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## 3M™ Wire Pulling Lubricant Gel WL-1, One Gallon



This is a water-soluble, translucent white gel that is easy to handle and apply to wire and cable without runs or drips. The lubricant produces a low coefficient of friction that lessens the chance of wire damage from high pulling forces. 4 per case

GTIN(UPC/EAN) : 0 00 54007 50623 2

3M Id : 80-6107-3663-1

### Additional Information

Not only does 3M™ Wire Pulling Lubricant Gel make wire pulling jobs smoother and safer, it also wipes off the cable quickly and cleanly before terminating or splicing. The consistent gel does not liquefy, or separate with hot or cold aging. It stays thick, smooth and ready to apply. Temperature use range is 20°F to 110°F.

### Characteristics

**China RoHS - Below MCV** Yes

**EU RoHS Compliant** Yes

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## 3M™ Wire Pulling Lubricant Gel WL-1, One Gallon Packaging

**3M Id:** 80-6107-3663-1

**Minimum Order Quantity:** 4.0 GALS

**Case Quantity:** 4.0 GALS

	English	Metric
Length	16.6 INCH	0.422 MTR
Width	16.1 INCH	0.409 MTR
Height	8.3 INCH	0.211 MTR
Gross Weight	38.5500 LBS	17.4860 KG



# WL Wire Pulling Lubricant

## Data Sheet



### 1. Product Description

3M™ Wire Pulling Lubricant is a translucent white polymer gel which produces a low coefficient of friction for smooth, low tension wire and cable pulling. A low coefficient of friction makes cable pulling easier and safer with less chance for cable jacket damage from high pulling forces. The lubricant is easy to handle and apply. The material is colorless and non-staining and affords quick and easy cleanup. The low solids content means less conduit blocking if additional pulls are required. The 3M Wire Lubricant is available in four sizes.

WL-QT	1 qt. squeeze bottle
WL-1	1 gallon pail
WL-5	5 gallon pail
WL-55	55 gallon drum (special order)

### Wire Pulling Lubricant Features

- UL Listed File E162404
- CSA Certified File LR108775
- Versatile (compatible with a wide range of cable types and jacket materials).
- Temperature stable. The lubricant can endure freezing and high temperature storage conditions and will not phase separate.
- Colorless, not-staining and is easy to cleanup.
- Low coefficient of friction.
- Low solids content. < 3.5% solids.
- Does not contain any wax, grease or silicone.

### 2. Applications

3M Wire Pulling Lubricant is suitable for pulling a wide variety of cable types, such as power, control, instrumentation and communication cables. This includes coaxial and fiber optic cables. This lubricant is compatible with common types of cable jacket materials.

### 3. Data: Physical Properties

#### Thixotropic translucent gel

**Percent non-volatile solids:** 2.5-3.5%

**pH:** 6.5-8.5

**Temperature use range:** 20°F - 110°F

#### Temperature stability:

< 10% change in Brookfield viscosity from 40°F to 100°F. No separation after five freeze/thaw cycles or 24 hours at 120°F.

**Flammability:** No flash point.

#### Lubricity:

- PVC or XLP jacketed cable on PVC conduit at 200 lbs/ft; coefficient of dynamic friction < 0.11, coefficient of static friction < 0.13.
- PVC or XLP jacketed cable on EMT conduit at 200 lbs/ft normal pressure; coefficient of dynamic friction < 0.18, coefficient of static friction < 0.20.

#### Lubricity of Dried Residue:

- PVC or XLP jacketed cable on PVC conduit at 200 lbs/ft normal pressure; coefficient of dynamic friction < 0.15, coefficient of static friction < 0.20.
- PVC or XLP jacketed cable on EMT conduit at 200 lbs/ft normal pressure; coefficient of dynamic friction < 0.13, coefficient of static friction < 0.17.

**Polyethylene Stress Cracking:** None / ASTM D1693

#### Compatible with conductive polymeric insulation's shields and jackets

IEEE P1026

## 4. Specifications

### Product

The lubricant shall be a polymer gel capable of use from 20°F to 110°F and storage at subfreezing or high temperature warehouse conditions without phase separation. The wire pulling lubricant must produce a low coefficient of friction when pulling a variety of cable types and have no adverse effects on the physical or electrical properties of cable jackets or semi-conducting shielding material. The lubricant must be colorless and non-staining. The gel must have no flash point. Lubricant shall be UL Listed and CSA Certified.

### Engineering Specifications

The wire pulling lubricant shall be 3M™ WL Wire Pulling Lubricant. The lubricant shall be a polymer gel type material and must be compatible with a wide variety of cable jacketing materials. The lubricant must be colorless and non-staining. The lubricant shall be unaffected by normal warehouse storage conditions.

