BISHOP'S ORIGINAL PRODUCTS, Inc.
7111 CLINTON DR • HOUSTON, TX 77020 • 713/671-2545 • FAX 713/671-0774

MATERIAL SAFETY DATA SHEET

PERMAFUSED ANTI-WEAR PROTECTION
AIRCRAFT ENGINES
MSDS NUMBER: AC-102

ISSUE DATE: 8/1/94

SECTION I. PRODUCT IDENTIFICATION

Revised: 22/2/22

CHEMICAL FAMILY: Petroleum Product Additive
DESCRIPTION: Metal treating additive containing petroleum distillates,hydro-treated or solvent dewaxed heavy paraffinic oils and other components judged not to affect the potential health or environment impact of the product.

SECTION II. HAZARDOUS INGREDIENT INFORMATION

The composition of this mixture may be proprietary information. In the event of a medical emergency, compositional information will be provided to a physician or nurse.

A hazard warning is not required for this product under the current OSHA Hazard Communication Standard (29 CFR 1910/1200).

For additional information see Section III

SECTION III. HEALTH INFORMATION AND PROTECTION

NATURE OF HAZARD

EYE CONTACT:
Slightly irritating.

SKIN CONTACT:
Low order of toxicity.
Frequent or prolonged contact may irritate and cause dermatitis.
Skin contact may aggravate an existing dermatitis condition.

INHALATION:
Negligible hazard at ambient temperature (118 to 38 Deg C; 0 to 100 Deg F)
Avoid breathing vapors or mists.

INGESTION:
Small amounts of the liquid aspirated into the respiratory system during ingestion or vomiting may cause mild to severe pulmonary injury, possibly progressing to death.

FIRST AID

EYE CONTACT:
Flush eyes with large amounts of water until irritation subsides. If irritation persists, get medical attention, preferably an Ophthalmologist.

SKIN CONTACT:
Immediately flush with large amounts of water; use soap if available. Remove contaminated clothing, including shoes, after flushing has begun.

INHALATION:
Using proper respiratory protection, immediately remove the affected victim from exposure. Administer artificial respiration if breathing has stopped. Keep at rest. Call for prompt medical attention.

INGESTION:
DO NOT induce vomiting. If individual is conscious, give milk or water to dilute stomach contents. Keep warn and quiet. Call for prompt medical attention. DO NOT attempt to give anything by mouth to an unconscious person.

PRECAUTIONS

SPECIAL PRECAUTIONS
Health studies have shown that many petroleum hydrocarbons pose potential human health risks which may vary from person to person. As a precaution, exposure to liquids, vapors mist or fumes should be minimized. Wash hands thoroughly after handling material. Avoid contact with skin and eyes.

PERSONAL PROTECTION
For open system where contact is likely, wear safety glasses with side shields, long sleeves and chemical resistant gloves.
Where contact may occur, wear safety glasses with side shields.
Where concentration in air may exceed the limits given in Section VII and engineering, work practice or other means of exposure reduction are not adequate, NIOSH/MSHA approved respirators may be necessary to prevent overexposure by inhalation.

VENTILATION
The use of local exhaust ventilation is recommended to control process emissions near the source. Laboratory samples should be stored and handled in a lab hood. Provide mechanical ventilation of confined spaces. See respiratory protection recommendation.

CHRONIC EFFECTS
This product contains petroleum base oils which may be refined by various processes including severe solvent extraction, severe hydrocracking, or severe hydrotreating. None of the oils require a cancer warning under OSHA Hazard Communication Standard (29 CFR 1910-1200). These oils have not been listed in the National Toxicology Program (NTP) Annual Report nor have they been classified by the International Agency for Research on Cancer (IARC) as; carcinogenic to humans (Group 1), probably carcinogenic to humans (Group 2A), or possibly carcinogenic to humans (Group 2B).

During use in engines, contamination of oil with low levels of cancer causing combustion products occurs. Used motor oils have been shown to cause skin cancer in mice following repeated application and continuous exposure. Brief or intermittent skin contact with used motor oil is not expected to have serious effects in humans if the oil is throughly removed with soap and water.

SECTION IV. FIRE AND EXPLOSION HAZARD

FLASHPOINT: 470 Deg. F METHOD: PM NOTE: Typical
FLAMMABLE LIMITS: NDA
AUTOIGNITION TEMPERATURE: NDA

GENERAL HAZARD

Combustible Liquid, can form combustible mixtures at temperatures at or above the flash point.
Toxic gases will form upon combustion.
"Empty" containers retain product residue (liquid and/or vapor) and can be dangerous. DO NOT PRESSURIZE, CUT, WELD, BRAZE, SOLDER, DRILL, GRIND, OR EXPOSE SUCH CONTAINERS TO HEAT, FLAME, SPARKS, STATIC ELECTRICITY, OR OTHER SOURCES OF IGNITION: THEY MAY EXPLODE AND CAUSE INJURY OR DEATH.
Empty drums should be completely drained, properly bunged and promptly returned to a drum reconditioner, or properly disposed of.

