

NATIONAL STARCH & CHEMICAL COMPANY; PERMABOND -- PERMA-LOK (R) LM 113 P/N 78-4311 --
8030-01-069-3046

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

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

MSDS Date:12/31/1991

FSC:8030

NIIN:01-069-3046

MSDS Number: BSHMK

=== Responsible Party ===

Company Name:NATIONAL STARCH & CHEMICAL COMPANY; PERMABOND

Address:FINDERNE AVE

Box:6500

City:BRIDGEWATER

State:NJ

ZIP:08807

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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 SPEC

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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 SPECIFIE

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===== Hazards Identification =====
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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. INGESTION

: NOT EVALUATED, ASSUMED TO
CAUSE NAUSEA & VOMITING.

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

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

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

===== 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.

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

Spill Release Procedures: WEAR PROTECTIVE CLOTHING. STOP LEAK IF WITHOUT RISK. SMALL SPILL: TAKE UP WITH SAND, ETC. PLACE IN CONTAINER FOR LATER DISPOSAL. LARGE SPILL: ABSORBED MATERIAL MAY POLYMERIZE (GENERATE HEAT & PRESSURE). VENT CONTAINER TO PREVENT BUILDUP OF PRESSURE.

===== 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.

===== 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:N1

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: