

# MP-50™ MOLY PASTE

## DESCRIPTION

**MP-50™ Moly Paste** is a nonmelting, lubricating compound containing a high percentage of low-friction molybdenum disulfide (MoS<sub>2</sub>). Being a thick paste, it can be applied by brush or spatula. **MP-50** has an application range of -300°F (-185°C) to 750°F (400°C). When employed in mechanical components not exposed to air, good lubrication results can be anticipated up to 2000°F (1090°C). Molybdenum Disulfide is nearly inert in operating conditions up to 600°F (315°C). If the grease vehicle should be squeezed out, disrupting normal lubrication, the moly disulfide remains to protect working surfaces. It assists in boundary lubrication by filling microscopic voids. **MP-50** "plates" metal surfaces, reducing high points and increasing the load carrying area. It provides a low-friction shield to reduce bearing temperatures, protect working parts, prevent galling, seizure, stick-slip and heat-freeze. **MP-50** has a film strength of 300,000 psi and adheres tenaciously to metal surfaces.

**MP-50** may be applied directly to hot surfaces without running off or dripping. Conversely, it may be applied at temperatures as low as 0°F (-18°C) where many lubricants solidify. **MP-50** is water resistant, withstands extreme weather elements, and helps prevent corrosion on parts exposed to water, steam, most acids and alkalis.

- Lead Free
- Prevents Corrosion
- Lowers Friction
- Contains high percentage MoS<sub>2</sub>
- Water Resistant
- Nonmelting
- Prevents Stick-Slip

## APPLICATIONS

**MP-50** is an extreme service lubricant designed to handle the toughest applications. **MP-50** is the primer centerbowl lubricant for rail car applications. The low pour point oil provides reduced torque when compared to low tech asphaltic or wax based lubricants in the extremes of winter. The nonmelting, thick consistency also allows **MP-50** to remain in place under extreme loads and elevated temperatures. Although expensive when compared to standard mandrel lubricants, **MP-50** provides a real cost savings in extended mandrel life, better surfaces with fewer imperfections, tears, etc., thus reduced down time and greater efficiency. **MP-50** has been selected as the premier valve stem lubricant by many of the OEM valve manufacturers. In high pressure, multiple actuation tests **MP-50** shows almost no loss in performance where other products result in higher and higher torques with each actuation. **MP-50** is the only product specified in NAVSEA TMS S 9558-AA-MMA-100 Volume 10, Book 1 on Marotta control valves.

Based upon the extremes of the applications noted above, **MP-50** is ideal for cam lubrication, assembly and subsequent disassembly of press and shrink fit pins, shafts, bushings, sprockets, gears, bearings. Highly loaded gears, open spur gears, marine transmission gears or any applications prone to scoring using normal lubricants should be predressed with **MP-50** before initial service.

## PRODUCT CHARACTERISTICS

Thickener	Organo Clay & MoS <sub>2</sub>
Fluid Type	Petroleum
Color/Appearance	Blue to Black Paste
Dropping Point (ASTM D-566)	None
Specific Gravity	1.40
Density (lbs/gal)	11.7
Oil Separation,	<1.0
Wt % Loss @ 212°F	
Flash Point (ASTM D-92)	>430°F (221°C)
K-Factor	
High Chrome Alloys @ 60,000 PSI	Contact Stress
NLGI Grade	3½
Penetration @ 77°F,	205 - 235
(ASTM D-217) mm x 10 <sup>1</sup>	
Copper Strip Corrosion	1A
(ASTM D-4048)	
Shell 4-Ball (ASTM D-2596)	250
Weld Point, kfg minimum	
Friction Coefficient	0.06
Service Rating	-300°F (-185°C) to 750°F (400°C)

## PACKAGING

Code No.	Container Size	Container
28003	1 lb.	Plug Top Can
28007	2 lb.	Plug Top Can
28023	12 lb.	Pail
28013	30 lb.	Pail
28015	60 lb.	Pail
28024	180 lb.	Drum
28029	600 lb.	Drum

## LIMITED WARRANTY

Jet-Lube, Inc. makes the Limited Express Warranty that at the date of delivery, this product shall be free from defects in Jet-Lube, Inc. materials and workmanship.

This Limited Express Warranty is expressly in lieu of any other express or implied warranties, including any implied warranty of merchantability or fitness for a particular purpose, and of any other obligation on the part of Jet-Lube, Inc.

The sole remedy for breach of the Limited Express Warranty shall be the refund of the purchase price. All other liability is negated and disclaimed, and Jet-Lube, Inc. shall not be liable for incidental or consequential damages.

## CORPORATE LOCATIONS

Houston, Texas—World Headquarters

Maidenhead, England

Edmonton, Canada

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# JET-LUBE, INC.

## MATERIAL SAFETY DATA SHEET

**Product Name:** MP-50™

**Chemical Family:** Petroleum based lubricating paste.

**Use:** Extreme pressure lubricant.

**Manufacturer/Supplier:** JET-LUBE, INC.

**Address:** 4849 Homestead Rd., Ste. #200

Houston, TX, 77028 USA **Phone:** 713-674-7617

**Emergency Phone:** 713-674-7617 **Fax:** 713-678-4604

**Chemtrec 24 hours (USA):** 800-424-9300

Hazardous Components	CAS No.	Wt%	OSHA PEL	ACGIH TLV	Other Limits of Exposure
Petroleum Oil	64742525/64742536	40-60	Oil mist TWA-5mg/m <sup>3</sup>	N/A	STEL: 10mg/M <sup>3</sup>
Nonhazardous Blend	1317335/68953582	40-60	15mg/M <sup>3</sup>	10mg/M <sup>3</sup>	

### Main Hazards—Health Effects

**Eyes:** May cause irritation. **Inhalation:** Viscous nature may block breathing passages if inhaled. **Ingestion:** May cause diarrhea.

