



POXYLUBE® #820

DRY FILM LUBRICANT: AIR DRY

SERIES E820

PTFE MODIFIED COATING

SANDSTROM

PRODUCTS COMPANY

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DESCRIPTION

Poxylube® #820 Dry Film Lubricant is a single component epoxy formulated with PTFE to provide excellent lubrication, fluid resistance and corrosion protection. This Air Drying material prevents corrosion, galling, seizing and fretting.

OUTSTANDING FEATURES/BENEFITS

- Excellent corrosion protection
- Easy application
- Air Dry coating for solution to in-plant or field lubrication challenges

POXYLUBE® #820 CONTAINS NO GRAPHITE.

LIMITATIONS

Do not use where there is potential for contact with food.

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

Poxylube® #820 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 easy release is desired (such as threads of all kinds).
- Where "clean operation" is desired (Poxylube® #820 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).

COMPOSITION AND PHYSICAL PROPERTIES

Net Weight per gallon	7.2 - 8.5 lbs.	Vehicle	100% Epoxy
Weight Solids	Black 14.45 ± 2.0% (Theoretical) Clear 15.07 ± 2.0% (Theoretical)	Lubricating Pigment	PTFE
Volume Solids	Black 7.0 ± 2.0% (Theoretical) Clear 7.0 ± 2.0% (Theoretical)	Color	Clear and Black
VOC	6.2 – 6.5 lbs./gallon (Theoretical)	Coverage Rate*	230 - 250 sq. ft./gal @ 0.5 mil DFT
Odor	Strong Solvent	Recommended Coats	1
Viscosity	30 - 41 seconds, #1 EZ Zahn @ 77°F	Dry Film Thickness	0.5 – 1.0 mils
Shelf Life	1 year from date of shipment		
Storage Conditions	Store below 100°F		
Freeze/Thaw Stability	Stable		
Flash Point	Black 27°F ± 2°F Clear 39°F ± 2°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 D2510 A, ASTM D2510 C	Pass (18 Hour Dry @ 77°F± 5°F and < 70% relative humidity)
Corrosion Protection:	
ASTM B117: Steel MIL-DTL-16232 Type Z Class 3	750 hrs. (at 0.5 mil)
Operating Temperature Range	-320°F to +300°F

IMPORTANT NOTICE TO BUYER / WARRANTY AND LIMITATIONS ON OUR LIABILITY

We warrant our products to be free of manufacturing defects and that they meet our current published physical properties and specifications. All information and suggestions presented are rendered gratis and are accurate to the best of our knowledge. They are based on technical data we believe to be reliable and are intended for use by persons having skill and "know-how" at their own discretion and risk. Prior to use, customers are cautioned to determine the suitability of our products for any given application through their own testing. NO WARRANTY IS MADE, EXPRESS OR IMPLIED, REGARDING SUCH INFORMATION, THE DATA ON WHICH IT IS BASED OR THE RESULTS OBTAINED FROM ITS USE OR THAT OUR PRODUCT SHALL BE MERCHANTABLE OR FIT FOR ANY PARTICULAR PURPOSE. SUCH STATEMENTS ARE NOT INTENDED TO SUGGEST INFRINGEMENT OF ANY PATENT. Since conditions of use of our products are beyond our control, all suggestions and statements are made without guarantee, warranty or other responsibility, express or implied, on our part. We assume no responsibility for results obtained, or damages incurred, from their use beyond replacing material proved to be defective or refunding the purchase price of such material at our option. Acceptance of delivery of our product means you have accepted the terms of this warranty, whether or not purchase orders of other documents state terms that vary from this warning. No seller is authorized to make any representations or warranty or assume any other liability on our behalf with any sales of our products. SANDSTROM PRODUCTS COMPANY

Revision Date: 11/06/2020

GENERAL

For maximum service, the APPLICATION INSTRUCTIONS MUST BE FOLLOWED CLOSELY.

COVERAGE

One gallon of this material will theoretically cover 230 - 250 sq. ft. with a dry film thickness of 0.0005 inches. Coverage depends upon methods 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

The following surface preparations are recommended for the individual metals listed to develop maximum adhesion, wear life and corrosion protection. 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 1100-1400 milligrams per sq. ft.), type Z, class 3.

Application on stainless 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). Passivate surface with ASTM A967, types nitric 1, nitric 2 or nitric 3, as applicable.

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

Application on titanium. Solvent wash (non-chlorinated) and abrasive blast surface with 180-220 grit aluminum oxide (25-50 RMS optimum) and alkaline anodize.

Application on copper alloys. Pre-clean surface with aliphatic naphtha or any other EPA compliant cleaner that sufficiently cleans surface to pass ASTM F22. Pretreat using one of the following methods (in order of preference):

- a) Black oxide treat (according to MIL-F-495)
- b) Bright dip, or grit blast (25-50 RMS optimum)

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 spraying - If necessary, reduce up to 1 to 1 with a blend of 2 parts MEK and 1 part PM solvents.

For dipping - Thin 4 parts of Poxylube® #820 with 1 part PMA solvent.

APPLICATION

Poxylube® #820 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.

CURING

Air drying 6 hours will yield maximum hardness. This material may also be force cured by using moving hot air or infrared bulbs. After a flash time of 15 to 30 minutes, Poxylube® #820 can be force cured according to the following schedule:

90 minutes @ 150°F or

45 minutes @ 175°F or

25 minutes @ 200°F.

It is important to **keep container of Poxylube® #820 closed when not in use** to keep loss of solvents at minimum and avoid change in volume solids.

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

CLEANUP

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

REMOVAL

In the event it is necessary to remove Poxylube® #820, physical removal is best (such as grit blasting, sanding or grinding). Also, selected epoxy cold strippers.

WARNINGS: Constant stirring is imperative for best results.

DANGER! USE WITH ADEQUATE VENTILATION.

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