 pH @ 2500 PPM SOLUTION: 11.6 (BASIC)
 pH @ USE DILUTION: N.A.V.
 PHYSICAL STATE: GRANULAR POWDER
 SPECIFIC GRAVITY: N.A.P.
 VISCOSITY: N.A.P.
 BOILING POINT: N.A.P.
 MELTING POINT: N.A.P.
 FLASH POINT: N.A.P.
 UEL: N.A.P.
 LEL: N.A.P.
 EVAPORATION RATE: N.A.P.
 ODOR THRESHOLD: N.A.P.
 VAPOR PRESSURE: N.A.P.
 VAPOR DENSITY: N.A.P.
 COEFF. OIL/WATER: N.A.P.
 WATER SOLUBILITY: MODERATE
 OTHER: N.A.P.

10. STABILITY AND REACTIVITY

STABLE: YES
 CONDITIONS TO AVOID: AVOID TEMPERATURES ABOVE 120°F AND HIGH HUMIDITY TO PREVENT CAKING.
 MATERIALS TO AVOID: AVOID MIXING DIRECTLY WITH ANY OTHER CLEANING PRODUCT. AVOID ACIDS AND VARIOUS METALS (ALUMINUM, ZINC, TIN, BRASS OR BRONZE) WHICH CAN GENERATE FLAMMABLE HYDROGEN GAS. MIX ONLY WITH WATER BELOW 150°F.
 COMPOSITION PRODUCTS: FIRE OR MIXING WITH INCOMPATIBLE MATERIALS MAY PRODUCE OXIDES OF CARBON AND OTHER TOXIC OR IRRITATING FUMES.
 POSSIBILITY OF HAZARDOUS REACTIONS: AVOID MIXING DIRECTLY WITH ACIDS.

11. TOXICOLOGICAL INFORMATION

ACUTE EFFECTS: CORROSIVE. SEE SECTION 2.
 CHRONIC EFFECTS: NONE KNOWN. NO REPORTABLE CARCINOGENS, MUTAGENS, SENSITIZERS, SYNERGISTIC MATERIALS, TERATOGENS, OR REPRODUCTIVE TOXINS.
 LC50/LD50: SODIUM HYDROXIDE 50%: 220 MG/KG ORAL-RAT LD50
 SODIUM HYDROXIDE: 1350 MG/KG DERMAL-RABBIT LD50
 TARGET ORGANS: EYES, SKIN, RESPIRATORY SYSTEM.
 OTHER TOXIC EFFECTS: NONE KNOWN.

ENDURE

MSDS # 102036

12. ECOLOGICAL INFORMATION

NOT AVAILABLE. Page 4 of 4

13. DISPOSAL CONSIDERATIONS

DISPOSAL METHOD: UNDILUTED PRODUCT IS REGULATED UNDER ENVIRONMENTAL AND TRANSPORTATION LAWS AS A CORROSIVE WASTE (RCRA CLASS D002). DISPOSE OF ACCORDING TO ALL FEDERAL, STATE, PROVINCIAL AND LOCAL LAWS AND REGULATIONS. CONSULT STATE AND LOCAL AUTHORITIES FOR RESTRICTIONS ON DISPOSAL OF CHEMICAL WASTE. MANAGE CHEMICAL WASTES THROUGH AN APPROVED WASTE TREATMENT FACILITY. DO NOT REUSE EMPTY CONTAINER. RINSE EMPTY CONTAINER THOROUGHLY WITH WATER BEFORE DISCARDING CONTAINER IN ACCORDANCE WITH CURRENT LOCAL COMMUNITY CODES. PLEASE RECYCLE EMPTY CONTAINER WHENEVER POSSIBLE.

14. TRANSPORT INFORMATION

DOT/TDG: CORROSIVE SOLID, BASIC, INORGANIC, N.O.S. (CONTAINS SODIUM HYDROXIDE), 8, UN3262, II
 DOT RQ: N.A.P.
 DOT ERG #: 154

15. REGULATORY INFORMATION

EPA CERCLA RQ: SODIUM HYDROXIDE = 1000 LB
 EPA REGISTERED: NO
 OSHA HAZARDOUS: YES
 PHOSPHORUS CONTENT: SEE LABEL
 PROPOSITION 65: N.A.P.
 SARA 311/312 HAZARDS: ACUTE
 SARA 313 CHEMICALS: NO
 STATE RIGHT TO KNOW: SEE SECTION 3 FOR CHEMICAL NAMES.
 TSCA INVENTORY STATUS: ALL COMPONENTS ARE LISTED ON THE INVENTORY.
 VOC: 0.00% MEETS THE EPA VOC EMISSIONS STANDARD AND TITLE 17, CALIFORNIA CODE OF REGULATIONS, DIVISION 3, CHAPTER 1, SUBCHAPTER 8.5, ARTICLE 2, CONSUMER PRODUCTS, SECTIONS 94508.
 WHMIS CLASS: E

16. OTHER INFORMATION

NFPA RATING: HEALTH-3/FLAMMABILITY-0/REACTIVITY-1/SPECIAL HAZARD-N.A.P.
 HMIS RATING: HEALTH-3/FLAMMABILITY-0/REACTIVITY-1/PERSONAL PROTECTION-SEE 8.0
 N.A.V. = NOT AVAILABLE N.A.P. = NOT APPLICABLE
 PREPARED BY: HEALTH AND SAFETY

NOTICE TO READER

THIS DOCUMENT HAS BEEN PREPARED USING DATA FROM SOURCES CONSIDERED TECHNICALLY RELIABLE. IT DOES NOT CONSTITUTE A WARRANTY, EXPRESS OR IMPLIED, AS TO THE ACCURACY OF THE INFORMATION CONTAINED WITHIN. ACTUAL CONDITIONS OF USE AND HANDLING ARE BEYOND SELLER'S CONTROL. USER IS RESPONSIBLE FOR EVALUATING ALL AVAILABLE INFORMATION WHEN USING PRODUCT FOR ANY PARTICULAR USE AND TO COMPLY WITH ALL FEDERAL, STATE, PROVINCIAL AND LOCAL LAWS AND REGULATIONS.