



MATERIAL SAFETY DATA SHEET

1. Product and Company Identification

Material name Molylube Multipurpose Extreme Pressure Grease with Moly 1
Product Code 40900
Version # 1.1
Revision date 12-14-2011
Synonym(s) Molylube AC 1000 1
Manufacturer information Bel-Ray Company, Inc.
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United States of America
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CHEMTREC: +1 703-527-3887 (outside USA)
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2. Hazards Identification

Emergency overview CAUTION

Harmful if inhaled. Harmful if swallowed. Harmful if absorbed through skin. Harmful in contact with eyes. Prolonged exposure may cause chronic effects.

OSHA regulatory status This product is considered hazardous under 29 CFR 1910.1200 (Hazard Communication).

Potential health effects

Routes of exposure Inhalation. Ingestion. Skin contact. Eye contact.

Eyes Harmful in contact with eyes. Eye contact may result in corneal injury. Contact may irritate or burn eyes. Do not get this material in contact with eyes.

Skin Harmful in contact with skin. Frequent or prolonged contact may defat and dry the skin, leading to discomfort and dermatitis. Avoid contact with the skin.

Inhalation Harmful if inhaled. Avoid breathing dust/fume/gas/mist/vapors/spray.

Ingestion Harmful if swallowed. Components of the product may be absorbed into the body by ingestion. Do not ingest.

Target organs Eyes. RESPIRATORY SYSTEM. Skin.

Chronic effects Conjunctiva. Frequent or prolonged contact may defat and dry the skin, leading to discomfort and dermatitis.

Signs and symptoms Corneal damage. Conjunctivitis. Defatting of the skin. Skin irritation. Rash.

Potential environmental effects Components of this product are hazardous to aquatic life. May cause long-term adverse effects in the environment.

3. Composition / Information on Ingredients

Components	CAS #	Percent
Distillates (petroleum), Hydrotreated Heavy Naphthenic	64742-52-5	0 - 100
Distillates (petroleum), Hydrotreated Heavy Paraffinic	64742-54-7	0 - 100
Distillates (petroleum), Solvent-refined Heavy Paraffinic	64741-88-4	0 - 100
Residual Oils (petroleum), Solvent-refined	64742-01-4	0 - 100
White Mineral Oil (petroleum)	8042-47-5	0 - 100
Aluminum, (benzoato-o,o)hydroxy(octadecanoato-o,o)-	54326-11-3	2.5 - 10
Antimony Tris[o,o-dipropyl] Tris(dithiophosphate)	15874-48-3	1 - 2.5
Carbon Black	1333-86-4	0.1 - 1
Other components below reportable levels		1 - 2.5

4. First Aid Measures

First aid procedures

Eye contact	Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention immediately.
Skin contact	Remove and isolate contaminated clothing and shoes. Immediately flush skin with plenty of water. Get medical attention immediately. Wash clothing separately before reuse.
Inhalation	Do not use mouth-to-mouth method if victim inhaled the substance. Call a physician or poison control center immediately.
Ingestion	IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. Rinse mouth thoroughly. Do not induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs. Do not use mouth-to-mouth method if victim ingested the substance. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Never give liquid to an unconscious person.

Notes to physician

Symptoms may be delayed.

General advice

Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. Fire Fighting Measures

Flammable properties

Not flammable by OSHA criteria. Not combustible by OSHA criteria.

Extinguishing media

Suitable extinguishing media Water fog. Foam. Dry powder. Carbon dioxide (CO₂).

Unsuitable extinguishing media Water. Do not use water jet as an extinguisher, as this will spread the fire.

Protection of firefighters

Protective equipment and precautions for firefighters Wear suitable protective equipment.

Fire fighting

Move containers from fire area if you can do so without risk.

equipment/instructions

Hazardous combustion products

Carbon monoxide and carbon dioxide.

6. Accidental Release Measures

Personal precautions

Keep unnecessary personnel away. Fully encapsulating, vapor protective clothing should be worn for spills and leaks with no fire. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Keep people away from and upwind of spill/leak. Keep upwind. Keep out of low areas. Ventilate closed spaces before entering them.

Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not contaminate water.

Methods for containment

ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Use water spray to reduce vapors or divert vapor cloud drift. Prevent entry into waterways, sewer, basements or confined areas.

Methods for cleaning up

Should not be released into the environment. This product is miscible in water.

Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water.

Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

Never return spills in original containers for re-use. For waste disposal, see section 13 of the MSDS.

7. Handling and Storage

Handling

DO NOT handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. Do not get this material in contact with eyes. Avoid breathing dust/fume/gas/mist/vapors/spray. Avoid contact with skin. Avoid contact with clothing. Wear personal protective equipment. Avoid prolonged exposure. Avoid release to the environment. Hydrogen sulfide (H₂S) may be given off when this material is heated. Do not depend on sense of smell for warning.

Storage

Class IIIB Combustible Liquid.

Keep away from heat, sparks and open flame. Store in a well-ventilated place. Keep container tightly closed. Keep away from food, drink and animal feedingstuffs. Keep out of the reach of children. Use care in handling/storage.

8. Exposure Controls / Personal Protection

Occupational exposure limits

ACGIH

Components

Type

Value

Form

Distillates (petroleum),
Hydrotreated Heavy
Naphthenic (64742-52-5)

TWA

5 mg/m³

Inhalable Fraction.

US. ACGIH Threshold Limit Values

Components

Type

Value

Form

Aluminum, (benzoato-o,o
)hydroxy(octadecanoato-o,o
)- (54326-11-3)

TWA

1 mg/m³

Respirable fraction.

Antimony Tris[o,o-dipropyl]
Tris(dithiophosphate)
(15874-48-3)

TWA

0.5 mg/m³

White Mineral Oil
(petroleum) (8042-47-5)

TWA

5 mg/m³

Inhalable fraction.

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components

Type

Value

Form

Antimony Tris[o,o-dipropyl]
Tris(dithiophosphate)
(15874-48-3)

PEL

0.5 mg/m³

Distillates (petroleum),
Hydrotreated Heavy
Naphthenic (64742-52-5)

PEL

5 mg/m³

Mist.

Distillates (petroleum),
Hydrotreated Heavy
Paraffinic (64742-54-7)

PEL

2000 mg/m³
500 ppm
5 mg/m³

Mist.

Distillates (petroleum),
Solvent-refined Heavy
Paraffinic (64741-88-4)

PEL

5 mg/m³

Mist.

Residual Oils (petroleum),
Solvent-refined
(64742-01-4)

PEL

2000 mg/m³
500 ppm
5 mg/m³

Mist.

White Mineral Oil
(petroleum) (8042-47-5)

PEL

5 mg/m³

Mist.

Exposure guidelines

Occupational Exposure Limits are not relevant to the current physical form of the product.

Personal protective equipment

Eye / face protection

Do not get in eyes. Chemical goggles are recommended. Eye wash fountain is recommended.

Skin protection

Chemical resistant gloves. Wear appropriate chemical resistant clothing. It may provide little or no thermal protection.

Respiratory protection

Wear positive pressure self-contained breathing apparatus (SCBA).

General hygiene considerations

Do not get in eyes. Avoid contact with skin. Avoid contact with clothing. Keep away from food and drink. Handle in accordance with good industrial hygiene and safety practice.

9. Physical & Chemical Properties

Appearance	Oily.
Physical state	Liquid.
Form	Grease
Color	Black.
Odor	Petroleum
Odor threshold	Not available.
pH	Not available.
Vapor pressure	0 hPa estimated
Density	880 kg/m ³
Vapor density	Not available.
Boiling point	680 °F (360 °C) estimated
Melting point/Freezing point	Not available.
Solubility (water)	Negligible
Solubility (other)	Oil
Specific gravity	0.88
Relative density	Not available.
Flash point	417.2 °F (214 °C) Pensky-Martens Closed Cup (Base Oil)
Flammability limits in air, upper, % by volume	Not available.
Flammability limits in air, lower, % by volume	Not available.
Auto-ignition temperature	500 °F (260 °C) estimated
VOC	0.04 % estimated
Viscosity	150 cSt
Percent volatile	0.04 % estimated
Other data	
Drop point	498.2 °F (259 °C)
Flammability class	Combustible IIIB estimated
Flash point class	Combustible IIIB
Viscosity temperature	104 °F (40 °C) ASTM D445

10. Chemical Stability & Reactivity Information

Chemical stability	Material is stable under normal conditions.
Conditions to avoid	Heat, flames and sparks. Avoid temperatures exceeding the flash point.
Incompatible materials	Not available.
Hazardous decomposition products	No hazardous decomposition products are known. At thermal decomposition temperatures, carbon monoxide and carbon dioxide. Hydrogen sulfide. Mercaptans.

11. Toxicological Information

Local effects	Components of the product may be absorbed into the body through the skin. Contact may irritate or burn eyes.
Chronic effects	Hazardous by OSHA criteria. Prolonged exposure may cause chronic effects.
Carcinogenicity	This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.
ACGIH Carcinogens	
Aluminum, (benzoato-o,o)hydroxy(octadecanoato-o,o)-	A4 Not classifiable as a human carcinogen.
ALUMINUM METAL AND INSOLUBLE COMPOUNDS, RESPIRABLE FRACTION (CAS 54326-11-3)	

Distillates (petroleum), Hydrotreated Heavy Naphthenic MINERAL OIL, EXCLUDING METAL WORKING FLUIDS, PURE, HIGHLY AND SEVERELY REFINED, INHALABLE FRACTION (CAS 64742-52-5) A4 Not classifiable as a human carcinogen.

Distillates (petroleum), Solvent-refined Heavy Paraffinic MINERAL OIL, EXCLUDING METAL WORKING FLUIDS, PURE, HIGHLY AND SEVERELY REFINED, INHALABLE FRACTION (CAS 64741-88-4) A4 Not classifiable as a human carcinogen.

White Mineral Oil (petroleum) MINERAL OIL, EXCLUDING METAL WORKING FLUIDS, PURE, HIGHLY AND SEVERELY REFINED, INHALABLE FRACTION (CAS 8042-47-5) A4 Not classifiable as a human carcinogen.

IARC Monographs. Overall Evaluation of Carcinogenicity

MINERAL OILS, HIGHLY-REFINED (CAS 8042-47-5) 3 Not classifiable as to carcinogenicity to humans.

12. Ecological Information

Ecotoxicological data

Product	Test Results
Molyube Multipurpose Extreme Pressure Grease with Moly 1 (Mixture)	EC50 Daphnia: 36222.22 mg/l 48 hours estimated LC50 Fish: 68326.02 mg/l 96 hours estimated

* Estimates for product may be based on additional component data not shown.

Ecotoxicity	Components of this product are hazardous to aquatic life.
Environmental effects	Harmful to aquatic organisms. An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.
Persistence and degradability	Not available.

13. Disposal Considerations

Disposal instructions	Consult authorities before disposal. Do not allow this material to drain into sewers/water supplies. This product, in its present state, when discarded or disposed of, is not a hazardous waste according to Federal regulations (40 CFR 261.4 (b)(4)). Under RCRA, it is the responsibility of the user of the product to determine, at the time of disposal, whether the product meets RCRA criteria for hazardous waste. Dispose in accordance with all applicable regulations.
Contaminated packaging	Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport Information

DOT

Not regulated as dangerous goods.

IATA

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.

15. Regulatory Information

US federal regulations	This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200. One or more components are not listed on TSCA.
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US EPCRA (SARA Title III) Section 313 - Toxic Chemical: De minimis concentration

Antimony Tris[o,o-dipropyl] Tris(dithiophosphate) (CAS 15874-48-3) 1.0 % N010

US EPCRA (SARA Title III) Section 313 - Toxic Chemical: Listed substance

Antimony Tris[o,o-dipropyl] Tris(dithiophosphate) (CAS 15874-48-3) Listed. N010

CERCLA (Superfund) reportable quantity

None

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories Immediate Hazard - Yes
Delayed Hazard - Yes
Fire Hazard - No
Pressure Hazard - No
Reactivity Hazard - No

Section 302 extremely hazardous substance No

Section 311 hazardous chemical Yes

Clean Water Act (CWA) Hazardous substance

State regulations California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

US - New Jersey RTK - Substances: Listed substance

Antimony Tris[o,o-dipropyl] Tris(dithiophosphate) (CAS 15874-48-3) Listed.
Distillates (petroleum), Hydrotreated Heavy Naphthenic (CAS 64742-52-5) Listed.
Distillates (petroleum), Hydrotreated Heavy Paraffinic (CAS 64742-54-7) Listed.
Distillates (petroleum), Solvent-refined Heavy Paraffinic (CAS 64741-88-4) Listed.
Residual Oils (petroleum), Solvent-refined (CAS 64742-01-4) Listed.

US - Pennsylvania RTK - Hazardous Substances: Listed substance

Distillates (petroleum), Hydrotreated Heavy Naphthenic (CAS 64742-52-5) Listed.
Distillates (petroleum), Hydrotreated Heavy Paraffinic (CAS 64742-54-7) Listed.
Residual Oils (petroleum), Solvent-refined (CAS 64742-01-4) Listed.
White Mineral Oil (petroleum) (CAS 8042-47-5) Listed.

16. Other Information

Further information HMIS® is a registered trade and service mark of the NPCA.

HMIS® ratings Health: 1*
Flammability: 1
Physical hazard: 0

NFPA ratings Health: 1
Flammability: 1
Instability: 0

Disclaimer Bel-Ray Company cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use.

Issue date 12-14-2011

This data sheet contains changes from the previous version in section(s): Product and Company Identification: Product and Company Identification