MATERIAL SAFETY DATA SHEET

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

Product Name: Pro Lock Type II (Stud)

Product Number: 470 L

Manufacturer:
Federal Mogul Corporation
Sealing Systems
7450 North McCormick Blvd.
Skokie, IL 60076

Phone: (847)674-7700
Emergency Phone: 1-800-535-5053 (Infotrac)

SECTION 2: COMPOSITION/INFORMATION ON HAZARDOUS INGREDIENTS

Ingredient	CAS No.:	% Weight	OSHA PEL	ACGIH TLV
Ethoxylated Bisphenol Dimethacrylate	24448-20-2	80-90	None Established	None Established
Di(2-ethylhexyl)phthalate (DEHP)	117-81-7	5-10	5 mg/m^3	5 mg/m^3
Tetrahydroquinoline	635-46-1	1-5	None Established	None Established
Cumene hydroperoxide	80-15-9	1-5	None Established*	None Established*

* AIHA has established a Workplace Environmental Exposure Level (WEEL, 8 hour TWA), of 1 ppm with a skin notation for cumene hydroperoxide.

OSHA Regulatory Status: This material is classified as hazardous under OSHA regulations.

SECTION 3: HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Combustible colored liquid with characteristic musty odor. May cause moderate to severe eye irritation and possible injury. Can cause skin irritation. Sensitive individuals will develop an allergic rash. Inhalation is not expected due to small quantity contained in package. Prolonged exposure to heat may cause polymerization and increased pressure within package. Repeated ingestion of DEHP may increase risks of developing cancer.

POTENTIAL HEALTH EFFECTS:

Inhalation: Inhalation is not expected due to relatively low vapor pressure and package size. The use of multiple containers in a poorly ventilated area would probably be required for lung effects to occur.

Skin: May cause irritation and rashes. Skin effects may be delayed. Cumene hydroperoxide may be absorbed through the skin and repeated or prolonged skin contact may result in toxic effects from skin absorption.

Eye: May cause moderate to severe irritation and possible injury.

Ingestion: Limited data is available. Product is expected to be of moderate toxicity based on similar compounds. Kidney, liver, blood, and central nervous system effects were seen in experimental animals that ingested cumene hydroperoxide.

Chronic: High doses of DEHP have caused growth retardation and increased lung, liver, and kidney weights in guinea pigs, rats, and dogs.

POTENTIAL HEALTH EFFECTS (CONTINUED)

Carcinogenicity: DEHP is listed as a substance that is "reasonably anticipated to be a human carcinogen" (Group IIB) by NTP and as a substance "unclassifiable as to carcinogenicity in humans" (Group 3 by IARC. Although DEHP is generally recognized as an animal carcinogen, these results may not indicate that DEHP causes cancer in humans due to differences in rodent and mammalian metabolism (See Section 11).

IARC: No NTP: Yes OSHA: No

Medical Conditions Aggravated by Exposure: None known. Repeated exposure may aggravate pre-existing eye and skin conditions.

	HEALTH	FLAMMABILITY	INSTABILITY/ PHYSICAL HAZARD
NFPA Rating:	2	1	1
HMIS Rating:	2	1	1

SECTION 4: FIRST AID MEASURES

Ingestion: If conscious, drink 4-8 ounces of water or milk. DO NOT INDUCE VOMITING or give liquids to an unconscious person. Call a poison control center or emergency medical facility immediately.

Inhalation: Not expected under normal working conditions. If inhaled, remove to fresh air. If breathing is difficult, administer oxygen. If breathing has stopped, give artificial respiration. Get immediate medical attention for breathing problems.

Eye Contact: Immediately flush with large amounts of water for at least 15 minutes and get medical attention.

Skin Contact: Remove contaminated clothing and wash skin thoroughly with large amounts of soap and water. If irritation persists or prolonged contact has occurred, get medical attention.

