



Product Data Sheet

Molydag[®] 210

Air dry molybdenum disulfide dry film lubricant

DESCRIPTION

Molydag[®] 210 is a colloidal dispersion of molybdenum disulfide in alcohol. **Molydag[®] 210** offers excellent extreme-pressure lubrication in a resin-bonded system that air dries in five to ten minutes. The material is easily applied by standard spray, brush, or dip methods to all substrates not affected by the fluid component. **Molydag[®] 210** is supplied as a concentrate to be used as is or diluted in appropriate solvent for final application.

FEATURES	BENEFITS
• Superior extreme-pressure lubrication	• High lubricity for tight tolerances of mating parts
• Excellent adhesion to most substrates	• Allows for a variety of parts to be processed with the same coating, saving on costs
• Fast air-dry times	• Minimum pre-treatment and energy costs required, reducing application costs
• Requires minimal if any surface pretreatment	• Economic savings in time and processing costs for application of the coating

TYPICAL APPLICATIONS

- Engine components for assembly and break-in requirements
- Mating surfaces of assemblies and machinery components
- Mechanisms, tumbler locks
- Automotive and industrial gaskets
- Anti-seize thread lubricant
- Aerosol lubricant additive

TYPICAL PROPERTIES (as of wet product)

Color	: grey-green
Pigment	: colloidal MoS ₂
Binder	: thermoplastic resins
Diluent	: alcohols, esters, ketones as appropriate
Consistency	: fluid
Density	: 0.91 kg/l (7.6 lb/gal)
Solids content by weight	: 20%
Flash point	: 0.91 kg/l (7.6 lb/gal)
VOC	: 730 g/l (6.08 lb/gal)
Theoretical coverage	: 3.66 m ² /kg @ 25 μm (136 ft ² /gal @ 1mil)

TYPICAL PROPERTIES (as cured)

Color	: grey-green
Coefficient of friction	: 0.23 static
Service temperature	
- continuous	: 200°C (390°F)

METHOD OF USE

Surface Preparation

Substrates to be coated must be clean and dry. A solvent wipe with air dry is sufficient for smooth surfaces. For porous surfaces, use the same procedure followed by heating to drive off entrapped contaminants, solvents or moisture.

Mixing/Blending/Dilution

METHOD OF USE

(Continued)

Stir the concentrate thoroughly before dilution. The dilution ratio recommended for initial evaluation is 1:5 (product:diluent). The best dilution ratio, considering performance and economy is generally worked out on the job.

Typical film thickness ranges from 5 – 12 microns (0.2 to 0.5 mil). A coating thickness of 25 micron (1 mil) of **Molydag 210** is best built up by the application of 5 coats by spray application. Dilution of 1 part by volume product to 3 parts by volume of solvent is necessary to obtain an adherent coating of this thickness.

Application

For small production work and prototypes, a suction cup gun may be used, if **Molydag 210** is thoroughly mixed prior to spray application. For intermediate production runs or many small parts, propeller-type attachments should be used on the suction gun to ensure coating uniformity. Full production is best handled with propeller-agitated pressure pot systems, which provide the best in application efficiency.

The diluted material can be applied by standard spray, brush, or dip methods, whichever is best for the job. Typical dry film thickness range from 5 – 12 microns (0.2 to 0.5 mil).

Drying

The coating air dries to touch in 5 minutes and is ready for use in 30 minutes. Following the air dry, bake for 5 minutes at 75°C (167°F) to achieve optimum coating qualities in a shorter curing cycle. When applied during periods of high humidity, the coating may become mottled in color. This does not affect performance.

STORAGE/ HANDLING

Shelf life for this product is 2 years from date of qualification under original seal. Keep container tightly closed when not in use. Store in a cool, well ventilated area. Keep away from heat, sparks, and open flame. Protect material from direct sunlight. Ground and bond containers when transferring materials. Empty containers may retain hazardous properties. Follow all MSDS/label warnings even after container is emptied.

APPLICATION ASSISTANCE

Henkel's Application Specialists are available to assist you in production start-up with **Molydag 210**. Visit our website www.henkelna.com/metals for more information and for the Henkel global location nearest you.

HEALTH & SAFETY

Please consult Material Safety Data Sheet.

NOTES

Flammable. Harmful if swallowed, inhaled, or absorbed through skin. May cause eye irritation. Wash thoroughly after handling. Keep away from heat, sparks, and open flame. Keep container tightly closed when not in use. Use with adequate ventilation. Avoid breathing vapor. See Acheson's Material Safety Data Sheet for proper first aid instructions.

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