

**GENERAL DESCRIPTION**

Dry Film Lubricant, dgf-123®, is a dispersion of micronically fine, pure colloidal synthetic graphite in a compounded volatile liquid carrier. The carrier is blended specifically for applying a film of graphite to a metal surface by spraying from a self-pressurized aerosol sprayer. dgf-123® is free from objection binders or varnish, and therefore, provides a film of pure graphite that will not chip or flake off a surface to which it is applied.

**GENERAL SPECIFICATIONS**

**WEIGHT NET PER SPRAYER 9oz.**

**SOLIDS CONTENT 0.98%**

**FLASH POINT & FIRE POINT NONE\*\***

**RATE OF EVAPORATION Very rapid or fast**

**RUST INHIBITOR CONTENT 0.0094%**

**MAX PARTICLE SIZE OF GRAPHITE 1(one) Micron**

**The carrier, approximately 98% by volume, is a compounded blend. Due to its low boiling point and high rate of evaporation, dgf-123 is packaged in self-pressurized sprayers.**

**FUNCTIONS OR PURPOSE**

dgf-123® is made for direct application to individual parts or bearing surfaces prior to assembly. It provides an efficient film of dry lubrication which ASSURES POSITIVE INITIAL LUBRICATION. dgf-123® dry film, with or without fluid lubrication, provides positive lubrication at the moment of initial movement between bearing surfaces. This protection against harmful metal-to-metal contact is present until normal lubricating oil films are established. It continues in effect and, in conjunction with lubricating oil, furnishes additional surface protection during the critical running-in period. dgf-123® dry film provides protection against fretting or seizure between tightly fitted parts whose movement is limited or mechanically confined. In this instance, the dgf-123® film functions as a parting or anti-seize medium.

**MAINTAINS THICKER OIL FILMS ON BEARING SURFACES**

dgf-123® film lowers interfacial tensions with oil and allows frictional surfaces to retain thicker oil films. This reduced surface tension further speeds the flow of oil to all points of the treated surface. The dgf-123® film actually performs the function of a wetting agent to distribute and hold oil on a treated surface. In addition, dgf-123® provides dependable lubrication even if the oil film is temporarily ruptured. Thicker oil films are especially beneficial to bearing surfaces during the initial run-in of a new or rebuilt engine.

**PRODUCES SMOOTHER MATED SURFACES**

The proper use of dgf-123® will produce smoother, more efficient bearing surfaces by protecting these surfaces during the initial mating or run-in period. Moments of extreme pressure or heat, where oil is unable to retain a constant protective film, will not cause harmful surface damage because the dgf-123® film provides stand-by lubrication until the oil film is re-established.

**REDUCES FRICTION AND HEAT BETWEEN BEARING SURFACES**

dgf-123® film reduces the coefficient of friction between bearing surfaces, particularly under high loadings or close initial tolerances. This reduction in friction results in measurable lower running temperatures. Surfaces treated with dgf-123® in conjunction with lubricating oil will withstand much higher operating temperatures without seizure than will surfaces lubricated with oil alone. dgf-123® withstands heat up to 3000°F.

**GENERAL APPLICATION RECOMMENDATIONS****1. TYPES OF SURFACES**

dgf-123® will adhere to any type of clean, dry metal surface, whether porous, such as cast iron, or highly polished or finished, and provides initial lubrication protection. dgf-123® is designed for application to hard parts such as pistons, camshafts, crankshafts, valves, bearing surfaces and hard part assemblies. Excellent cosmetic value to damaged or discolored metal, and can be painted over. Lubrication of near zero tolerances.

**2. PREPARATION OF PARTS OR SURFACES FOR TREATMENT**

Parts or surfaces to be treated with dgf-123® must be dry and free from oil or grease. Standard solvents which leave surfaces dried by air pressure or natural evaporation should be used. Standard degreasing equipment employing heat vapor blasting or degreasing action will provide a satisfactory surface. Surfaces dry but with discolorations of varnish or carbon will coat satisfactorily and it is not necessary to remove such deposits. Avoid hand or fingerprints on degreased surfaces. dgf-123® is best used on surfaces and parts between 70°F and 110°F.

**3. APPLICATION INSTRUCTIONS**

Spray dgf-123® directly on clean, dry surface or part to be treated from a distance of 6" - 12".

**4. DRYING INSTRUCTIONS**

Allow 3 minutes drying time at room temperature for film to set. Slight air circulation can speed up drying time. Use of hot air or drying ovens is not necessary and will not measurably decrease drying time. Proper drying time is essential to provide a film which is resistant to blending with lubricating oils.

**5. PARTS STORAGE OR BUILD-UP TIME**

dgf-123® provides dry, clean, non-attractive surface protection for treated parts during storage. The dgf-123® film will provide protection against corrosion on parts awaiting assembly.

**6. FINAL ASSEMBLY INSTRUCTIONS**

Before final assembly, apply Miracle Power wgf® Wet Graphite Film or other oil lubricants to surfaces or parts treated with dgf-123®. Because dgf-123® is micronic in thickness, no extra allowances are necessary, even for final assembly of very close fitting parts. Always assemble to specified tolerances.

**HANDLING AND STORAGE INSTRUCTIONS**

dgf-123® is packaged in self-pressurized aerosol sprayers. Sprayers operate most efficiently at room temperature and are designed to completely exhaust themselves of product when operated in an upright or nearly upright position. dgf-123® should be stored in a cool place. Keep away from extreme heat (above 110°F). Sprayers are treated to 130°F before shipment from manufacturer.