
Wire Pulling Lubricants

Thread Lubricants

Oxide-inhibiting Joint Compounds

Electrical Sealer

Cable Cleaner

Silicone Lubricant

RTV Silicone Adhesive Sealants

Intumastic



GE Silicones

Ideal

Polywater

Crouse-Hinds

3M

Burndy

Firetherm

IDEAL

IDEAL Yellow 77® Wire-Pulling Lubricant

Ordering Information

Description	Unit	Weight	Catalog Number
15 oz. aerosol	1	1-1/2 lbs.	31-356
1 qt. squeeze bottle	1	2-1/2 lbs.	31-358
1 qt. container	1	2-1/2 lbs.	31-350
1 gal. pail	1	9 lbs.	31-351
5 gal. pail	1	44 lbs.	31-355
55 gal. drum	1	450 lbs.	31-365



Application Selection Chart

	IDEAL Yellow 77® Wire-Pulling Lubricant	IDEAL Yellow 77® Plus Wire-Pulling Lubricant	IDEAL Aqua-Gel® II Cable-Pulling Lubricant	IDEAL Aqua-Gel® IIP Cable-Pulling Lubricant	IDEAL Aqua-Gel® CW Cable-Pulling Lubricant	IDEAL Optic-Lube™ Cable-Pulling Lubricant	IDEAL Wire-Lube® Wire-Pulling Lubricant
Application	General purpose construction & maintenance	High temp. construction & maintenance	Utility construction & maintenance	Utility construction & maintenance	Cold weather construction & maintenance	Fiber optic cables	Economy general purpose/ short runs
Base	wax	wax	polymer	polymer	polymer	polymer	soap
Average Coefficient of Friction	0.07	0.034	0.052	0.050	0.055	0.047	0.078
Temperature Range	32°F-130°F	30°F-190°F	28°F-180°F	28°F-180°F	-25°F+180°F	32°F-200°F	32°F-120°F
COMPATIBILITY (Cable Types)							
Rubber	•	•	•	•	•	•	•
Neoprene	•	•	•	•	•	•	•
Nylon	•	•	•	•	•	•	•
PVC	•	•	•	•	•	•	•
High density or cross-linked polyethylene	•	•	•	•	•	•	•
Low density polyethylene		•		•	•	•	
Semiconducting jacket		•	•	•	•	•	•
Hypalon	•	•	•	•	•	•	•

Electrolines Est.

CROUSE-HINDS

Lubricants

Application:

- STL thread lubricant is used between any screw thread and its tapped opening, on any rotating shaft – threaded or plain, and to inhibit corrosion on any metal-to-metal joint of apparatus and appliance enclosures.
- HTL high temperature lubricant is used on lighting fixture threaded joints and on threaded joints of the enclosures of any heat-producing apparatus or appliance.

Features:

STL thread lubricant is lithium based, anti-galling and:

- is especially effective between parts made of dissimilar metals
 - is effective and stable from -20°F to +300°F
 - maintains grounding continuity; should not be used on exposed current-carrying parts
 - has excellent adhesion qualities
- A liberal application on threaded joints maintains raintightness and inhibits corrosion.

HTL is a high temperature, anti-seize, conductive thread lubricant:

- effective and stable from -70°F to + 1800°F
- prevents seizure, galling, rust, galvanic action
- maintains grounding continuity; should not be used on exposed current-carrying parts
- effective between parts made of dissimilar metals



**STL
Thread
Lubricant**
Net
Wt.
1 3/4 oz. (tube)
8 oz. (can)



**HTL
High Temperature
Thread Lubricant**
Net
Wt.
4 oz. (tube)

Cat. #
STL2
STL8

Cat. #
HTL4

BURNDY

PENETROX A, A-13 and E Oxide-inhibiting Joint Compounds

PENETROX® oxide-inhibiting compounds produce low initial contact resistance, seal out air and moisture, prevent oxidation or corrosion, exhibit superior weathering characteristics, are usable over wide temperature ranges, and provide a high conductivity "gas-tight" joint. All PENETROX® compounds contain homogeneously suspended metal particles. The suspended metal particles assist in penetrating thin oxide films, act as electrical "bridges" between conductor strands, aid in gripping the conductor, improve electrical conductivity and enhance the integrity of the connection.

The specially formulated PENETROX compounds are for use with compression and bolted connectors providing an improved service life for both copper and aluminum connections. Additionally, the non-toxic compounds are an excellent lubricant for threaded applications reducing galling and seizing.

PENA-1 LB

PENA-1 LB is a 1 lb. cartridge filled with PENETROX-A. It's designed to fit standard caulking guns for easy insertion into transmission and distribution connectors. Additionally, this packaging design provides a convenient method for applying PENETROX to many different applications.