## 5. Installation Techniques

The lubricant needs to reach all points where the cable and conduit rub together to obtain optimum tension reduction. Normal application is by wiping on the cable jackets as the

cable is pulled into the conduit. The cable will generally carry enough lubricant to complete an average pull. If cable pulls are long or difficult, inject the lubricant directly into the conduit and spread ahead of the cable in addition to wiping on the jackets.

The amount of lubricant needed can vary greatly depending on the difficulty of the pull. A general formula to determine application rates for a normal pull is: Quantity (gallons) = .0015 x L x D. Where L equals length of pull in feet and D equals diameter of conduit in inches. For example, approximately 3/4 gallon per 100' of 5" conduit.

## 6. Maintenance

3M WL Wire Pulling Lubricant is unimpaired by normal warehouse storage conditions. Opened containers should be tightly resealed to prevent evaporation of the material.

## 7. Availability

3M WL Wire Pulling Lubricant is available in 1 quart squeeze bottles or 1 and 5 gallon pails from electrical distributors. Fifty-five gallon drums may be special ordered. Material Safety Data Sheets (MSDS) are available from 3M or your electrical distributor.

3M is a trademark of 3M.

### IMPORTANT NOTICE

Before using this product, you must evaluate it and determine if it is suitable for your intended application. You assume all risks and liability associated with such use.

**Warranty; Limited Remedy; Limited Liability.** This product will be free from defects in material and manufacture as of the date of purchase. **3M MAKES NO OTHER WARRANTIES INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.** If this product is defective within the warranty period stated above, your exclusive remedy shall be, at 3M's option, to replace or repair the 3M product or refund the purchase price of the 3M product. **Except where prohibited by law, 3M will not be liable for any loss or damage arising from this 3M product, whether direct, indirect, special, incidental or consequential regardless of the legal theory asserted.**

# 3M

Electrical Products Division



## Material Safety Data Sheet

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### SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

**PRODUCT NAME:** 3M Brand Wire Pulling Lubricant  
**MANUFACTURER:** 3M  
**DIVISION:** Electrical Markets Division

**Document Group:** 06-5049-9

#### Product Use:

Intended Use: lubricant, wire pulling  
Specific Use: LUBRICANT, WIRE PULLING

### SECTION 2: INGREDIENTS

<u>Ingredient</u>	<u>C.A.S. No.</u>	<u>% by Wt</u>
WATER	7732-18-5	95 - 99
GLYCOLS, POLYPROPYLENE	25322-69-4	1 - 3
POLYETHYLENE GLYCOL	25322-68-3	1 - 3

### SECTION 3: HAZARDS IDENTIFICATION

#### 3.1 EMERGENCY OVERVIEW

**Specific Physical Form:** Gel

**Odor, Color, Grade:** OPAQUE;WHITE;NO ODOR

**General Physical Form:** Liquid

**Immediate health, physical, and environmental hazards:**

#### 3.2 POTENTIAL HEALTH EFFECTS

**Eye Contact:**

Mild Eye Irritation: Signs/symptoms may include redness, pain, and tearing.

**Skin Contact:**

Contact with the skin during product use is not expected to result in significant irritation.

**Inhalation:**

No health effects are expected.

**Ingestion:**

Gastrointestinal Irritation: Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhea.

**SECTION 4: FIRST AID MEASURES**

**4.1 FIRST AID PROCEDURES**

The following first aid recommendations are based on an assumption that appropriate personal and industrial hygiene practices are followed.

**Eye Contact:** Flush eyes with large amounts of water. If signs/symptoms persist, get medical attention.

**Skin Contact:** Wash affected area with soap and water. If signs/symptoms develop, get medical attention.

**Inhalation:** No need for first aid is anticipated.

**If Swallowed:** Do not induce vomiting unless instructed to do so by medical personnel. Give victim two glasses of water. Never give anything by mouth to an unconscious person. Get medical attention.

**SECTION 5: FIRE FIGHTING MEASURES**

**5.1 FLAMMABLE PROPERTIES**

Autoignition temperature	<i>Not Applicable</i>
Flash Point	<i>Not Applicable</i>
Flammable Limits - LEL	<i>Not Applicable</i>
Flammable Limits - UEL	<i>Not Applicable</i>

**5.2 EXTINGUISHING MEDIA**

Material will not burn.

**5.3 PROTECTION OF FIRE FIGHTERS**

**Special Fire Fighting Procedures:** Wear full protective equipment (Bunker Gear) and a self-contained breathing apparatus (SCBA).

