Product ID:PERMA-LOK (R) MM 115 MSDS Date:08/16/1989 FSC:8030 NIIN:01-025-1692 **MSDS Number: BHGBH** === Responsible Party === Company Name: NATIONAL STARCH AND CHEMICAL CORPORATION Address: FINDERNE AVENUE Box:6500 City:BRIDGEWATER State:NJ ZIP:08807 Country:US Info Phone Num:201-68 5-5379 Emergency Phone Num:201-685-5000 Preparer's Name: PHILIP A. TOSCANO CAGE:85091 === Contractor Identification === Company Name:NATIONAL STARCH AND CHEMICAL CORP Address:10 FINDERNE AVE Box:6500 City:BRIDGEWATER State:NJ ZIP:08807 Country:US Phone:908-685-5379; FAX:908685-5306 CAGE:85091

Ingred Name:TETRAETHYLENEGLYCOL DIMETHACRYLATE (EYE AND SKIN IRRITANT) CAS:109-17-1

Ingred Name: HYDROXYETHYL METHACRYLATE

CAS:868-77-9 RTECS #:OZ4725000

Ingred Name:1-METHYL-1-PHENYLETHYL HYDROPEROXIDE (CUMENE HYDROPEROXIDE) (SARA III) CAS:80-15-9 RTECS #:MX2450000 EPA Rpt Qty:10 LBS DOT Rpt Qty:10 LBS

Ingred Name:SACCHARIN (SARA III) CAS:81-07-2 RTECS #:DE4200000 EPA Rpt Qty:100 LBS DOT Rpt Qty:100 LBS

Routes of Entry: Inhalation:YES Skin:YES Ingestion:YES Reports of Carcinogenicity:NTP:NO IARC:NO OSHA:NO Health Hazards Acute and

Chronic:IRRI, & MAY INJURE EYE TISSUE IF NOT REMOVED PROMPTLY. SKIN: PROLONGED CONTACT MAY IRRI & CAUSE DERMATITIS SENSITIZATION, DERMATITIC RASH -EXPOSURE MINIMAL. INHAL: LOW VOLATILITY, NOT CONSIDERED TO BE RESPIRATORY HAZARD UNDER NORMAL COND.IRRI, TOXIC VAPOR. INGES: NO EVALUATION, ASSUMED TO CAUSE NAUSEA & VOMITING

Effects of Overexposure:EYE: IRRI, MAY INJURE EYE TISSUE IF NOT REMOVED PROMPTLY. SKIN: IRRI, CAUSE DERMATITIS, SENSITIVE, PAR OR WHOLE BODY DERMATIT

IC RASH. INHAL: LOW VOLATILITY-NOT CONSIDERED RESPIRATORY HAZARD UNDER NORM AL COND. IRRI & TOXIC VAPOR MAY BE RELEASED AT ELEVATED TEMP. INGEST: NONE EVALUATED, ASSUMED TO CAUSE NAUSEA & VOMITING

Medical Cond Aggravated by Exposure: IN CERTAIN INDIVIDUALS, SENSITIZATION MAY OCCUR CAUSING DERMATITIS WITH EVEN MINIMAL CONTACT

First Aid:EYE: IMMD FLUSH W/LARGE AMT OF WTR AT LEAST 15 MIN, LIFTING LIDS. GET

PROMPT MEDATTN. SKIN: FLUSH AREAS W/SOAP & WTR UNTIL ALL CHEMICAL IS REMVED. REMOVE CONTAM CLOTHING & LAUNDER BEFORE REUSE. INHAL: FIRST AID ID NOT NORMALLY REQUIRED. REMOVE TO FRESH AIR. IF BREATH DIFF, GIVE OXYGEN/CPR. GET MED ATTN. INGEST: DO NOT INDUCE VOMIT. IF CONSCIOUS GIVE MILK/WTR. KEEP WARM/QUIET. GET PROMPT MED ATTN.

Flash Point Method:SCC Flash Point:230 F 110.00 C Lower Limits:NA **Upper Limit** s:NA Extinguishing Media:CO2, DRY CHEMICAL, FOAM, WATER Fire Fighting Procedures: FIRE FIGHTERS SHOULD BE EQUIPPED WITH SELF CONTAINED BREATHING APPARATUS TO PROTECT AGAINST POTENTIALLY TOXIC & IRRITATING FUMES; COOL EXPOSED EQUIP W/WTR SPRAY Unusual Fire/Explosion Hazard: IN LARGER QUANTITIES, COULD UNDERGO POLYMERIZATION GENERATING SIGNIFICANT HEAT AND PRESURE Spill Release Procedures: WEAR PROTECTIVE CLOTHS. STOP L EAK IF NO RISK. SMALL: TAKE UP WITH SAND/INERT ABSORBENT MATERIAL & PLACE IN A CONTAINER FOR DISPOSAL. NOTE: BULK QUANT, MAY POLYMERIZE GENERATE SIGNIFICANT HEAT/PRESSU RE. VENT CONTAINER. CAN SOLIDIFY W/ANAEROBIC Handling and Storage Precautions: ROOM TEMP. AVOID EXCESSIVE HEAT. STORE OUT OF DIRECT SUNLIGHT IN A DRY AREA. MAXIMUM STORAGE TEMP IS 100 F Other Precautions: SACCHARIN MAY IRRITATE THE EYES AND MUCOUS MEMBRANES. INGESTION MAY CAUSE ALLERGIC SKIN MANIFESTATIONS. Respiratory Protection: NONE REQUIRED UNDER NORMAL HANDLING CONDITIONS. USE NIOSH APPROVED RESPIRATOR IFVAPOR OR MIST LEVELS ARE IRRITATING Ventilation:GENERAL Protective Gloves: PROTECTIVE GLOVES Eve Protection: SAFETY GLASSES, GOGGLES OR FACE SHIELD Other Protective Equipment: NO SPECIAL CLOTHING REQUIRED FOR LOW VOLUME

ACTIVITY. REMOVE CLOT

HING & LAUNDER BEFORE REUSE IF CONTAMINATED Work Hygienic Practices:WASH HANDS WITH SOPA & WATER IF CONTACT WITH PRODUCT OCCURS OR BEFRE EATING, DRINKING, SMOKING, OR USE OF TOILET Supplemental Safety and Health NK
======================================
Melt/Freeze Pt:M.P/F.P Text:NA Vapor Pres:0.01 @ 77F Vapor Density:1.01 AIR Spec Gravity:1.070 pH:NA Evaporation Rate & amp; Reference:NOT NOTED Solubility in Water:INSOLUBLE Appearance and Odor:BLUE LIQUID; MILD, PLEASANT ODOR
======================================
Stability Indicator/Materials to Avoid:YES NK Stability Condition to Avoid:METALS & THEIR SALTS, PERMA-LOCK (R) ANAEROBIC SURFACE COND NFPA REACTIVITY HAZARD CLASS 2-MODERATE Hazardous Decomposition Products:THERMAL DECOMPOSITION COULD PRODUCE CARBON MONOXIDE, CARBON DIOXIDE, AND UNIDENTIFIED ORGANIC COMPOUNDS Conditions to Avoid Polymerization:ANAEROBIC & POLYMERIZE IN THE ABSENCE OF AIR, SUNL IGHT, EXCESSIVE HEAT & CONTAM BY METALS OR ANAEROBIC SUR COND LRG AMT

Waste Disposal Methods:SHOULD BE IN ACCORDANCE WITH EXISTING FEDERAL, STATE AND LOCAL ENVIRONMENTAL REGULATIONS

Disclaimer (provided with this information by the compiling agencies): This information is formulated for use by elements of the Department of Defense. The United States of America in no manner whatsoever, expressly or implied, warran ts this information to be accurate and disclaims all liability for its use. Any person utilizing this document should seek competent professional advice to verify and assume responsibility for the suitability of this information to their particular situation.