

LUBRIGEL GN1477

Heavy Duty Cable Lubricant

LUBRIGEL GN1477 is a thick gel, slow drying, synthetic lubricant for pulling electrical cables through conduits. It has good cling, allowing easy handling and application. It is temperature stable up to 60°C. The dried lubricant still remains slippery.

LUBRIGEL GN1477 is effective and economical and is suitable for general purpose use. It is pleasant to use, harmless to people and is environmentally friendly. Clean up is easy as it is readily rinsed off with water. It will not damage cable jacketing material such as PVC, polyethylene or rubber.

LUBRIGEL GN1477 allows more cables to be pulled through conduits, sometimes more than twice as many. It reduces pull drag by as much as 80%, so there is far less risk of stretching and damaging copper wire and cable components. It reduces the coefficient of dynamic friction to 0.15 or less.

Friction reduction achieved by cable lubricant similar to **Lubrigel LN1477** are shown below (*page 2*)

FEATURES

- Very good lubricity and cling.
- Suitable for use with most cable coatings, including PVC, cross linked polyethylene, nylon, Neoprene and Hypalon (synthetic rubber).
- Suitable for PVC and metal conduits.
- Safe to use and environmentally friendly.
- Easy clean up.

PHYSICAL and CHEMICAL PROPERTIES

| | |
|---------------------|------------------------|
| Appearance | Thick, opaque blue gel |
| Solubility in water | 100%. |
| Specific gravity | 1.0 |
| Boiling Point | 100°C |
| Flash point | Non flammable |
| pH | 6 - 8 |

DIRECTIONS FOR USE

Apply to cables neat by hand application, flow coating, spraying or immersion.

Test

An excess of the lubricant was coated onto 6-inch long cables made of polyvinyl chloride and crosslinked polyethylene. The coated cables then pulled through a 2 inch inside diameter polyvinyl chloride (PVC) conduit. A sidewall force of 100 lb/ft was applied. The static and kinetic coefficients of friction were calculated for each *cable* and conduit combination. Results of the tests are tabulated below.

For comparison purposes, the static and kinetic coefficients of friction were calculated for nonlubricated *cable*. However, because the apparatus was not equipped with sufficient pulling force to move the nonlubricated *cable* under 100 lb/ft sidewall force (maximum pulling force is about 30 lbs.) the coefficients of friction were calculated under a smaller sidewall force.

The data shown below demonstrates that the lubricant significantly reduces the static and kinetic coefficients of friction between *cable* and conduit.

| Cable | Static coef. of friction | Dynamic coef. of friction |
|---------------------------------------|---------------------------------|----------------------------------|
| PVC lubricated (100 ft/lb) | 0.17 | 0.13 |
| PVC bare (20 ft/lb) | 0.90 | 0.70 |
| Polyethylene - lubricated (100 ft/lb) | 0.16 | 0.13 |
| Polyethylene - bare (20 ft/lb) | 0.90 | 0.80 |