



ICEUS, Inc. Utility Division

Presents

PROFESSIONAL PULL FIBER OPTIC CABLE LUBRICANT

A special, fragrance free, water based, easily poured gel lubricant engineered to provide maximum friction reduction in low shear, special cable placing situations such as: small diameter, fiber optic, coaxial, or subduct operations found in telecommunications & CATV.

- **Pro-Pull FO Lubricant** provides excellent friction reduction between cable and plastic conduit and innerduct. Test procedure: (Bellcore TR-NWT-00281, procedure #6.1) results: starting friction (static, starting the pull) 0.091; sliding friction (dynamic, during the pull) 0.066
- **Pro-Pull FO** coats evenly and clings on the cable. It also exhibits an excellent stranding filament-like attachment to the cable, often referred to as the string factor. Lubricant may be applied by pouring from container into duct, blowing into duct with compressed air, prelubrication with spreader device, or pumping application.
- **Pro-Pull FO** is biodegradable and nonirritating to skin during normal use. It is a nonflammable liquid and the residue remaining after complete evaporation will not sustain or propagate combustion.
- **Pro-Pull FO** is compatible with the following cable jacket and innerduct material: (Test criteria: TR-NWT-002811, issue 1, November 1993) (ASTM-D-1693); low density, linear low density, cross linked, polyethylene, Union Carbide, dynk material.
- **Pro-Pull FO** leaves a small amount of residue (less than 2.5% solids by weight). This minute amount of residue prevents cementing of the cable in the duct. The residue remaining retains its lubricating qualities for many months.
- **Pro-Pull FO** will not evaporate or lose performance qualities in either warm weather or after undergoing freeze/thaw cycles. The standard formula was designed to be used at temperatures from 32°F to 120°F.
- **Pro-Pull FO Winter grade (PPFO-W)** was designed to be used at temperatures that are under 32°F.

Lubricant needed to install cable:

Any attempt to quantify exactly the amount of lubricant that is needed on any individual installation will not be totally accurate, due to jobsite variables. In general, field experience has shown that some valid assumptions can be made. The formulas presented here have been normally acceptable for planning purposes. However, there are often field conditions that may require more lubricant than the formulas provide. Knowledge of specific jobsite conditions, cable and conduit weight and diameter specifications, along with the number of bends and "experience" have proven to be the most accurate estimates.

Lubricant Formulas

Condition A: For use in plastic conduit and innerduct (PVC, ABS, Polyethylene, Fiberglass)

1. Non-metric (USA): $Q = 0.0015 \times L \times D$
2. Metric: $Q = 0.008 \times L \times D$

Condition B: For use in non-plastic conduit (multiple concrete (MCD), clay tile, fiber cement, metal, fiber filled, etc.)

Not Recommended

- **Odor – None**
- **Appearance: Opaque, viscous, stringy, orange, gel**
- **Flash Point: None**
- **PH – Neutral**
- **See MSDS for more details**

ITEM#	DESCRIPTION	PACKAGING	SHIPPING WEIGHT
PPFO-55	55 gallon plastic drum	1 drum	480 LBS
PPFO-05	5 gallon plastic pail	1 pail	45 LBS
PPFO-01	1 gallon plastic jug	6 jugs	53 LBS
PPFO-32	32 ounce bottles w/quirt tops	12 bottles	28 LBS
Winter Grade			
PPFO-W-55	55 gallon plastic drum	1 drum	480 LBS
PPFO-W-05	5 gallon plastic pail	1 pail	45 LBS
PPFO-W-01	1 gallon plastic jug	6 jugs	53 LBS
PPFO-W-32	32 ounce bottles w/quirt tops	12 bottles	28 LBS

Distributed/Represented By:

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Chemical & Topical Products



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