

Molydag® 254N

Resin bonded MoS2 lubricant coating

DESCRIPTION

Molydag 254N is one of a series of Acheson resin-bonded lubricant coatings designed to provide dry film lubrication in a variety of industrial, consumer, and military applications. **Molydag 254N** is a synergistic combination of MoS₂ and other lubricants dispersed in an epoxy / phenolic resin solution. **Molydag 254N** can be applied by standard brush, dip, spray-tumble, or spray techniques.

Molydag 254N provides lifetime lubrication and good corrosion resistance for components which are inaccessible after assembly, but nevertheless must continue to function reliably.

Molydag 254N provides an effective performance, even as a very thin film (12 µm), thus there is little interference with operating tolerances.

Molydag 254N meets the requirements of GE's A50TF147, Classes A and C.

BENEFITS

- Good adhesion to metals
- Low coefficient of friction
- Good wear life (resistance to fretting and galling)
- Corrosion resistance
- Resistance to many chemicals and solvents

TYPICAL APPLICATIONS

- Construction equipment
- Business machines
- Jet engine parts
- Woodworking equipment
- Mining equipment
- Safety equipment
- Cold-heading machinery
- Threaded connections
- Farm machinery
- Aircraft fasteners
- High tension nuts and bolts

TYPICAL PROPERTIES (of wet product)

Pigment :	molybdenum disulphide and other lubricating solids
Binder :	epoxy / phenolic resin
Solids content :	54 - 56%
Viscosity (Brookfield 20°C, 20 rpm) :	200 - 1000 mPa.s
Flashpoint :	-4°C
Density :	1340 kg/m ³
Theoretical Coverage :	27.5 m ² /kg at 10 µm
Diluent :	Methyl Ethyl Ketone
Shelf Life :	24 months from date of qualification under original seal

TYPICAL PROPERTIES (as cured)

Colour :	dark grey
Static coefficient of friction :	0.14
Service temperature	
-continuous :	150°C
-intermittent :	175°C
	A fully run-in coating has a service temperature of 340°C (continuous) and 400°C (intermittent)

METHOD OF USE

Surface Preparation

The performance obtained by a coating of **Molydag 254N** depends on the care given to substrate preparation, application and curing. The following pretreatments are recommended:

Steel :	Grit or vapour blast, degrease and chemically pretreat with lubrite 2*, Granodine 11* or Bonderite 100*.
Stainless steel :	Grit or vapour blast, degrease
Aluminium :	Degrease or solvent clean and pretreat with Alone 1200* or equivalent. Coating may also be applied over anodised surface
Copper alloys :	Degrease or solvent clean, grit blast, or chemically pretreat with Ebonol C**

* Parker + Amchem ** Enthone, Inc.

Equivalent products are available from Turco, Detrex, MacDermid and others.

Mixing

Molydag 254N lubricant is supplied as a one-component concentrate at a solids concentration of 54 - 56%. Dilution depends on the method of application to be used and the coating thickness desired. A 1 : 1 blend of toluene and MEK or only MEK(methyl ethyl ketone) can be used as a diluent. Mixing is best accomplished by mechanical agitation.

Application

Molydag 254N may be applied by spray, dip-, spray-tumble or brush methods according to individual application requirements.

For spray application, external atomising type spray guns are recommended.

Adjust the spray gun to provide a well-atomised spray at 25 to 40 psi (1.8 to 2.8 kg/cm²) air pressure. For maximum corrosion resistance, apply multiple thin coats with a ten-minute air dry period between coats to minimise pin holes. Oven curing is required only after the final coat of lubricant is applied.

Note: It is recommended that an agitator-type spray cup be used to maintain product suspension.

Curing

A normal cure schedule is a cure of 60 minutes at 150°C. However, performance may be improved with a cure of 60 minutes at 200°C. For example, this cure cycle increases the Falex endurance life.

STORAGE/ HANDLING

Keep container tightly closed when not in use. Store in a cool, well ventilated area. Empty containers may retain hazardous properties.

HEALTH & SAFETY

Please consult Material Safety Data Sheet.

NOTES

Molydag® is a registered trademark of Henkel AG & Co KGaA.



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