**Skin:** Possible rash for persons with hypersensitivity.

**Eyes:** Flush with water until all residual material is gone. If irritation persists, seek medical help. **Inhalation:** Clear air passage. If respiratory difficulty continues, seek medical help. **Ingestion:** Wash out mouth immediately. Consult physician. **Skin:** Wash thoroughly with hand cleanser, followed by soap & water. Contaminated clothing should be dry cleaned before reuse.

**Extinguishing Media:** Foam, dry powder, Halon®, carbon dioxide, sand, earth & water mist.

**Unsuitable Extinguishing Media:** Water jet. **Protective Equipment for Fire fighting:** Self-contained breathing apparatus.

**Personal Precautions:** Wear gloves & protective overalls. **Environmental Precautions:** Do not allow it to enter drains.

**Spillage:** Scrape up bulk, then wipe up remainder with cloth. To prevent walking hazard, pick up remaining residue with diatomaceous earth.

**Handling:** No special handling precautions necessary. **Storage:** Do not store at elevated temperatures.

**Respiratory Protection:** None needed.

**Hand Protection:** Protective gloves for hypersensitive persons.

**Eye Protection:** Glasses, if applied to parts in motion.

**Body Protection:** Overalls.

**Physical State:** Semisolid paste **Color:** Opaque Black **Odor:** Petroleum **pH:** Neutral **Boiling Range/Point °F (°C):** <600 (316)

**Melting Point °F (°C):** None **Flash Point (COC) °F (°C):** 430 (221) **Autoignition Temperature °F (°C):** >500 (260)

**Explosive Properties:** LEL: 0.9% UEL: 7% **Evaporation Rate (Butyl Acetate):** <0.01 **Partition Coefficient (Log Pow):** N/A

**Vapor Pressure (kPa):** <0.01 **Percent Volatiles:** Nil **Density (g/cm<sup>3</sup>):** 1.40 **Flammability:** Not flammable at ambient temperature. **OAR Value:** N/A **Oxidizing Properties:** None **Water Solubility:** Nil **Vapor Density:** >5

**Stability:** Chemically stable under normal conditions. No photoreactive agents. **Conditions to Avoid:** Powerful sources of ignition & extreme temps. **Materials to Avoid:** Strong inorganic & organic acids, oxidizing agents. **Hazardous Decomposition Products:** Burning generates smoke, airborne soot, hydrocarbons & oxides of carbon, sulfur & nitrogen. Residue mainly comprised of soot & mineral oxides.

**Acute Toxicity:** Not known.

**Irritancy—Skin:** Very mild.

**Skin Sensitization:** Not known.

**Subacute/Sub-chronic Toxicity:** Not known.

**Genotoxicity:** None known.

**Chronic Toxicity:** None known.

**California Prop 65:** N/A **Carcinogen:** NTP: No IARC: No OSHA: No

**EC Classification (67/548/EEC):** No

**LC-50:** >2000mg/kg-extrapolated from component data. **LD-50:** Not applicable

**Allergens:** None known.

**Possible Effects:** In extreme cases, may generate oil fractions that could act as a marine pollutant. Occurrences of this nature are highly unlikely. **Behavior:** Relatively well behaved. Bioaccumulation potential nil. **Environmental Fate:** Due to its fluid nature & specific gravity, this product will float & spread across water making it a nuisance contaminant. It's not thought to be toxic to marine or land organisms.

**Product Disposal:** Do not incinerate. Contact waste disposal company or local authority for advice. **Container Disposal:** Pails without liner—see Product Disposal section above. Pails with plastic liner—pail may only be disposed of via standard waste disposal services, recycled or reused. Liner—see Product Disposal section above.

Not classified as hazardous for transport. **D.O.T.:** Nonhazardous **UN No.:** Nonhazardous **Air Transport (ICAO & IATA):** Nonhazardous **Sea Transport (IMO & IMDG):** Nonhazardous **Road & Rail Transport (ADR/RID):** Nonhazardous


**Labeling Information:** None needed **EC Annex 1 Classification:** Not Applicable. **R Phrases:** R22—harmful if swallowed.

**S Phrases:** None applicable, as known. **Ozone Depleting Chemicals:** Not applicable. **TSCA:** All components are listed.

**WHMIS (Canada):** Not controlled. **Canadian DSL:** All components listed. **40 CFR Part 372 (SARA Section 313):** N/A

**CERCLA:** Nonhazardous **RCRA Hazard Class:** Nonhazardous **SARA 311/312:** None **TSCA 12B Components:** None

SDS first issued. SDS data revised. **New Jersey Right To Know:** See Section II

**Signature:**   
**Prepared by:** Donald A. Oldiges  
**Date Issued:** November 10, 2008

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LEGEND	
I.	IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND COMPANY
II.	COMPOSITION INFORMATION ON INGREDIENTS
III.	HAZARDS IDENTIFICATION
IV.	FIRST AID MEASURES
V.	FIRE FIGHTING MEASURES
VI.	ACCIDENTAL RELEASE MEASURES
VII.	HANDLING AND STORAGE
VIII.	EXPOSURE CONTROL/PERSONAL PROTECTION
IX.	PHYSICAL AND CHEMICAL PROPERTIES
X.	STABILITY AND REACTIVITY
XI.	TOXICOLOGICAL INFORMATION
XII.	ECOLOGICAL INFORMATION
XIII.	WASTE DISPOSAL
XIV.	TRANSPORT INFORMATION
XV.	REGULATORY INFORMATION
XVI.	OTHER INFORMATION

### HMIS SYMBOL

HEALTH	1
FLAMMABILITY	1
REACTIVITY	0
PPI	N/A

### NFPA SYMBOL

