SANDSTROM E760

SOLID FILM LUBRICANT: AIR DRY

MOLY & PTFE AIR DRY Light Duty Lubricant

RoHS COMPLIANT

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DESCRIPTION

Sandstrom E760 Solid Film Lubricant is a thermoplastic coating containing molybdenum disulfide, PTFE and corrosion inhibiting pigments. This air-drying material prevents corrosion, galling, seizing and fretting. It is a low-friction coating that exhibits long wear life when operated at -320°F to +300°F under loads exceeding 100,000 psi.

Once E760 has been applied to a properly prepared surface and allowed to cure, it is virtually unaffected by atmospheric and fretting corrosion, acids, oils and degreasers. Sandstrom E760 can be applied to all metallic and non-metallic surfaces by spray application.

OUTSTANDING FEATURES/BENEFITS

- Excellent corrosion protection without the use of toxic heavy metals.
- Air dry coating
- **WORKS WITH GREASES and OILS**
- **CONTAINS NO GRAPHITE or TOXIC HEAVY METALS**
- **UTILIZES NON-HAP SOLVENTS**

LIMITATIONS

STORE AT TEMPERATURES BELOW 100°F.

NOTICE

Before using this product, read all warnings, limitations and safety information printed on the product label, Safety Data Sheet (MSDS), and Technical Data Sheet.

TYPICAL USES

Sandstrom E760 is an excellent in-plant or field solution to the problem of lubricating parts:

- Where application of a baked-on lubricant is not possible.
- That may be operated in corrosive atmospheres.
- That may be stored for long periods.
- That 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 "clean operation" is desired (Sandstrom 28A will not collect dirt and debris as do grease and oils).
- Where parts may be subjected to frequent disassembly.
- 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 threads of all kinds).

COMPOSITION AND PHYSICAL PROPERTIES

Net Weight per gallon *ASTM D1475*	9.90 ± 0.2 lbs. (Theoretical)	**Lubricating Pigment**	Molybdenum Disulfide & PTFE
Weight Solids	32% minimum	**Color**	Flat Dark Gray
VOC	5.06 lbs./gal. (606 g/L) (Theoretical)	**Shelf Life**	2 Years from Date from Manufacture
Viscosity	15 - 25 seconds, #2 EZ Zahn @ 77°F	**Storage Conditions**	Below 100°F
Coverage Rate * *ASTM D1400*	500 sq. ft./gal @ 0.5 mil	**Freeze/Thaw Stability**	Stable
Dry Film Thickness	0.3 mil	**Flash Point**	23°F
		Boiling Point	78.6°C / 173.5°F

* Actual figures do not include spray loss. Also allow for surface irregularities and porosity, as well as material loss when mixing.

PERFORMANCE AND FUNCTIONAL PROPERTIES			
Chemical/Fluid Resistance:			
MIL-PRF-46147 Table I Fluids *ASTM D2510A, ASTM D2510C*	Pass ^	**Load Carry Capacity** *ASTM D2625B*	2500 lbf ^
MIL-L-23398 Table III Test Fluids *ASTM D2510A, ASTM D2510C*	Pass ^ *includes Skydrol	*Wear Life* *ASTM 2625A*	62 minutes ^
Corrosion Protection:		**Operating Temperature Range** *Continuous Use Limits*	-320°F to +300°F
ASTM B117: Steel *MIL-DTL-16232 Type Z Class 3*	400 hrs. * ^	**Thermal Stability** *ASTM D2511*	Pass
ASTM B117: Aluminum *MIL-A-8625 Type 2*	1000 hrs. * ^	**Thermal Stability Range** *AS1701F sec. 4.2.3*	-320°F to +450°F
* Tests halted before failure		^ 6 & 18 Hour Dry	

GENERAL
Sandstrom E760 is a paint-like material consisting of lubricative pigments dispersed in a thermoplastic resin system thinned with appropriate solvents. For maximum service, the APPLICATION INSTRUCTIONS MUST BE FOLLOWED CLOSELY.

FILM THICKNESS & ENGINEERING TOLERANCE
As supplied, Sandstrom E760 will yield a film thickness of about 0.0003 inches without interference. If excess buildup does occur and a force fit is necessary, burnishing lightly will assist in mating the parts. The remaining excess will be worn away in the first few cycles of operation. Whenever possible, the proper tolerances should be designed into the part.

