Material Safety Data Sheet

Section 1. Chemical Product and Company Identification

Product Name: AR456PP

Synonyms: Diester based lubricant - Fatty acids, C5-C10, mixed esters with 3-Methylbutanoic acid and Pentaerythritol. with engineered fiber

Product Use: Synthetic bearing Lubricant System

Supplier/Manufacturer:

Permawick Company
255 E. Brown Street, Suite 100
Birmingham, Michigan 48009
Tel (248) 433-3500 Fax:(248) 594-3433

Emergency Phone Numbers:

Monday - Friday, 8 am – 4:30 pm (EST) (812) 376-0703
Chemtrec 24 hr.: (US and Canada) (800) 424-9300

Information Contacts: For technical information contact your sales representative.

Section 2. Composition/Information on Ingredients

Hazardous Ingredients:

	CASRN (by wt.)	Percent (%)
Barium Dinonylnaphthalene-sulfonate	025619-56-1	0.8 - 4%
Diester Base lubricant	68424-32-8	76 - 81%
Engineered Fiber	9004-36-4	14 - 19%

See section 8 for Exposure Guidelines

Section 3. Hazards Identification

******Emergency Overview******

Will cause eye irritation, and other potentially harmful health effects.

Signs and Symptoms of Exposure:

Inhalation: Irritation possible. Fumes from heated material may cause irritation. Sprays or mists may be irritating to the upper respiratory tract.

Ingestion: May cause gastrointestinal irritation. LD50:>5g/kg (rat)(similar products)

Eye Contact: Irritant. May cause tearing, reddening, or swelling.

Skin Contact: Prolonged or repeated contact may result in defatting, and/or drying of the skin which may lead to skin irritation and dermatitis. Harmful if absorbed through the skin.

Subchronic/Chronic Hazards: Based on animal data, may cause blood disorders.

Section 4. First Aid Measures

FIRST AID

***Eye Contact*:** Immediately flush eyes with plenty of water. If irritation develops or persists seek medical attention immediately.

Ingestion: Call a physician or poison control center immediately.

Inhalation: Immediately remove victim to fresh air. If victim has stopped breathing give artificial respiration, preferably by mouth to mouth. Get medical attention immediately.

Skin Contact: Wash affected area immediately with soap and plenty of water. Remove contaminated clothing and wash clothing before reuse. If symptoms occur obtain medical attention immediately.

Section 5. Fire Fighting Measures

Flash Point:	450°F	Method used:	ASTM D92
Lower explosive limit:	not available	Upper explosive limit:	not available
NFPA rating:	none		

Other Flammable Properties: Can burn in a fire and form carbon dioxide and some carbon monoxide.

Extinguishing Media: Water spray or fog, foam, dry chemical or CO_2.

Fire Fighting Precautions and Procedure:

Firefighters should wear self - contained breathing apparatus (MSHA/NIOSHA approved or equivalent) in the positive - pressure mode with full protective gear especially when there is the possibility of exposure to smoke, fumes or hazardous decomposition of products. Containers can build up pressure if exposed to heat (fire). Cool with water spray.

Section 6. Accidental Release Measures

Spill or Release Procedures:

Ventilate area. Absorb spill with inert material and place in appropriate chemical waste container. Obey any federal, state, and local laws and regulations. Do not flush into sewers discharging into domestic water systems or natural waterways. Use personal protective equipment (Sec.8). Spilled material will cause a slippery surface. Avoid trips and falls.

Section 7. Handling and Storage

Handling:

Thoroughly wash after handling. Use adequate ventilation and avoid breathing vapor or mist. Avoid contact with eyes, skin, clothing. Mix well before use.

Storage:

Keep container tightly closed when not in use and during transport. Store in cool, dry place. Keep from freezing.

Section 8. Exposure Controls/Personal Protection

Exposure Limits-

PEL: No OSHA PEL established TLV: No OSHA TLV established

Engineering Controls: Adequate ventilation must be provided.

Personal Protective Equipment-

Eye/Face Protection: Use chemical splash goggles.

