

NATIONAL STARCH & CHEMICAL COMPANY; PERMABOND -- PERMA-LOK (R) HM 118 P/N 78-4307 --
8030-01-142-3131

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

Product ID:PERMA-LOK (R) HM 118 P/N 78-4307

MSDS Date:12/31/1991

FSC:8030

NIIN:01-142-3131

MSDS Number: BSHND

=== 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:908-685-5000

Emergency Phone Num:908-685-5000

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

===== 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 =====

Routes of Entry: Inhalation:YES Skin:YES Ingestion:YES
Reports of Carcinogenicity:NTP:NO IARC:NO OSHA:NO
Health Hazards Acute and Chronic:EYE: IRRITATION, INJURE EYE TISSUE IF
NOT REMOVED PROMPTLY. SKIN: FREQUENT/PROLONGED CONTACT: IRRITATE,
DERMATITIS. SENSITIZATION, DERMATITIC RASH. INHALATION: NOT
RESPIRATORY HAZARD UNDER NORMAL COND ITIONS. IRRITATING/TOXIC VAPOR
RELEASEDAT ELEVATED TEMPS. 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 =====

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

REAS 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 RESPIRATION.GET MED AID. INGEST:DON'T INDUCE VOMITING.IF CONSCIOUS GIVE MILK/WATER(NOTHING TO UNCONSCIOUS)KEEP WARM/QUIET.GET 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 WITHOUT RISK. SMALL: TAKE UP WITH 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 TEMPERATURE OUT OF DIRECT SUNLIGHT IN A DRY AREA. MAXIMUM STORAGE TEMPERATURE 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 MIST LEVELS ARE IRRITATING.

Ventilation:GENERAL

Protective Gloves:PROTECTIVE GLOVES TO PREVENT CONTACT

Eye Protection:SAFETY GLASSES, GOGGLES OR FACE SHIELD

Other Protective Equipment:NO SPECIAL CLOTHING REQUIRED FOR LOW VOLUME ACTIVITY. REMOVE CLOTHING & LAUNDRER BEFORE REUSE IF CONTAMINATED W/PRODUCT.

Work Hygienic Practices:WASH HANDS WITH SOAP AND WATER IF CONTACT WITH PRODUCT OCCURS OR BEFORE EATING, DRINKING, SMOKING OR USING RESTROOM

Supplemental Safety and Health

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

Boiling Pt:B.P. Text:POLYMERIZES

Vapor Pres:0.01 @ 77F

Vapor Density:1.01

Spec Gravity:1.070 (WATER=1)

Viscosity:1800 CPS

Solubility in Water:INSOLUBLE

Appearance and Odor:RED LIQUID; MILD PLEASANT ODOR

Percent Volatiles by Volume: