



Material Safety Data Sheet

MSDS ID NO.: 0182MAR019
Revision date: 12/07/2010

1. CHEMICAL PRODUCT AND COMPANY INFORMATION

Product code: MR1254
Product name: Marathon Maralube Moly
Synonym: Maralube® Moly Grease; 529 Maralube Moly
Chemical Family: Lubricating Grease
Formula: Mixture

Manufacturer:
Marathon Petroleum Company LP
539 South Main Street
Findlay OH 45840

Other information: 419-421-3070
Emergency telephone number: 877-627-5463

2. COMPOSITION/INFORMATION ON INGREDIENTS

Maralube® Moly grease is a complex mixture of highly refined, high viscosity, lubricating oil base stock with a lithium complex soap thickener.

Product information:

Name	CAS Number	Weight %	ACGIH Exposure Limits:	OSHA - Vacated PELs - Time Weighted Ave	Other:
Marathon Maralube Moly	Mixture	100			

Component Information:

Name	CAS Number	Weight %	ACGIH Exposure Limits:	OSHA - Vacated PELs - Time Weighted Ave	Other:
Distillates, Petroleum Solvent- Refined Heavy Paraffinic	64741-88-4	50-60			Mineral Oil Mist (MOM) =5 mg/m ³ TWA = 10 mg/m ³ STEL
Residual Oils (Petroleum). Solvent Refined	64742-01-4	20-30			Mineral Oil Mist (MOM) =5 mg/m ³ TWA = 10 mg/m ³ STEL
Lithium Complex Soap Base	Mixture	10-14			
Additives	Not specified	7-11			
Molybdenum Disulfide	1317-33-5	1-2	= 10 mg/m ³ TWA = 3 mg/m ³ TWA	= 10 mg/m ³ TWA	

Notes:

The manufacturer has voluntarily elected to reflect exposure limits contained in OSHA's 1989 air contaminants standard in its MSDS's, even though certain of those exposure limits were vacated in 1992.

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

THIS PRODUCT IS A NON-VOLATILE AND NON-COMBUSTIBLE, GREY COLORED SEMI-SOLID GREASE BUT WILL IGNITE AND BURN AT ELEVATED TEMPERATURES.

Inhalation:

No acute effects expected from routine operations. Overheating of product may produce vapors which can cause respiratory irritation, dizziness and nausea.

Ingestion:

Product would be expected to have a low order of acute toxicity.

Skin contact:

Prolonged or repeated liquid contact can cause dermatitis, folliculitis or oil acne.

Eye contact:

Short-term contact (solid or vapor) may result in slight eye irritation.

Carcinogenic Evaluation:**Product information:**

Name	IARC Carcinogens:	NTP Carcinogens:	ACGIH - Carcinogens:	OSHA - Select Carcinogens:
Marathon Maralube Moly Mixture	NE			

Notes:

Based on the available information, this product cannot be classified with regard to its carcinogenicity. This product is not listed as a carcinogen by the International Agency for Research on Cancer (IARC), the National Toxicology Program (NTP), or the Occupational Safety and Health Administration (OSHA).

Component Information:

Name	IARC Carcinogens:	NTP Carcinogens:	ACGIH - Carcinogens:	OSHA - Select Carcinogens:
Distillates, Petroleum Solvent- Refined Heavy Paraffinic 64741-88-4	Supplement 7 [1987], Monograph 33 [1984]			Present
Residual Oils (Petroleum). Solvent Refined 64742-01-4	Supplement 7 [1987], Monograph 33 [1984]			Present

4. FIRST AID MEASURES

Eye Contact:

Flush eyes with large amounts of tepid water for at least 15 minutes. If symptoms or irritation occur, call a physician.

Skin Contact:

Wash with soap and large amounts of water. Remove contaminated clothing. If symptoms or irritation occur, call a physician.

If product is accidentally injected into or under the skin, regardless of wound size or initial absence of symptoms, the individual should be evaluated immediately by a physician as a surgical emergency.

Ingestion:

Not expected to be acutely toxic. If large amounts are swallowed, immediately call a physician.

4. FIRST AID MEASURES

Inhalation:

No acute effects expected. If symptoms or irritation occur with any exposure, call a physician.

NOTES TO PHYSICIAN:

No data available.

Medical Conditions Aggravated By Exposure:

No data available.

5. FIRE FIGHTING MEASURES

Suitable extinguishing media:

For small fires, Class B fire extinguishing media such as CO₂, dry chemical, foam (AFFF/ATC) or water spray can be used. For large fires, water spray, fog or foam (AFFF/ATC) can be used. Fire fighting should be attempted only by those who are adequately trained and equipped with proper protective equipment.

Specific hazards:

The product is not combustible per the OSHA Hazard Communication Standard, but will ignite and burn at temperatures exceeding the flash point.

Special protective equipment for firefighters:

Avoid using straight water streams. Water spray and foam (AFFF/ATC) must be applied carefully to avoid frothing and from as far a distance as possible. Avoid excessive water spray application. Use water spray to cool exposed surfaces from as far a distance as possible. Keep run-off water out of sewers and water sources.

Flash point:

>356 F COC

Autoignition temperature:

No data available.

Flammable limits in air - lower (%):

No data available.

Flammable limits in air - upper (%):

No data available.

NFPA rating:

Health: 1

Flammability: 1

Instability: 0

Other: -

6. ACCIDENTAL RELEASE MEASURES

Personal precautions:

Keep public away. Isolate and evacuate area. Shut off source if safe to do so. Advise authorities and National Response Center (800-424-8802) if the product has entered a water course or sewer. Advise local and state emergency services agencies, if appropriate. Recover and return product to source. Use suitable absorbent materials such as vermiculite, sand, or clay to clean up residual liquids.

7. HANDLING AND STORAGE

Handling:

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Comply with all applicable EPA, OSHA, NFPA and consistent state and local requirements. Use appropriate grounding and bonding practices. All five gallon pails and larger metal containers (including tank cars and tank trucks) should be grounded and/or bonded when material is transferred. Store in properly closed containers that are appropriately labeled and in a cool well-ventilated area. Do not cut, drill, grind or weld on empty containers since they may contain explosive residues. Do not expose to heat, open flames, strong oxidizers or other sources of ignition.

Avoid repeated and prolonged skin contact. Exercise good personal hygiene including removal of soiled clothing and prompt washing with soap and water.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

PERSONAL PROTECTIVE EQUIPMENT

Engineering measures:	Local or general exhaust required when using at elevated temperatures that generate vapors or mists.
Respiratory protection:	Not required under normal conditions and adequate ventilation. Approved organic vapor chemical cartridge or supplied air respirators should be worn when significant vapors are generated. Observe respirator assigned protection factors (APFs) criteria cited in federal OSHA 1910.134. Self-contained breathing apparatus should be used for fire fighting.
Skin and body protection:	Use chemical resistant gloves such as neoprene, nitrile, or PVA to prevent prolonged or repeated skin contact.
Eye protection:	Not normally required for routine operations.

9. PHYSICAL AND CHEMICAL PROPERTIES:

Appearance:	Grey semi-solid
Physical state (Solid/Liquid/Gas):	Solid
Substance type (Pure/Mixture):	Mixture
Color:	Grey
Odor:	Mineral Oil
Molecular weight:	Not determined.
pH:	Neutral
Boiling point/range (5-95%):	> 600 F
Melting point/range:	Not determined.
Decomposition temperature:	Not applicable.
Specific gravity:	0.892 @ 68 F
Density:	7.4 lbs/gal @ 68 F
Bulk density:	No data available.
Vapor density:	No data available.
Vapor pressure:	Not determined.
Evaporation rate:	No data available.
Solubility:	Negligible
Solubility in other solvents:	No data available.
Partition coefficient (n-octanol/water):	No data available.
VOC content(%):	No data available.
Viscosity:	154.9 cSt @ 40 C 14.8 cSt @ 100 C

10. STABILITY AND REACTIVITY

Stability:	The material is stable at 70 F, 760 mm pressure.
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Polymerization:

Will not occur.

Hazardous decomposition products:

Carbon monoxide, carbon dioxide, hydrogen sulfide, oxides of sulfur, oxides of nitrogen, oxides of phosphorous, oxides of magnesium, boric oxide, calcium oxide and zinc oxide.

Materials to avoid:

Strong oxidizers such as nitrates, chlorates, peroxides.

Conditions to avoid:

Heat and open flames.

11. TOXICOLOGICAL INFORMATION

Acute toxicity:**Product information:**

Name	CAS Number	Inhalation:	Dermal:	Oral:
Marathon Maralube Moly	Mixture	NA	NDA	NDA

Toxicology Information:

Based on the toxicity of its individual components, this product would not be expected to be toxic via either the oral or dermal route of exposure.

12. ECOTOXICOLOGICAL INFORMATION

Mobility:

No data available.

Ecotoxicity:

No data available.

Bioaccumulation:

No data available.

Persistence/Biodegradation:

This product is not expected to cause any acute or chronic toxicity to aquatic organisms due to its extremely low water solubility.

13. DISPOSAL CONSIDERATIONS

Cleanup Considerations:

Don't pollute, conserve resources. "Empty" drums and drum liners retain residue (solid, liquid and/or vapor) that will burn and can be dangerous. Do not attempt to clean and reuse. Dispose of empty drum liners in an environmentally safe manner. "Empty" drums should be completely drained, properly bunged and promptly returned to a drum reconditioner. This material as supplied and by itself, when discarded or disposed of, is not an EPA RCRA hazardous waste according to federal regulations. This material could become a hazardous waste if mixed or contaminated with a hazardous waste or other substance(s). It is the responsibility of the user to determine if disposal material is hazardous according to federal, state and local regulations.

14. TRANSPORT INFORMATION

49 CFR 172.101:

DOT:

Transport Information: This material when transported via US commerce is NOT REGULATED by DOT regulations.

Packing group: Not applicable.

DOT reportable quantity (lbs): Not applicable.

15. REGULATORY INFORMATION

US Federal Regulatory Information:

US TSCA Chemical Inventory Section 8(b): This product and/or its components are listed on the TSCA Chemical Inventory.

OSHA Hazard Communication Standard: This product has been evaluated and determined not to be hazardous as defined in OSHA's Hazard Communication Standard.

EPA Superfund Amendment & Reauthorization Act (SARA):

SARA Section 302: This product contains the following component(s) that have been listed on EPA's Extremely Hazardous Substance (EHS) List:

Name	CERCLA/SARA - Section 302 Extremely Hazardous Substances and TPQs
Distillates, Petroleum Solvent-Refined Heavy Paraffinic	NA
Residual Oils (Petroleum). Solvent Refined	NA
Lithium Complex Soap Base	NA
Additives	NA
Molybdenum Disulfide	NA

SARA Section 304: This product contains the following component(s) identified either as an EHS or a CERCLA Hazardous substance which in case of a spill or release may be subject to SARA reporting requirements:

Name	CERCLA/SARA - Hazardous Substances and their Reportable Quantities
Distillates, Petroleum Solvent-Refined Heavy Paraffinic	NA
Residual Oils (Petroleum). Solvent Refined	NA
Lithium Complex Soap Base	NA
Additives	NA
Molybdenum Disulfide	NA

SARA Section 311/312

The following EPA hazard categories apply to this product:

None

SARA Section 313:

This product contains the following component(s) that may be subject to reporting on the Toxic Release Inventory (TRI) From R:

Name	CERCLA/SARA 313 Emission reporting:
Distillates, Petroleum Solvent-Refined Heavy Paraffinic	None
Residual Oils (Petroleum). Solvent Refined	None
Lithium Complex Soap Base	None
Additives	None
Molybdenum Disulfide	None

State and Community Right-To-Know Regulations:

The following component(s) of this material are identified on the regulatory lists below:

Distillates, Petroleum Solvent-Refined Heavy Paraffinic

Louisiana Right-To-Know:	Not Listed
California Proposition 65:	Not Listed
New Jersey Right-To-Know:	Not Listed.
Pennsylvania Right-To-Know:	Not Listed.
Massachusetts Right-To Know:	Not Listed.
Florida substance List:	Not Listed.
Rhode Island Right-To-Know:	Not Listed
Michigan critical materials register list:	Not Listed.
Massachusetts Extraordinarily Hazardous Substances:	Not Listed
California - Regulated Carcinogens:	Not Listed
Pennsylvania RTK - Special Hazardous Substances:	Not Listed
New Jersey - Special Hazardous Substances:	carcinogen
New Jersey - Environmental Hazardous Substances List:	Not Listed
Illinois - Toxic Air Contaminants	Not Listed
New York - Reporting of Releases Part 597 - List of Hazardous Substances:	Not Listed