Skin Protection: Wear impermeable gloves to minimize skin contact.

Respiratory Protection: Where exposure is likely to exceed acceptable criteria, use NIOSH/ OSHA approved respiratory equipment. Respirators should be selected based on the form and concentration of contaminant in air with OSHA concentration of contaminant in air and in accordance with OSHA (29 CFR 1910.134).

Other Protective Equipment: In order to identify additional Personal Protective Equipment requirements, the recommendation is made that a hazard assessment in accordance with the OSHA PPE Standard (29 CFR 1910.132) be conducted before product use.

Section 9. Physical and Chemical Properties

Boiling Point:	>540 F @ 760 mm Hg pressure
Pour Point:	-75° F (ASTM D-97)
Vapor Pressure:	< 0.05 mm Hg @ 300° F
Vapor Density (Air = 1):	heavier than air
Specific Gravity:	0.94 @ 60 / 60° F
pH:	NA
Viscosity:	160 SUS @ 100°F
Evaporation Rate:	slower than Butyl Acetate
Solubility in water:	Negligible
Appearance and color:	Clear to slightly hazy liquid
Odor:	mild ester odor

Section 10. Stability and Reactivity Stability:

Stability: Stable under normal storage conditions.
Hazardous Polymerization: Will not occur during normal conditions.
Conditions to avoid: Not applicable

Material Incompatibility: Avoid oxidizing and reducing agents.

Hazardous Decomposition Products : Carbon dioxide, carbon monoxide.

Section 11. Toxicological Properties

Other Toxicological Information:
The toxicological properties have not been fully investigated.

Section 12. Ecological Information

Ecological Information: No information available

Section 13. Disposal Considerations

Disposal Method: All recovered material should be packaged, labelled, transported, and disposed or reclaimed in accordance with federal, state and local regulations. Incineration is the preferred method. Reclaim where possible.

Section 14. Transportation Information

U.S. Department of Transportation:

DOT proper shipping name: not regulated
DOT classification: not regulated

Section 15. Regulatory Information

U.S. Federal Regulations

OSHA: Preparation of this document is in accordance with the MSDS requirements of the OSHA Hazard Communication Standard.

SARA Section 311/312- Hazard classification: none

SARA Section 313-
This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.

	CAS Number Wt.	PERCENT %
Barium Compounds	Not Available	3

TSCA:
This product or its components are listed in or exempt from the TSCA inventory requirements. This product contains the following substances subject to export notification under Section 12(b) of TSCA: None

State Regulations
California (Proposition 65):

This product contains the following substances known to the State of California to cause cancer:
None

This product contains the following substances known to the State of California to cause adverse reproductive effects: None

Section 16. Other Information

HMIS Rating System: Health = 2 Flammability = 1 Reactivity = 0
Ratings key: 4 = Highest hazard, 0 = Lowest hazard, * = Chronic Health Hazard

Revision summary:

This is the first issue of this MSDS in the ANSIZ400.1, 1993 format.
Approval date: 12/23/96
Supersedes: 03/01/96

This information presented herein is believed to be factual as it has been derived from works and opinions of persons believed to be qualified experts; however, nothing contained in this information is to be taken as warranty or representation for which Permawick bears legal responsibility. Any recommendations should be reviewed by the user in the specific context of the intended use to determine whether they are appropriate.

ACGIH:	American Conference of Governmental and Industrial Hygienists.
ANSI:	American National Standards Institute
CERCLA:	Comprehensive Emergency Response, Compensation and Liability Act
HMIS:	Hazardous Material Identification System
IARC:	International Agency for Research on Cancer
NTP:	National Toxicology Program
OSHA:	Occupational Health and Safety Organization
PEL:	OSHA Permissible Exposure Limit
RCRA:	Resource Conservation and Recovery Act
SARA:	Superfund Amendment Reauthorization Act
STEL:	Short Term Exposure Limit
TLV:	Threshold Limit Values
TSCA:	Toxic Substances Control Act