



## PRODUCT DATA SHEET

### PT-14 MICROFINE TECHLUBE PTI TECHLUBE SERIES

#### DESCRIPTION

**PT-14** is a microfine Molybdenum Disulphide with graphite in a multi-polymer thermosetting resin binder. **PT-14** is supplied in concentrate form requiring reduction with **PT-1002** solvent. **PT-14** is designed for operating temperatures between -100F and +500F.

**PT-17** is a microfine Molybdenum Disulphide (no graphite) in a multi-polymer thermosetting resin binder 9. **PT-17** is supplied in concentrate form requiring reduction with **PT1002** solvent. **PT-17** is designed for operating temperatures between -300F and +500F. Meets **MIL-L 46010 TY II**.

These dry film lubricants are intended to be applied to equipment such as but not limited to steel, aluminum, magnesium, clutches, gears, shafts and other mechanical parts which function under extreme weathering and/or operating conditions.

#### SPECIAL USES AND DESIGN APPLICATIONS

- In extreme temperature environments.
- In cases where dust harms the operation of equipment.
- Exposure to liquids which leach out oils or grease.
- In the processing of materials that may be contaminated.
- In cases where retention of liquid lubrication is difficult.
- In cases requiring operation following long storage periods.
- Bearings subjected to wide temperature ranges. For examples: electronic devices, textile machinery, door hinges, catches and locks and window sliding surfaces, airborne mechanisms and moving parts of ovens furnaces and kilns.
- Equipment exposed to an environment reactive to conventional lubricants. For example: bearings operating in contact with plating solutions, steam, water, detergents or gasoline.
- Bearings and other mechanisms adjacent to surfaces or materials which must not be contaminated.
- Mechanisms that operate infrequently or that are kept in storage for emergency use. For example: automatic switching devices in communication equipment, bomb triggering mechanisms, liquid rocket systems, emergency service devices and a variety of guidance and control devices for missiles.
- Bearings, clutches and other parts that are exposed to friction and are located in inaccessible areas that make lubrication retention difficult.
- Where dust collection is objectionable. For example: textile machines and precision machinery.
- To supplement fluid lubricants. For example, the alleviation of sticking valves, clutches gears and the reduction of piston and cylinder wall wear
- As a separating agent and a high pressure lubricant in metal working and molding applications

### COLORS – DARK GRAY

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#### APPLICATION

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##### **Surface Preparation:**

Surface to be coated must be chemically cleaned. It must be free of oxides, soils, greases and other contaminants. Cleaning and surface preparation prior to the application of any **TECHLUBE** is extremely important to form a proper bond and maximize the corrosion resistant properties of the **TECHLUBE**

##### **Metal Surfaces:**

The following metal surfaces (with the exceptions noted) may be cleaned using an industry-approved vapor degreasing method, preferably a method using Perchloroethylene. Heavy soils and grease can be removed with a heavy Alkali bath. You can also use **PTC-2001C**. Do not use acids to clean carbon steel.

##### **Application Method:**

This coating may be applied by spraying or dipping. Spraying should be done in a suitable area having adequate ventilation. Care should be taken that no other materials be sprayed in the immediate area at the time of application to avoid contamination.

- **Spray Application:** Concentrate shall be mixed with the **PT-1002** at a ratio of approximately 2 to 3 parts of paint to 1 part solvent. The amount of solvent depends on the type of application and/or equipment. The mixture should be such that the spray goes on the part thin and wet. A hairy or granular spray usually signifies too little solvent. Each coat should be sprayed at 1 mil thick. No less than two coats should be applied to the parts, more coats can be applied if necessary.
- **Dip Application:** Concentrate shall be mixed with the PT-1002 at a ratio of 2 to 4 parts solvent to 1 part concentrate. Under thinning for dip applications can cause excessive build up.

**Primer to Promote Bonding and Prevent Corrosion:** If the parts being sprayed will be under unusually harsh conditions and an extra strong bond is required, apply the **PT-402 Wash Primer** prior to applying the lubricant. Please refer to **PT-402** technical data for application instructions. Then apply the **PT-201 Thermosetting Epoxy**. **PT-201** is usually applied in a red, yellow or orange color to more easily identify when repair or touch up is needed.



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### CURING

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#### PT-14

Air dry ten minutes and bake:

Steel Alloys, Aluminum and Copper Alloys      325°F – 1 hour  
 Magnesium Alloys

#### PT-17

Air dry ten minutes and bake:

Steel Alloys, Aluminum and Copper Alloys      325°F – 1 hour  
 Magnesium Alloys

### PHYSICAL PROPERTIES

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#### MOLY SPRAY PROPERTIES & CHARACTERISTICS

Flash Point	24°F
Boiling Point	175°F to 395°F
Thinner	PT-1002
Coefficient of Friction	0.035 at 200,000 PSI and 0.070 at 0 PSI
Max Load Bearing Prop.	20,000 PSI
Operating Temperatures	-100°F to 500°F
Recommended Primer	PT-402 (Acid Etching Primer)
Weight (pounds per gallon)	10.87
VOC	496 g/L
Load Bearing vs. Speed	The lubrication characteristics of the PT-14 are excellent at high load and low speed as well as low load and high speed. They are not recommended for high load high speed unless supplementary lubrication is applied.
Corrosion Resistance	When used over the PT-402 Acid Etching Wash Primer followed by the PT-201 Thermosetting Epoxy 1000 hours Salt Spray



## PRODUCT DATA SHEET

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### **SHELF LIFE**

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Shelf life is only applicable for materials stored in unopened and undamaged original factory filled containers.  
1 year when stored at 50°-85° F.

### **HEALTH, SAFETY, & STORAGE REQUIREMENTS**

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Refer to each individual material SDS (Safety Data Sheet) for specific requirements on the health, safety, storage and handling requirements. Follow all local, state, and national regulations during surface preparation, material application and cleanup.

### **PRODUCT INFORMATION & DISCLAIMER**

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Product Data Sheets are periodically updated to reflect new information. It is important to use the latest and most recent revision for the product being used. The foregoing information is accurate to the best of our knowledge. However, due to differences in customer handling, use and method of application which are not known and are beyond our control, Products Techniques, Inc. makes no warranties as to the end result.