

Dry Film Lubricants

Dry Film Lubricants are high performance coatings made up of very fine particles of lubricating agents blended with binders and other special additives. Once cured, these lubricating agents bond to the part surface as a solid film which reduces galling, seizing and fretting and protects against corrosion. Through the combination of these properties, dry film lubricants greatly improve the wear life of coated parts.

Dry film/solid film lubricants allow for operating pressures above the load-bearing capacity of normal greases and oils. They are also less prone to collecting soil particulates than greases and oils. In some applications, the coating is self-burnishing, leading to improved, rather than decreased, performance over time. Some blends of dry film/solid film lubricants are also temperature and chemical resistant allowing for their use in harsh environments such as jet engines where exposure to aviation fuel and extreme temperatures are the norm.

Chem Processing Inc. Dry Film Lubricant Capabilities:

- Spray and dip application
- Application of zinc phosphate or manganese phosphate per MIL 16232 as a pre-treatment for steel
- Nitric acid passivation as a pre-treatment for stainless steel
- Sulfuric acid anodizing or chem film as a pre-treatment for aluminum
- Aluminum oxide grit blasting as a pre-treatment for copper and copper alloys
- Selective surface masking and multiple finishes per part
- Salt spray corrosion test per ASTM B117
- Metrological thickness analysis
- Adhesion testing per ASTM 3359D

Applicable Specifications:

MIL-PRF-46010G
MIL-PRF-46147D

AS5272 Type I
AS5272 Type II

MIL-L-23398
PWAA550

Typical Applications of Dry Film Lubricants:

- **Automotive/Heavy Machinery:** splines, universal joints, keyed bearings, and others
- **Defense/Military:** provides long-term lubrication of moving parts on firearms
- **Aerospace/Aviation:** provides start-up lubrication on jet engine components
- **Plastics Manufacturing:** provides release on PVC molds
- **Fasteners:** allows for repeated assembly/disassembly

All processes comply with industry specifications including ASTM, SAE, MIL, etc., as applicable for the particular process involved and are performed under ISO 9001:2000/AS9100B standards. Specific company approvals may also apply.



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