FIRE FIGHTING

Use water spray to cool fire exposed surfaces and to protect personnel.
Isolate "fuel" supply from fire.
Use foam, dry chemical, CO2, fog or water spray to extinguish fire.
Respiratory and eye protection required for fire fighting personnel.
Avoid spraying water directly into storage containers due to danger of boil over.

HAZARDOUS COMBUSTION PRODUCTS

Fumes, smoke, carbon monoxide, aldehydes and oxides of nitrogen, magnesium, zinc, sulfur, phosphorus are formed. Hydrogen sulfide may also be released.

SECTION V. SPILL CONTROL PROCEDURE

LAND SPILL

This product is not expected to present any environmental problems other than those associated with oil spills. Eliminate sources of flow. Prevent additional discharge of material. For small spills implement cleanup procedures; for large spills implement cleanup procedures and, if in public area, keep public away and advise authorities. Also, notify the National Response Center 1-800-424-8802
Prevent liquid from entering sewers, watercourses, or low areas. Contain spilled liquid with sand or earth. Absorb with fire retardant sawdust, diatomaceous earth, etc. Shovel up and dispose of at an approved waste disposal facility in accordance with current applicable laws and regulations.
Recover by pumping (use an explosion proof or hand pump) or with a suitable absorbent.
Consult an expert on disposal of recovered material and ensure conformity to local disposal regulations.

WATER SPILL

Eliminate sources of flow. Warn occupants and shipping in surrounding and downwind areas of hazard and request all to stay clear. Remove from surface by skimming or with suitable adsorbents.

Consult an expert on disposal of recovered material and ensure conformity to local disposal regulations.

SECTION VI. NOTES

HAZARD RATING SYSTEM:
This information is for people trained in:
National Paint & Coatings Association's (NPCA)
Hazardous Materials Identification System (HMIS)
National Fire Protection Association (NFPA)
Identification of the Fire Hazards of Materials

	NPCA-HMIS	NFPA 704	KEY
HEALTH	0	0	4 = Severe
FLAMMABILITY	1	1	3 = Serious
REACTIVITY	0	0	2 = Moderate
			1 = Slight
			0 = Minimal

SECTION VII. REGULATORY INFORMATION

DEPARTMENT OF TRANSPORTATION (DOT):
DOT SHIPPING DESCRIPTION: PETROLEUM OIL N.O.I.B.N..

FLASHPOINT: 470 Deg. F METHOD: PM NOTE: Typical

TSCA: Components of this product are listed on the TSCA Inventory.

COMPOSITION COMMENT: Based upon information reviewed to date, this product fits the ACGIH definition for mineral oil mist. The ACGIH TLV is 5 mg/m3, the OSHA PEL is 5 mg/ m3.

DOT HAZARD CLASS: Not designated as a hazardous material by the Federal DOT.
DOT IDENTIFICATION NUMBER: N/A

SECTION VIII. TYPICAL PHYSICAL & CHEMICAL PROPERTIES

Specific Gravity (@ F): 28.2 at 60
Vapor Pressure (mmHg @ F): NDA
Density: 7.6 lbs/gal
Solubility in Water: Insoluble
Viscosity (cSt @ F); 143.15 cSt @ 100
Specific Gravity of Vapor (@ 1 atm. Air = 1): Greater than 5
Freezing/Melting Point/Range (F): 0
Evaporation Rate (n-Bu Acetate = 1): NDA
Boiling Point/Range (F): 600

SECTION IX. REACTIVITY DATA

This product is stable and hazardous polymerization will not occur.
Conditions to avoid Instability:
Not Applicable
Conditions to avoid Hazardous Polymerization:
Not Applicable
Materials & Conditions to avoid Incompatibility:
Strong oxidizing agents, Heat, Spark, Flame and Build up of static electricity.
Hazardous Decomposition Products:
Not Applicable

SECTION X. STORAGE & HANDLING

Storage Temperature (F): Ambient
Storage Pressure (mmHg): Atmospheric
Loading Temperature (F): Ambient
Loading Viscosity (cSt @ F): Not Available

SECTION XI. OTHER INFORMATION

Not Applicable.

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