Residual Oils (Petroleum). Solvent Refined

Louisiana Right-To-Know:	Not Listed
California Proposition 65:	Not Listed
New Jersey Right-To-Know:	Not Listed.
Pennsylvania Right-To-Know:	Not Listed.
Massachusetts Right-To Know:	Not Listed.
Florida substance List:	Not Listed.
Rhode Island Right-To-Know:	Not Listed
Michigan critical materials register list:	Not Listed.
Massachusetts Extraordinarily Hazardous Substances:	Not Listed
California - Regulated Carcinogens:	Not Listed
Pennsylvania RTK - Special Hazardous Substances:	Not Listed
New Jersey - Special Hazardous Substances:	carcinogen
New Jersey - Environmental Hazardous Substances List:	Not Listed
Illinois - Toxic Air Contaminants	Not Listed
New York - Reporting of Releases Part 597 - List of Hazardous Substances:	Not Listed

Lithium Complex Soap Base

Louisiana Right-To-Know:	Not Listed
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Distillates, Petroleum Solvent-Refined Heavy Paraffinic

California Proposition 65:	Not Listed
New Jersey Right-To-Know:	Not Listed.
Pennsylvania Right-To-Know:	Not Listed.
Massachusetts Right-To Know:	Not Listed.
Florida substance List:	Not Listed.
Rhode Island Right-To-Know:	Not Listed
Michigan critical materials register list:	Not Listed.
Massachusetts Extraordinarily Hazardous Substances:	Not Listed
California - Regulated Carcinogens:	Not Listed
Pennsylvania RTK - Special Hazardous Substances:	Not Listed
New Jersey - Special Hazardous Substances:	Not Listed
New Jersey - Environmental Hazardous Substances List:	Not Listed
Illinois - Toxic Air Contaminants	Not Listed
New York - Reporting of Releases Part 597 - List of Hazardous Substances:	Not Listed

Additives

Louisiana Right-To-Know:	Not Listed
California Proposition 65:	Not Listed
New Jersey Right-To-Know:	Not Listed.
Pennsylvania Right-To-Know:	Not Listed.
Massachusetts Right-To Know:	Not Listed.
Florida substance List:	Not Listed.
Rhode Island Right-To-Know:	Not Listed
Michigan critical materials register list:	Not Listed.
Massachusetts Extraordinarily Hazardous Substances:	Not Listed
California - Regulated Carcinogens:	Not Listed
Pennsylvania RTK - Special Hazardous Substances:	Not Listed
New Jersey - Special Hazardous Substances:	Not Listed
New Jersey - Environmental Hazardous Substances List:	Not Listed
Illinois - Toxic Air Contaminants	Not Listed
New York - Reporting of Releases Part 597 - List of Hazardous Substances:	Not Listed

Molybdenum Disulfide

Louisiana Right-To-Know:	Not Listed
California Proposition 65:	Not Listed
New Jersey Right-To-Know:	Not Listed.
Pennsylvania Right-To-Know:	Not Listed.
Massachusetts Right-To Know:	Present
Florida substance List:	Not Listed.
Rhode Island Right-To-Know:	Not Listed
Michigan critical materials register list:	Not Listed.
Massachusetts Extraordinarily Hazardous Substances:	Not Listed
California - Regulated Carcinogens:	Not Listed
Pennsylvania RTK - Special Hazardous Substances:	Not Listed
New Jersey - Special Hazardous Substances:	Not Listed

Distillates, Petroleum Solvent-Refined Heavy Paraffinic

New Jersey - Environmental Hazardous Substances List:	Not Listed
Illinois - Toxic Air Contaminants	Not Listed
New York - Reporting of Releases Part 597 - List of Hazardous Substances:	Not Listed

Canadian Regulatory Information:

Canada DSL/NDL Inventory: This product and/or its components are listed either on the Domestic Substances List (DSL) or are exempt.

Name	Canada - WHMIS: Classifications of Substances:	Canada - WHMIS: Ingredient Disclosure:
Molybdenum Disulfide	Uncontrolled product according to WHMIS classification criteria	1 %

NOTE: Not Applicable.

16. OTHER INFORMATION

Additional Information: No data available.

Prepared by: Mark S. Swanson, Manager, Toxicology and Product Safety

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End of Safety Data Sheet