PENETROX A

PENETROX A is a natural (petroleum) base compound with evenly suspended zinc particles. It is recommended for aluminum to aluminum, aluminum to copper connections and aluminum conduit threads. It is not recommended for use with rubber or polyethylene insulated conductors. UL listed to 600V.



PENETROX A-13

PENETROX A-13 is a synthetic base compound with evenly suspended zinc particles. It is recommended for aluminum to aluminum, aluminum to copper connection plus aluminum conduit threads. It is compatible with rubber, polyethylene and other insulating materials. UL listed for all voltages.



PENETROX E

PENETROX E is a synthetic base compound with evenly suspended copper particles. It is recommended for copper to copper, copper threads and all grounding applications. UL listed.



Electrolines Est.

POLYWATER

Polywater® Lubricant J is a high performance, clean, slow-drying, water based gel lubricant. Lubricant J provides maximum tension reduction in all types of cable pulling. It is especially recommended for long pulls, multiple bend pulls and pulls in a hot environment. Lubricant J dries to form a thin lubricating film which retains its slip for months after use.

Polywater® Lubricant J is a specification grade lubricant which does not promote flame propagation when used with fire retardant cables and systems. It is harmless to humans, environmentally safe, compatible with all cable jacket materials, and can be easily applied as part of the unique Polywater® Lubricant Application System.

Polywater® Lubricant WJ (winter grade) has the same characteristics as Polywater® Lubricant J and is specially formulated for use in temperature as low as -20°F (-30°C).

Front End Pack™ is a conduit sized polyethylene bag of lubricant. The Front End Pack™ travels through the conduit on the winch line prelubricating the conduit ahead of the cable being pulled.

Package Size	Lubricant J Product Number	Winter Grade Lubricant WJ Product Number
55-gal (208 ℓ) drum	J-Drum	WJ-Drum
5-gal (18.9 ℓ) pail	J-640	WJ-640
1-gal (3.8 ℓ) pail	J-128	WJ-128
1/2-gal (1.9 ℓ) Front End Pack™ (in 5-gal pail)	J-110	WJ-110
1-qt (.95 ℓ) Front End Pack™ (in 5-gal pail)	J-99	WJ-99
1/2-gal (1.9 ℓ) Front End Pack™ (in corrugated carton)	J-55	WJ-55
1-qt (.95-gal ℓ) squeeze bottle	J-35	WJ-35
1-qt (.95 ℓ) Front End Pack™ (in corrugated carton)	J27	WJ-27

3M

Scotch™ Ivi-Spray Electrical Sealer



1602 and 1603 Scotch™ Ivi-spray electrical sealers insulate, refinish and protect. They are electrical-grade enamel paints and sealers for electric motor repair and refinishing, also used to spray over varnish treatment for additional thickness, overcoat outdoor electrical splices, and splice cases to impede the effects of weather, moisture, acids, alkalis and oils. The sealer provides 850 V per mil insulation and inhibits rust.

Product	Color	Contents Fluid oz (ml)	Net Weight oz (grams)	Can Size Fluid oz (ml)	Cans/Case
1602	Red	15-1/2 (458)	13(369)	16 (473)	12
1603	Black	15-1/2 (458)	13(369)	16 (473)	12

Scotch™ Silicon Lubricant



1609 lubricates and protects. Use 1609 on tuners and switches, plastic gears and drives, locks and hinges, drawer guides, other sliding parts. Works against squeaks caused by friction and helps to relieve sticking and seizing. Inhibits rust and corrosion, resists moisture, helps preserve plastic, rubber and leather materials, impedes buildup of glues, waxes, inks, paints, etc.; reduces friction when cutting tools are used. A silicone polymer, this product contains no petroleum oils, will not freeze at -28°F or degrade at 350°F.

Product	Contents Fluid/oz (ml)	Net Weight oz (grams)	Can Size Fluid Case	Cans/Case
1609	15-1/2 (458)	22-1/2 (637)	16 (473)	12

Scotch™ Cable Cleaner



1606 cleans and degreases contaminated surfaces. It provides high-pressure cleaning action to quickly dissolve and flush away grease, tar, dirt, pulling compounds and many other contaminants that cause electrical interference problems. Especially effective for cable preparation prior to splicing, to clean and degrease test and regulating equipment, electric motors and generators, dissolve and flush away dirt, grease and tar

deposits from switches, relays, turners, tools, any greasy or dirty surface.

