

FLUID FILM BLACK

FLUID FILM BLACK® is a penetrant and lubricant also used for corrosion prevention. It is a non-toxic, long lasting, thixotropic liquid that has been used for over fifty years in the highly corrosive marine environment of ships and offshore drilling rigs. More recently they have been introduced and successfully utilized in the Automotive and snow handling industries as a vehicle undercoating. The wet barrier creeps and migrates into tight seams and into the metal chassis to provide corrosion protection from salts and brines. The addition of FLUID FILM BLACK® allows customers to protect their vehicle while restoring a rich black color to the chassis or cover existing rust. FLUID FILM BLACK® is formulated from specially processed wool-wax, highly refined petroleum oils and selected agents to provide corrosion control, penetration, metal wetting and water displacement. The long lasting product contains no solvents, will not dry out and will penetrate to the base of all metals, providing corrosion protection from both natural and industrial atmospheres. Heavily corroded and/or frozen parts such as nuts, bolts, shafts, etc. that would normally be damaged during maintenance, can be salvaged by applying FLUID FILM BLACK®.

TYPICAL PROPERTIES

Unless designated otherwise, the following data refers to FLUID FILM® NAS or FLUID FILM® AS after the propellant has evaporated away following spray application.

Appearance

black colored liquid.

Viscosity

Brookfield HBF, 70 ° F

#2 Spindle at 2 RPM

10 - 20 reading (16,800 - 32,000 cps)

Flash Point, Bulk Liquid: *ASTM-92 Cleveland Open Cup*

405°F minimum.

Non-Volatile

89% minimum (3 hours @ 220°F).

VOC. CARB 310

AS: Less than 25%, NAS: Less than 1%

Specific Conductivity

Less than 10⁻⁹ ohm/cm @ 1 mHz.

Specific Gravity

0.875 - 0.885 (less propellant).

Effect on Rubber *ASTM D-471 @ ± 158°F 70 hours*

None on neoprene and buna-n. May cause swelling on non oil-resistant rubber goods.

Effect on Paint

None on most painted surfaces.

Effect on Aluminum

No pitting.

Extreme Pressure *ASTM D-2782 Timken Method*

Fail load - 15 pounds.

Wear Prevention - Characteristics *ASTM D-2266 Four Ball Method*

40 Kg., 1200 RPM for 1 hour @ 167°F. Results: Scar diameter of 0.49mm.

Repaintability

Contain no silicones. It is recommended that surfaces treated with **FLUID FILM® AS or NAS** be hot water or steam detergent washed (120°F), whichever is most effective.

Corrosion Protection *ASTM D-1735 Humidity Cabinet*

Passes 50 days.

ASTM D-1748 *Humidity Cabinet*

Passes 30 days.

MIL-C-16173 *Corrosion Requirement*

Grade 2 -Soft Films. Meets & exceeds salt spray requirements.

Water Replacement

Displaces water from all metal surfaces (MIL-C-23411, Paragraph 3.6).

Toxicity

Non-toxic, LD-50 greater than 3 grams per kilogram. Non-irritating skin response. Very slight irritation to the eyes. (Toxicity tests performed according to standard methods by an independent laboratory).

Warning

AS: Extremely flammable. Contents under pressure. Do not puncture, incinerate or store above 120°F. Keep from open flame.

NAS: Combustible. Do not incinerate

Spray Nozzle Cleaning

Turn can upside down, point in a safe direction and spray until only propellant escapes. If spray button becomes clogged during use, pull it from the can and clean it with a fine wire or needle. Replace the button with a gentle twisting motion, keeping it pointed in a safe direction. Do not stick pins or other objects into nozzle tube.

All components of **FLUID FILM® Aerosol and non-aerosol** are listed on the TSCA Inventory.