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Product Data: #206.3  
Effective January 2020

## FLUID FILM® WRO-EP

### Technical Data Sheets | FLUID FILM® WRO-EP

WRO-EP is recommended for the general maintenance of wire rope. It provides corrosion protection and lubrication for standing and running rigging, drag lines and bridge cable. The high tackiness of WRO-EP minimizes throw-off on higher speed running rigging and provides higher resistance to water abrasion and washout when used in tidal areas. Extreme pressure properties provide excellent lubrication for both wire rope and open gear applications.

**NOTE: ENVIROMENTALLY FRIENDLY – WRO-EP is solvent Free and essentially non-toxic**

### FLUID FILM® PENETRANT, LUBRICANT and CORROSION PREVENTATIVE (WRO-EP)



#### NATIONAL STOCK NUMBER

5 gal/Pail  
9150-00-530-6814

## FLUID FILM WRO-EP DETAILS

**Description** Permanently soft gel. Conforms to MIL-PRF-18458 C. Submarine Material Usage Category-Limited-38°C Maximum Temperature.

**Colour** Greenish black

**Usage Details** Rusty wire rope and cable should be first treated with FLUID FILM Liquid A to attain maximum penetration.

Where a low viscosity material is desired for a slushing compound, the use of FLUID FILM Gel-WRL is recommended. This product also has extreme pressure properties. See Technical Bulletin #206.2.

**Application Methods** WRO-EP Wire Rope Lubricant may be applied using a leather or lamb's wool glove. When a considerable length of wire is to be coated, it may be advantageous to apply as follows: Form a cone of leather, about two feet long and six inches in diameter at the base. Both base and apex are left open with the wire rope passing through the apex. The apex is tightly lashed around the wire with marlin for about six inches. WRO-EP is applied to the wire with a rag, and then the leather cone is dragged along the wire (or vice versa) so that the excess is scraped off into the cone, the remainder being well worked into the rope crevices. The amount of material left on the wire can be regulated by adjusting the marlin lashing. Too heavy an application not only wastes material but also can result in throw-off, particularly in running cable.

TYPICAL PROPERTIES			
PROPERTY	VALUE	ASTM	IP
NLGI Grade	1-2	D-217	-
Specific Gravity	0.928-0.938	-	-
Dropping Point	113°	D-566	132/65
Flash Point	254°	D-92	36/67
Specific Conductivity	Less than 10 <sup>-9</sup> mho/cm @ 1M Hz		
Effect on Rubber	None on neoprene and buna-n. May cause swelling on non oil-resistant rubber goods.		
VOC	Less than 0.1% (CARB 310)	-	-

COMPARISON WITH MIL-PRF-18458 C		
PROPERTY	TYPICAL VALUE	SPECIFICATION
Worked Penetration (ASTM D-217)	290	200-350
Oil Separation	1.6%	10% Max.
Lead Wear Index (ASTM D-2596)	46.7	30 Min.
Accelerated Weathering (ASTM G-23)	pass	pass
Salt Spray 20% (240 hours)	pass	pass
Low Temperature Flexibility (20°F)	pass	pass
Volatile Matter	1.70%	2% Max
Adhesiveness	99.80%	95% Min.

Packaged in 39 pound pails and 441 pound drums.

**KEEP OUT OF REACH OF CHILDREN.**

This document is subject to revision without notice.