**Unusual Fire and Explosion Hazards:** Not applicable.

**Note: See STABILITY AND REACTIVITY (SECTION 10) for hazardous combustion and thermal decomposition information.**

**SECTION 6: ACCIDENTAL RELEASE MEASURES**

CMRG: Chemical Manufacturer Recommended Guideline  
 OSHA: Occupational Safety and Health Administration  
 AIHA: American Industrial Hygiene Association Workplace Environmental Exposure Level (WEEL)

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Specific Physical Form:	Gel
Odor, Color, Grade:	OPAQUE;WHITE;NO ODOR
General Physical Form:	Liquid
Autoignition temperature	<i>Not Applicable</i>
Flash Point	<i>Not Applicable</i>
Flammable Limits - LEL	<i>Not Applicable</i>
Flammable Limits - UEL	<i>Not Applicable</i>
Boiling point	100 °C
Density	<i>Not Applicable</i>
Vapor Density	.9 - 1.1 [Ref Std: AIR=1]
Vapor Density	<i>Not Applicable</i>
Vapor Pressure	18 mmHg [@ 68.000000000 °F] [Details: @20C MITS data]
Vapor Pressure	<i>Not Applicable</i>
Specific Gravity	1.01 [Ref Std: WATER=1]
pH	6.5 - 8.5
Melting point	<i>Not Applicable</i>
Solubility in Water	Complete
Average particle size	<i>Not Applicable</i>
Bulk density	<i>Not Applicable</i>
Evaporation rate	<i>No Data Available</i>
Evaporation rate	<i>Not Applicable</i>
Hazardous Air Pollutants	<i>Not Applicable</i>
Molecular weight	<i>Not Applicable</i>
Volatile Organic Compounds	0 lb/gal
Kow - Oct/Water partition coef	<i>Not Applicable</i>
Percent volatile	0 %
Softening point	<i>Not Applicable</i>
VOC Less H2O & Exempt Solvents	0 g/l
Viscosity	110000 - 115000 centipoise

## SECTION 10: STABILITY AND REACTIVITY

**Stability:** Stable.

**Materials and Conditions to Avoid:** None known  
 Not Applicable

**Hazardous Polymerization:** Hazardous polymerization will not occur.

**Other Stability:** Not Applicable

**Other Hazardous Polymerization:** Not Applicable

### Hazardous Decomposition or By-Products

<u>Substance</u>	<u>Condition</u>
Carbon monoxide	During Combustion

Carbon dioxide

During Combustion

## SECTION 11: TOXICOLOGICAL INFORMATION

Please contact the address listed on the first page of the MSDS for Toxicological Information on this material and/or its components.

## SECTION 12: ECOLOGICAL INFORMATION

### ECOTOXICOLOGICAL INFORMATION

Not determined.

### CHEMICAL FATE INFORMATION

Not determined.

## SECTION 13: DISPOSAL CONSIDERATIONS

**Waste Disposal Method:** Incinerate in an industrial or commercial facility in the presence of a combustible material. As a disposal alternative, dispose of waste product in a facility permitted to accept chemical waste.

**EPA Hazardous Waste Number (RCRA):** Not regulated

Since regulations vary, consult applicable regulations or authorities before disposal.

## SECTION 14: TRANSPORT INFORMATION

### ID Number(s):

80-6107-3662-3, 80-6107-3663-1, 80-6107-3664-9, 80-6107-3665-6, 80-6107-3931-2, 80-6108-3578-9

Please contact the emergency numbers listed on the first page of the MSDS for Transportation Information for this material.

## SECTION 15: REGULATORY INFORMATION

### US FEDERAL REGULATIONS

Contact 3M for more information.

### 311/312 Hazard Categories:

Fire Hazard - No Pressure Hazard - No Reactivity Hazard - No Immediate Hazard - Yes Delayed Hazard - No

### STATE REGULATIONS

Contact 3M for more information.

### CHEMICAL INVENTORIES

The components of this product are in compliance with the chemical notification requirements of TSCA.

All applicable chemical ingredients in this material are listed on the European Inventory of Existing Chemical Substances (EINECS),



or are exempt polymers whose monomers are listed on EINECS.

Contact 3M for more information.

**Additional Information:** NOTE: ALL INGREDIENTS LISTED ON TSCA, AICS, CDSL, EINICS, AND KTCCL INVENTORIES.

## INTERNATIONAL REGULATIONS

Contact 3M for more information.

This MSDS has been prepared to meet the U.S. OSHA Hazard Communication Standard, 29 CFR 1910.1200.

## SECTION 16: OTHER INFORMATION

### NFPA Hazard Classification

**Health:** 1 **Flammability:** 0 **Reactivity:** 0 **Special Hazards:** None

National Fire Protection Association (NFPA) hazard ratings are designed for use by emergency response personnel to address the hazards that are presented by short-term, acute exposure to a material under conditions of fire, spill, or similar emergencies. Hazard ratings are primarily based on the inherent physical and toxic properties of the material but also include the toxic properties of combustion or decomposition products that are known to be generated in significant quantities.

**Reason for Reissue:** The MSDS has been revised because 3M has adopted the 16-section ANSI/ISO format. The potential hazards of the product have not changed. We encourage you to reread the MSDS and review the information.

No revision information is available.

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