COVERAGE
One gallon of this material will theoretically cover 500 sq. ft. with a dry film thickness of 0.0005 inches. Coverage depends upon method of application and other variables such as overspray and type of surface to be coated. Above coverage rates are based on 100% efficiency.

SURFACE PREPARATION
Please contact Sandstrom Products Company for substitute surface preparations if recommended steps cannot be followed.

Application on steel. Pre-clean surface with aliphatic naphtha or any other EPA compliant cleaner that sufficiently cleans surface to pass ASTM F22. Abrasive blast surface with 180-220 grit aluminum oxide (25-50 RMS optimum). Phosphate IAW MIL-DTL-16232 (weight should be 11-22 g/m^2), type M, class 3 (optimal performance) or type Z, class 3.

Application on stainless steels. Pre-clean surface with aliphatic naphtha or any other EPA compliant cleaner that sufficiently cleans surface to pass ASTM F22. Abrasive blast surface with 180-220 grit aluminum oxide (25-50 RMS optimum). Passivate surface with ASTM A967, types nitric 1, nitric 2 or nitric 3, as applicable.

Application on aluminum and aluminum alloys. Pre-clean surface with aliphatic naphtha or any other EPA compliant cleaner that sufficiently cleans surface to pass ASTM F22. Sulfuric acid anodize IAW MIL-A-8625 and seal surface with hot deionized water (>180°F for 30 minutes). .

Application on titanium and titanium alloys. Degrease surface to be coated with aliphatic naphtha or any other EPA compliant cleaner that sufficiently cleans surface to pass ASTM F22. Abrasive blast surface with 180-220 grit aluminum oxide (25-50 RMS optimum) and alkaline anodize.

Application on copper and copper alloys. Pre-clean surface with aliphatic naphtha or any other EPA compliant cleaner that sufficiently cleans surface to pass ASTM F22. Abrasive blast surface with 180-220 grit aluminum oxide (25-50 RMS optimum). Form a black oxide finish on surface.

IMPORTANT! ***DO NOT TOUCH CLEAN SURFACE WITH FINGERS - OIL FROM THE HANDS WILL INTERFERE WITH PROPER COATING ADHESION.***
Whenever possible, treat both contact surfaces (i.e., the shaft and the bearing).

STIRRING

IMPORTANT! THIS LUBRICANT CONTAINS HEAVY PIGMENTS WHICH SETTLE RAPIDLY. THEREFORE, IT SHOULD BE STIRRED THOROUGHLY BEFORE USE AND **CONTINUOUSLY** DURING APPLICATION.

THINNING

For conventional spray - Apply Sandstrom E760 as supplied. If reduction is desired, use 3 parts Sandstrom E760 to 1-part D169 Thinner.

For dipping - No thinning required.

APPLICATION

Sandstrom E760 should be sprayed or dipped to the desired film thickness (usually 0.0003 to 0.0007 inches). Allow the surface to dry **at least** 30 minutes to 1 hour before doing light assembly work.

It is important to keep container closed when not in use to keep loss of solvents at a minimum and avoid a change in volume solids.

Note: All instructions are based on product and part temperatures of 77°F ± 5°F and <70% relative humidity. Should product need temperature adjustments, use a hot or cold water bath.

DRYING/CURING

Sandstrom E760 may be air dried or force cured. If parts are to be air dried, allow at least 6 hours @ 77°F ± 5°F and ≤70% relative humidity before putting into service.

After a flash time of 30 minutes, E760 can be force cured according to the following schedule:

90 minutes @ 150°F or
45 minutes @ 175°F or
25 minutes @ 200°F.

IMPORTANT! The time begins when **the part** has reached temperature, NOT when it is placed in the Class A oven.

CLEANUP

Use the same solvents for cleaning tools as are recommended for thinning or use MEK.

REMOVAL

Soak the coated part for 10 – 20 minutes in a 1:1 blend (by volume) of Acetone to PM Solvent. Then use a soft bristle brush to remove coating from the surface. If necessary, perform a second rinse with a clean solvent blend to remove any remaining coating.

WARNINGS: Constant stirring is imperative for best results.

DANGER! USE WITH ADEQUATE VENTILATION.

Strict compliance to the instructions given in Surface Preparation, Application and Stirring is very essential for obtaining optimum results.