SECTION 5: FIRE FIGHTING MEASURES

Flashpoint: ~ 200 °F **LEL:** No Data **UEL:** No Data **Autoignition Temperature:** No Data (solidifies @ 175 °F, Pensky-Martens CC)

Extinguishing Media: Foam, dry chemical, carbon dioxide, water spray or fog. If substantial quantities are involved in a fire, the use of a direct water stream may cause violent frothing.

Unusual Fire and Explosion Hazards: Combustible liquid. High temperatures may cause containers to rupture or burst from pressure. Fire may produce irritating acidic vapors and other oxidation products.

Special Fire Fighting Procedures: None expected. Minimum firefighting gear requirement for industrial fires is a NIOSH approved self-contained breathing apparatus operated in positive pressure mode and full turnout or bunker gear.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Wipe up excess with rag or paper towel. Wear gloves and goggles to prevent eye and skin contact (See Section 8). Wash area of spill with soap and water. Appropriately dispose of rags and towels. DO NOT use vermiculite.

SECTION 7: HANDLING AND STORAGE

Combustible material. Store in cool, dry, well-ventilated area away from heat, flames, sunlight, and incompatible materials. Store below 100 °F. Protect from physical damage. Do not drag, slide, or roll containers.

Use in well ventilated areas. Do not eat, drink, or smoke in work and storage areas or store food, cosmetics, cigarettes or other personal items in these areas. Dispose of empty containers appropriately. Avoid skin and eye contact and wash thoroughly after handling. Keep out of reach of children. For industrial use only.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Respiratory Protection: None required under normal working conditions. If ventilation is insufficient to control air contaminants, select NIOSH approved respiratory protection according to the magnitude of exposure. Select and maintain respirators in accordance with 29 CFR 1910.134.

Ventilation Protection: General ventilation. Use local exhaust in confined or poorly ventilated areas.

Skin Protection: Long-sleeves and appropriate PVA or neoprene gloves.

Eyes: Protective goggles.

Other: Emergency eyewash stations should be located in close proximity to work area.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Boiling Point:	725 °F	**Vapor Pressure (@ 20 °C):**	Low
Melting Point:	No Data	**Vapor Density (air = 1):**	> 1
pH:	N/A	**% Volatile:**	No Data
Specific Gravity:	1.1	**Evaporation Rate:**	Slower than butyl acetate
Water Solubility:	Negligible		
Appearance and Odor:	Colored liquid with characteristic musty odor		

SECTION 10: STABILITY AND REACTIVITY

Stability: Stable under normal conditions and use.

Incompatibility (materials/conditions to avoid): Avoid heat, sunlight, and strong oxidizers.

Hazardous Polymerization: Will not occur

Decomposition Products: Thermal decomposition acrid organic fumes, small amounts of nitrogen compounds and other oxidation products.

SECTION 11: TOXICOLOGICAL INFORMATION

Inhalation: Inhalation is not expected due to size of container and relatively low vapor pressure. The 4 H LC_{50} for cumene hydroperoxide (73% solution) is 220 ppm. Two female rats exposed to 50 ppm cumene hydroperoxide for 3 four hour periods exhibited narcosis, incoordination and tremors and 1 rat died. Inhalation data for acrylates and phthalates present was unavailable. Acrylates are considered to be primarily skin irritants. Limited industrial exposure data indicates that DEHP may cause central or peripheral neuropathy; however, this information has not been supported by animal bioassays or occupational cohorts.

Skin: Undiluted cumene hydroperoxide has caused severe skin irritation with damage; however a 7% concentration was considered non-irritating. The dermal LD_{50} for cumene hydroperoxide is 500 mg/kg in the rat. Dimethyl ester and Bisphenol A Fumarate resin are considered skin irritants and may cause dermatitis with repeated exposure.

Eye: Undiluted cumene hydroperoxide may cause severe eye irritation and damage. The concentration of cumene hydroperoxide considered non-irritating to rabbit eyes was 1%. Severe irritation that persisted a week was caused by a drop of 10% cumene hydroperoxide in propylene glycol. Washing with water within 4 seconds prevented injury.

Ingestion: Data was not available for dimethacrylate ester and bisphenol A resin. The LD50 for ingestion of 73% cumene hydroperoxide solution is 500 mg/kg in the rat.

SECTION 11: TOXICOLOGICAL INFORMATION (CONTINUED)

Subchronic/Chronic: The No-Observed Effect Level (NOEL) for cumene hydroperoxide was 5 ppm in a 3 month inhalation study in the rat. Repeated inhalation of fumed silica has been reported to cause recurrent fever and changes in x-rays.

DEHP has been associated with reproductive toxicity and developmental toxicity only at extremely high oral and parental doses. Increased hepatocellular carcinomas or neoplastic nodules were seen in rats and mice repeatedly fed DEHP. The hepatic damage and peroxisome proliferation induced in rats and mice by high doses of DEHP does not occur in primates apparently due to fundamental differences in the way different species hepatocytes react to peroxisome proliferators and different metabolism.

SECTION 12: ECOLOGICAL INFORMATION

Data was unavailable for mixture. The toxicity threshold for cumene hydroperoxide was 7.4 mg/L for green algae (*Scenedesmus quadricauda*) and 1.2 mg/L for blue green algae (*Microcystis aeruginosa*).

SECTION 13: DISPOSAL CONSIDERATIONS

Recycle, reclaim, and dispose of in accordance with applicable local, state and federal regulations.

SECTION 14: TRANSPORTATION INFORMATION

Proper Shipping Name:	None
Hazard Class:	Not Applicable
Identification Number:	Not Applicable
Packing Group:	Not Applicable
Shipping Label:	Not Applicable
Additional Marking Requirement:	None

SECTION 15: REGULATORY INFORMATION

California Proposition 65: This product contains DEHP, an ingredient known to the State of California to cause cancer.

SARA TITLE III – SECTION 313 SUPPLIER NOTIFICATION:
This product contains the following toxic chemicals subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-To-Know Act (EPCRA) of 1986 and 40 CFR 372:

Chemical	CAS No.	% Weight
Cumene hydroperoxide	80-15-9	1-5
DEHP	117-81-7	5-10

RCRA HAZARDOUS WASTE CODE: DEHP: U028; Cumene hydroperoxide: U096

CERCLA Hazardous Substances: This product contains DEHP and cumene hydroperoxide, CERCLA Hazardous Substances with reportable quantities (RQs) of 100 and 10 pounds, respectively.

OSHA: Aside from PELs, OSHA has not developed standards or PELs specific to this product or its constituents.

U.S. TSCA/Canadian DSL: All ingredients are listed on the U.S. Toxic Substances Control Act (TSCA) inventory or exempt from listing and on the Canadian Domestic Substance List (DSL).

WHMIS Classification: D2A, D2B

SECTION 16: OTHER INFORMATION

Abbreviations:

N/A:	Not Applicable
(C):	Ceiling Limit (e.g., concentration that may not be exceeded at any time)
OSHA PELs:	U.S. Occupational Safety and Health Administration Permissible Exposure Limits
ACGIH TLVs:	American Conference of Governmental Industrial Hygienists Threshold Limit Values
NIOSH RELs:	National Institute for Occupational Safety and Health Recommended Exposure Limits
PNOC:	Particulates (Insoluble) Not Otherwise Classified
PNOR:	Particulates Not Otherwise Regulated
STEL:	Short-Term Exposure Limit
Skin:	Chemical can be Absorbed into bloodstream through unbroken skin
ppm:	Parts per million in air (v/v)
mg/m^3:	milligrams contaminant per cubic meter of air
CAS #:	Chemical Abstract Services Number
IARC:	International Agency for Research on Cancer
NTP:	National Toxicology Program

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