

NATIONAL STARCH & CHEMICAL COMPANY; PERMABOND -- PERMA-LOK (R) LM 113 P/N 78-4311 --
8030-01-054-3968

===== Product Identification =====

Product ID:PERMA-LOK (R) LM 113 P/N 78-4311

MSDS Date:12/31/1991

FSC:8030

NIIN:01-054-3968

MSDS Number: BSHMF

=== Responsible Party ===

Company Name:NATIONAL STARCH & CHEMICAL COMPANY; PERMABOND

Address:FINDERNE AVE

Box:6500

City:BRIDGEWATER

State:NJ

ZIP:08807

Country:US

Info Phone Num:908-685-5800

Emergency Phone Num:908-685-5800

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

===== Composition/Information on Ingredients =====

Ingred Name:TETRAETHYLENEGLYCOL DIMETHACRYLATE

CAS:109-17-1

Fraction by Wt: >1%

Other REC Limits:NONE SP

ECIFIED

Ingred Name:HYDROXYETHYL METHACRYLATE (ORAL LD50 1250 MG/KG RAT)

CAS:868-77-9

RTECS #:OZ4725000

Fraction by Wt: >1%

Other REC Limits:NONE SPECIFIED

Ingred Name:CUMENE HYDROPEROXIDE (SARA III) (ORAL LD50 800 MG/KG RAT
83% SOLUTION;DERMAL LD50 1.13 RAT;INHAL LC50 700 PPM/6HR RAT)

CAS:80-15-9

RTECS #:MX2450000

Fraction by Wt: >1%

Other REC Limits:NONE SPECIFIED

EPA Rpt Qty:10 LBS

DOT Rpt Qty:10 LBS

Ingred Name:VOC: 0.09 LBS/GAL (10 G/L)

RTECS #:9999999VO

Other REC Limits:NONE SPECIF

IED

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===== Hazards Identification =====

Routes of Entry: Inhalation:YES Skin:YES Ingestion:YES

Reports of Carcinogenicity:NTP:NO IARC:NO OSHA:NO

Health Hazards Acute and Chronic:EYE: IRRITATING, INJURE TISSUE IF NOT
REMOVED PROMPTLY. SKIN: FREQUENT/PROLONGED CONTACT: IRRITATE,
DERMATITIS. SENSITIZATION, DERMATITIC RASH. INHALATION: NOT HAZARD
UNDER NORMAL CONDITIONS. IRRITATING/TOXIC VAPORS MAY BE RELEASED
AT ELEVATED TEMPERATURES. INGESTI

ON: NOT EVALUATED, ASSUMED TO
CAUSE NAUSEA & VOMITING.

Effects of Overexposure:CHRONIC: IN CERTAIN INDIVIDUALS, SENSITIZATION
MAY OCCUR DAUSING DERMATITIS WITH EVEN MINIMAL CONTACT. DUE TO SKIN
ABSORPTION WITH EXCESSIVE CONTACT, PRODUCT MAY PRODUCE NERVOUS
SYSTEM EFFECTS, I.E., A TAXIA. TARGET ORGANS: EYES
AND SKIN

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===== First Aid Measures =====

First Aid:EYE:IMMED FLUSH W/WATER 15 MIN,LIFT EYELIDS. GET PROMPT MED
AID. SKIN:FLUSH

W/SOAP & WATER TILL CHEMICAL REMOVED.REMOVE CONTAM CLOTHES. WASH BEFORE REUSE. INHAL:NOT NORMALLY REQ'D. REMOVE TO FRESH AIR . IF BREATH DIFFICULT,GIVE OXYGEN;IF STOPPED,GIVE ARTIF RESP. GET MED AID. INGEST:DO NOT INDUCE VOMITING. IF CONSCIOUS,GIVE MILK/WATER (NOTHING TO UNCONSCIOUS). KEEP WARM/QUIET. GET PROMPT MED AID.

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===== Fire Fighting Measures =====

Flash Point Method:SCC

Flash Point:230F,110C

Extinguishing Media:CO2, DRY CHEMICAL, FOAM, WATER FOG

Fire Fighting Procedures:EQUIP FIRE FIGHTERS WITH SELF-CONTAINED BREATHING APPARATUS TO PROTECT AGAINST POTENTIALLY TOXIC AND IRRITATING FUMES. COOL EXPOSED EQUIPMENT WITH WATER SPRAY.

Unusual Fire/Explosion Hazard:POLYMERIZATION MAY TAKE PLACE AT ELEVATED TEMPERATURES.

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===== Accidental Release Measures =====

Spill Release Procedures:WEAR PROTECTIVE CLOTHING. STOP LEAK IF W/OUT RISK. SMALL: TAKE UP W/SAND, ETC. PLACE IN CONTAINER. LARGE

:
ABSORBED MAT'L MAY POLYMERIZE (GENERATE HEAT, PRESSURE). VENT CONTAINER TO PREVENT BUILDUP OF PRESSURE.

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===== Handling and Storage =====

Handling and Storage Precautions:AVOID EXCESSIVE HEAT. STORE AT ROOM TEMPERATURES, OUT OF DIRECT SUNLIGHT IN A DRY AREA. MAXIMUM STORAGE TEMPERATURES IS 100 F.

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===== Exposure Controls/Personal Protection =====

Respiratory Protection:NONE REQUIRED UNDER NORMAL HANDLING CONDITIONS. USE

NIOSH APPROVED RESPIRATOR IF VAPOR OR MISTS LEVELS ARE IRRITATING.

Ventilation:GENERAL

Protective Gloves:PROTECTIVE GLOVES TO PREVENT

Eye Protection:SAFETY GLASSES, GOGGLES OR FACE SHIELD

Other Protective Equipment:NO SPECIAL CLOTHING REQUIRED FOR LOW VOLUME ACTIVITY. REMOVE CLOTHES AND WASH BEFORE REUSE IF CONTAMINATED WITH PRODUCT.

Work Hygienic Practices:WASH HANDS WITH SOAP & WATER IF CONTACT W/PRODUCT OCCURS OR BEFORE EATING, DRINKING, SMOKING OR USING TOILET FACILITIES

Supplemental Safety and Health

===== Physical/Chemical Properties =====

HCC:T6

Boiling Pt:B.P. Text:POLYMERIZES

Vapor Pres:0.01 @ 77F

Vapor Density:1.01

Spec Gravity:1.070 (WATER=1)

Viscosity:1000 CPS

Evaporation Rate & Reference:NOT NOTED

Solubility in Water:INSOLUBLE

Appearance and Odor:PURPLE LIQUID MILD PLEASANT ODOR

Percent Volatiles by Volume: