MULEGLIDE™

THORNE & DERRICK INTERNATIONAL

*From the Makers of **MULETAPE®***

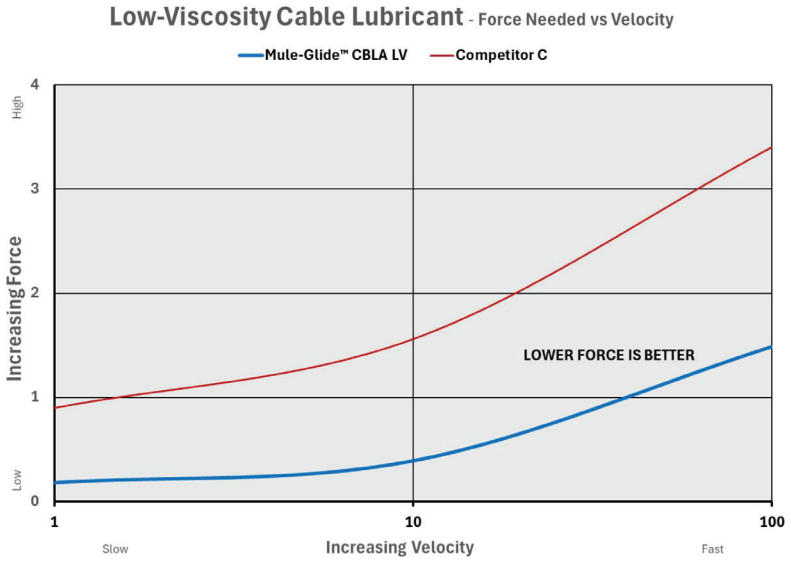
CBLA LV RTU - Low Viscosity Ready to Use Air Assist MULEGLIDE™

- Low-viscosity cable lubricant
- Offered in 16 ounce bottles, 32 ounce bottles, and 1 gallon pail
- Optimized formula with lubricity that lasts
- Specially designed formulation for enhanced field performance
  - 15% faster with reduced product consumption
- Silicone-based formulation specially formulated for all underground cable placement
- Deposits a non-drying silicone-based component for long-lasting coating on conduit wall surface
- Enables rapid air-assisted cable installation with a super low friction and low drag force composition
- Narrow tip for easy-to-use dispensing in microduct and duct applications
- Smooth feel resists gel or string buildup in application and provides enhanced operator experience in the field

Properties	Test Method	Value
Appearance		White Translucent Liquid
Brookfield Viscosity (2 rpm)	ASTM D2196	500-2000 cps (25 °C)
Density	ASTM D1475	8.3 lbs/gallon
Nonvolatile Solids		3-4%
pH		6-8
Freeze Point		~0°C
Temperature Use Range		20°F to 130°F (-7°C to 54°C)
Temperature Stability	Freeze/Thaw	Pass
Flammability	UL94	Product as applied is nonflammable, Residue meets V0 rating
Evaporation		Leaves behind lubricating film
Lubricant Slip Characteristic		COF < 0.1 straight pull*
Toxicity		Nontoxic
Clean Up		Wipes away with rag

Package	16 oz Bottle	1 Gallon Pail
Item #	75214 (16/Case)	75215 (4/Case)

*MULEGLIDE™ lubricants provide a low calculated COF (less than 0.1 straight pull) when an adequate quantity of lubricant is applied for a cable installation by reducing or eliminating any cable/duct direct contact. The appropriate quantity of lubricant will depend primarily on the size, type, and condition of the duct. When an optimum amount of MULEGLIDE™ lubricant has been applied, the effective calculated COF will be very low (approaching down to about 0.05 straight pull). A key feature of MULEGLIDE™ cable lubricants is that they also provide for a lower (drag) force needed over a wide velocity range (see plot).



Instructions for use:

1. Clean conduits thoroughly by blowing a mandrel or tight fitting sponge under low pressure through the conduit prior to lubricating the conduit until sponges come dry and clean.
2. Pre-lubricate a tight-fitting sponge with MULEGLIDE and insert into duct. Refer to table below and add appropriate amount of lubricant into duct and add second tight fitting sponge into to help spread MULEGLIDE in duct.
3. Connect to cable jetting equipment to pre-lubricated conduit and blow sponges through conduit at low pressure until all sponges exit duct at the far end.
4. Follow set up procedures recommended by cable jetting equipment manufacturer to install cables.

MULEGLIDE™ CBLA LV Air-Assisted Lubricant Quantity

Micro Duct Diameters	Recommended Lubricant Quantity per 1000 Feet*	
ID (mm)	FL OZ	ML
5	1.6	50
6	2.3	70
8	4.1	120
10	6.3	190

Small Duct Diameters	Recommended Lubricant Quantity per 1000 Feet*		
ID (mm)	FL OZ	LITER	GAL
12	9	0.27	0.07
14	12	0.37	0.10
15	14	0.42	0.11
20	25	0.74	0.20

Conventional Duct Diameters		Recommended Lubricant Quantity per 1000 Feet*		
ID (mm)	Nom ID (inch)	FL OZ	LITER	GAL
26	1	42	1.3	0.3
32	1.25	64	1.9	0.5
40	1.5	100	3.0	0.8
51	2	160	4.8	1.3

**Lubricant quantity will vary significantly based on several factors like cable and duct types (stiffness, diameter), condition (debris vs clean, wet vs dry, rough or corrugated vs smooth), fill factor, total bend angles, install speed/pressure & terrain environment.*