

# 3M™ Concentrated Multi-Purpose Cable Lubricant

## Product Description

3M™ Concentrated Multi-Purpose Cable Lubricant is suitable for almost any communications cable pull job and is compatible with most commonly used communication jackets. Because this product is highly concentrated, it uses 1/4 as much lubricant than standard product and is designed to provide friction reduction that lasts even as the lubricant dries. Concentrated Multi-Purpose Cable Lubricant is available in three different packaging types: a spray, wipes and pourable liquid to ensure the most efficient application for pulling cable. Wipes and spray applications are effective in vertical cable pulls using lightweight cables. This lubricant is suitable for either the inside or outside environment.



## Friction Testing

Friction is determined using standard Telcordia test procedure<sup>1</sup>. The duct is wrapped 420° around a three-foot diameter. A 25-lb incoming weight is attached to the cable as it is pulled at a set rate of 65 feet per minute. A load cell takes pulling tension data which is used to determine a “dynamic” friction coefficient. Below is typical data.

### Coefficient of Friction for MDPE Jacket Cable into HDPE Continuous Innerduct

Back Tension (lb)	Unlubricated	CMP Wipes	CMP Liquid	CMP Spray
25	0.30	0.08	0.07	0.07

## Product Features and Benefits

Feature	Benefit
Non-staining/non hazardous	Safe to use/dispose Easy to clean off
Easy spray or wipe application	Quick and easy to use with virtually no mess or excess
Product is compatible with all commonly used communication jackets	Can be used on fiber, copper and coaxial cable jackets One product handles most jobs
Slow drying for continuous lubricity	Lower coefficient of friction even after lube has dried Eases cable replacement
Highly concentrated silicone lubricant	Uses 1/4 as much lubricant Superior friction reduction
Thin film lubricant	No dripping Suitable for vertical pulls

<sup>1</sup> Telcordia Standard TR-NWT-002811; Generic Requirements for Cable Placing Lubricants.



## Application Use

Use for all types of cable installations, including:

- Fiber optic cable drops
- Lightweight cable, building construction
- High performance data cables
- Vertical cable pulls
- Inside and outside environment
- Copper
- Coaxial

## Performance Properties

### Coatability & Cling Factor

3M™ Concentrated Multi-Purpose (CMP) Cable Lubricant will coat the cable jacket evenly to provide friction reduction. Since CMP is a highly concentrated thin film lubricant it is designed to continue providing friction reduction even after it dries.

### Combustibility

Lubricant has no flash point and dried residue is non-flammable.

### Sprayability

Low viscosity lubricant allows product to flow through spray head. Lubricant will not clog valves

## 3M™ Concentrated Multi-Purpose Cable Lubricant

### Cable Lubricant Usage in Gallons

Quantity of 3M Concentrated Multi-Purpose\* Cable Lubricant in Gallons (Liters)

Length of Pull Feet (Meters)

Conduit Size inches (CM)	500 (152)	1,000 (304)	2,000 (608)	3,000 (912)	4,000 (1,216)	5,000 (1,520)	6,000 (1,824)
1 (2.5)	0.19 (0.71)	0.38 (1.43)	0.75 (2.83)	1.13 (4.27)	1.5 (5.67)	1.88 (7.11)	2.25 (8.51)
2 (5.0)	0.38 (1.43)	0.75 (2.83)	1.5 (5.67)	2.25 (8.51)	3 (11.35)	3.75 (14.19)	4.5 (17.03)
3 (7.5)	0.56 (2.11)	1.13 (4.27)	2.25 (8.51)	3.38 (12.79)	4.5 (17.03)	5.63 (21.31)	6.75 (25.55)
4 (10)	0.75 (2.83)	1.5 (5.67)	3 (11.35)	4.5 (17.03)	6 (22.71)	7.5 (28.39)	9 (34.06)
5 (12.5)	0.94 (3.55)	1.88 (7.11)	3.75 (14.19)	5.63 (21.31)	7.5 (28.39)	9.38(35.50)	11.25 (42.58)
6 (15)	1.13 (4.27)	2.25 (8.51)	4.5 (17.03)	6.75 (25.55)	9 (34.06)	11.25 (42.58)	13.5 (51.10)

Formula:  $.000375 * L * D$

L= length in feet

D= diameter of conduit in inches

\*For use with one gallon Concentrated Multi-Purpose Cable Lubricant. Spray and wipes application is intended for shorter cable pulls (distance) than illustrated above.

## Cable Compatibility

**Polyethylene Stress Cracking:** 3M™ Concentrated Multi-Purpose Cable Lubricant does not cause environmental stress cracking of polyethylene jackets commonly found on communications cables. Untreated polyethylene (Union Carbide DYNK) and MDPE jacket material were both tested according to ASTM standard method.<sup>1</sup> After 168 hours exposure none of the test specimens showed failures.

**Polycarbonate Stress Cracking:** 3M™ Concentrated Multi-Purpose Cable Lubricant will not stress crack polycarbonate. Polycarbonate bars are bent to a defined strain and exposed to lubricant as described in the Telcordia standard<sup>2</sup>, Section 8.2, Stress Cracking of Polycarbonate. After 48 hours, none of the test specimens showed signs of cracking.

**Corrosion of Copper and Steel:** 3M™ Concentrated Multi-Purpose Cable Lubricant will not corrode copper after 24 hour exposure as described in the Telcordia standard<sup>2</sup>, Section 8.3, Copper Mirror Test.

<sup>1</sup> ASTM Test Method D1693, Environmental Stress-Cracking of Ethylene Plastics.

<sup>2</sup> Telcordia Standard TR-NWT-002811; Generic Requirements for Cable Placing Lubricants.

## Physical Properties

	Property	Result
<b>Application Properties:</b>	<b>Appearance:</b>	Slightly thickened, white liquid
	<b>Percent Non-Volatile Solids:</b>	97 %
<b>Temperature Use Range:</b> 20°F to 120°F (-5°C to 50°C)	<b>VOC Content:</b>	0 gms/liter
	<b>Viscosity:</b>	250-750 cps @10rpm
	<b>pH:</b>	6.5 – 8.0

### Temperature Stability

No phase-out after five freeze/thaw cycles or five-day exposure at 120°F (50°C).

Will not phase out or separate during the shelf life of lubricant.

### Clean-Up

Use water to clean up the area

### Storage and Shelf Life

Store product tightly sealed and away from direct sunlight. Lubricant shelf life is one year past the date of manufacture.

## Directions for Use

### 3M™ Concentrated Multi-Purpose Cable Lubricant Spray

Apply 5 to 10 sprays directly into conduit just before pulling or pushing. For larger conduit or longer pulls, spray additional lubricant onto the cable or into the conduit if the tension increases.

### For 3M™ Concentrated Multi-Purpose Cable Lubricant Wipes

Wipe cable as it enters conduit or attach wipe to pulling line to pre-lubricate conduit. One towel is sufficient for small cable and for installations or drops under 200 feet. Use additional lubricant wipes on longer pulls or when tension increases.

### For 3M™ Concentrated Multi-Purpose Cable Lubricant Liquid

Can be poured directly onto the wire or cable. Directly lubricate the cable or wire during the entire portion of the pull as it enters the conduit.



In addition to 3M™ Concentrated Multi-Purpose Cable Lubricant, 3M also makes 3M™ Multi-Purpose Gel Cable Lubricant and 3M™ Multi-Purpose Liquid Cable Lubricant, available in many sizes to fit your needs.

## Ordering Information

Product Number	Product Description	3M ID	MOQ
CL-CMP-QTS	Concentrated Multi-Purpose Cable Lubricant Quart Spray Bottle	80-6113-3182-0	12
CL-CMP-1	Concentrated Multi-Purpose Cable Lubricant 1 Gallon Jug	80-6113-3183-8	4
CL-CMP-C	Concentrated Multi-Purpose Cable Lubricant 20-CT Wipe Canister	80-6113-3184-6	12

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