

TECHNICAL INFORMATION GUIDE

# #099 SOLID FILM LUBRICANT HEAT CURING

SERIES E199

WHICH IS QUALIFIED TO

MIL-PRF-46010 & SAE AS5272 type III

## SANDSTROM

PRODUCTS COMPANY

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### DESCRIPTION

Sandstrom #099 Dry Film Lubricant is a paint-like coating containing molybdenum disulfide and corrosion inhibiting pigments. This **Heat Curing** material prevents corrosion, galling, seizing, and fretting. It is a low-friction coating which exhibits long wear life when operated at -320°F to +500°F under loads exceeding 100,000 psi.

#099 should be applied where maximum wear life and corrosion protection from a dry film lubricant are required. Once Sandstrom #099 has been heat cured, it is virtually unaffected by atmospheric and fretting corrosion, solvents, acids, oils, degreasers, and is not resoftened again at elevated temperatures.

#099 can be applied to a wide variety of surfaces by spraying or dipping. Complete application instructions are on the reverse of this sheet.

### OUTSTANDING BENEFITS

Excellent Corrosion Protection, Chemical Resistance, and Long Wear Life are its outstanding characteristics. Cured product exceeds the screening requirements for use in spacecraft materials.

### TYPICAL USES

Sandstrom #099 is an excellent solution to the problem of lubricating parts:

- That will be operated in corrosive atmospheres
- That may be stored for long periods
- Which are seldom lubricated once they leave the factory and where permanent lubrication is desired
- Where operating pressures exceed the load-bearing capacities of ordinary oils and greases
- Where parts may be subjected to frequent disassembly
- Where "clean operation" is desired (#099 will not collect dirt and debris like grease and oils)
- Where a protective coating and sacrificial break-in lubricant is needed
- Where fretting and galling is a problem (such as splines, universal joints, and keyed bearings)
- Where easy release is desired (such as fasteners and PVC molds)

**SANDSTROM #099 CONTAINS  
NO GRAPHITE OR LEAD**

### QPL LISTINGS

PRI SAE AS5272 type III

QPL-46010 MIL-PRF-46010 - NSN 9150-01-416-9506

### COMPOSITION AND PHYSICAL PROPERTIES

|                             |  |   |   |
|-----------------------------|--|---|---|
| Net Wt./Gallon              | 11.25 lbs. + 0.25 lb                                   | Coefficient of Friction                     | 0.0286 (Falex Test)   |
| Solids Content              | 40% minimum (By Wt.)                                   | Load Carrying Capacity                      | 3000 lbs* ASTM D2625B   |
| Viscosity                   | 60 KU ± 10 @ 77°F                                      | Corrosion Protection                        | 750 hours*<br>ASTM B117 @ 0.0005 inches DFT<br>on MIL-DTL-16232 Type M Class 3<br>phosphated steel                                  |
| Operating Temperature Range | -320°F to +500°F                                       | Freeze/Thaw Stability                       | <b>DONOT FREEZE</b>   |
| Vehicle Type                | Epoxy  | Theoretical Coverage                        | 800 sq. ft./gal. @ 0.5 Mil DFT  |
| VOC                         | less than 250 g/L                                      | ASTM E595<br>Vacuum Outgassing              | Total Mass Loss 0.31%   |
| Wear Life                   | 508+ minutes average<br>ASTMD2625A                     | Collected Volatile<br>Condensable Materials | 0.01%   |
| Flash Point                 | 216°F ± 2°F Setaflash                                  | Water Vapor Regain                          | 0.12%   |
| Lubricative Pigment         | Molybdenum Disulfide                                   | Chemical Resistance                         | exceeds ASTM D2510A&C<br>MIL-PRF-46010 table 1 immersions<br>including Skydrol & brake fluids<br>200+ MEK double rubs w/o softening |
| Color                       | • Flat Dark Gray<br>(Burnishes upon handling)          |   |   |
| Shelf Life                  | 1 year from date of Manufacture when<br>stored at 77°F |   |   |

\*Test halted before failure occurred.