Product	Contents Fluid/oz (ml)	Net Weight oz (grams)	Can Size Fluid Case	Cans/Case
1606	15-(443)	22-1/2 (637)	16 (473)	12

Scotchkote™ Electrical Coating



Scotchkote™ provides a tough, oil-resistant outer seal on electrical insulation subjected to abnormal weathering, oil or moisture conditions, such as splices in manholes, underwater cables, etc. The brush-applied coating provides added oil and moisture protection when used over an application of Scotch™ vinyl plastic electrical tape.

Product	Contents Fluid/oz (ml)	Net Weight oz (grams)	Can Size Fluid oz (ml)	Cans/Case
Scotchkote™ Electrical Coating	15 (443)	-	16 (473)	10

Electrolines Est.

GE SILICONES

Alkoxy Cure, Acetoxy Cure & Specialty Grades Adhesive Sealants

Typical Uses & Properties

One-Part RTV Silicone Adhesive Sealants

Alkoxy Cure, Acetoxy Cure & Specialty Grades

Alkoxy cure silicones are neutral cure materials that offer exceptional adhesion. These materials are non-corrosive to most metals. Several grades are non-corrosive to sensitive metals such as copper and brass.

Acetoxy cure silicones are the most commonly used type of RTV materials and are considered GE Silicones' general purpose product line.

Specialty grade silicones are one-part material that offer outstanding adhesion coupled with either one or more of the following unique properties:

- Fuel, solvent, chemical and oil resistance
- High temperature performance
- Low volatiles content
- Exceptionally high strength

Primer†	Use For	Use With
SS4004	General Purpose	1, 2C
SS4179	Plastics & 1 General Purpose	
SS4155	General Purpose	1, 1A, 2A, 2C
SS4120	Where Charity Is Needed	1A, 2A

Key

- 1 Use with one-part sealants
- 1A Use with heat cure one-parts
- 2C Use with condensation cure two-parts
- 2A Use with addition cure two-parts † Please ask for CDS1532 or CD1873 product data sheets for more detailed information.

	Typical Uses	Product Description	Product	Specs (UL, MIL, etc)	
Alkoxy Cure — Totally Noncorrosive	Economical true neutral with primerless, adhesion and long tooling time.	Low Modulus Paste	RTV5222 White RTV5223 Black RTV5229 Gray	-	
	Fast cure , true neutral with hydrolytic stability, primerless adhesion and UL recognition.	Fast Cure Paste	RTV5242 White RTV5243 Black RTV5249 Gray	• UL File No. E36952	
	Non-corrosive protection of printed circuit boards from dirt, dust, moisture & solvents. Coat contact points. Seal exposed wires. Cushion between plastics and metals. Thin-section potting.	Non-Corrosive Pourable	RTV160 White	• MIL-A-46146* • UL File No. E36952	
	Non-corrosive bonding of capacitors, resistors & integrated circuits to PCBs. Insulate relays, exposed copper wires, terminals. Seal & protect faying surfaces, connectors, miniature circuits.	Non-Corrosive Paste	RTV162 White	• UL File No. E36952	
Acetoxy Cure	Highest strength adhesive sealant for mechanical or electrical applications. Use on horizontal and vertical surfaces. Excellent electrical insulator.	Non-Corrosive High Strength Paste	RTV167 Gray	• MIL-A-46146* • UL File No. E36952	
	High strength high performance seal against moisture, dust and dirt; vertical & overhead sealing & bonding; electrical insulation; protect leads from mechanical shock; protect components from shock and vibration.	High Strength Paste	RTV102 White†† RTV103 Black†† RTV108 Translucent†† RTV109 Aluminum††	• FDA Compliance • MIL-A-46106* • NSF • USDA • MIL-S-47162 • MIL-S-14112	
	Use of general-purpose, cost-effective sealing and bonding. Cure-in-place electrical insulation. Applications requiring UL approval.	General Purpose Paste	IS802 White†† IS803 Black†† IS808 Translucent††	• FDA Compliance • UL File No. E36952 • NSF	
	Thin-section protective coating; seal, bond, insulate and encapsulate.	General Purpose Pourable	RTV112 White RTV118 Translucent††	• FDA Compliance • MIL-A-46106* • UL File No. E36952 • NSF • USDA	
	Specialty Grades: Fuel and High Temperature Resistance	Fluorosilicone adhesive sealant for use in contact with fuel, solvents and chemicals.	Fuel Resistant Paste	FRV1106 Red†† FRV1107 Gray††	-
Heavy bodied adhesive sealant for formed-in-place gasketing. Good oil resistance.		FIPG	RTV1473 Black††	-	
Use as a sealant on firewalls or as a flame-retardant coating. Use in switching devices, motors and high-voltage transformers.		Flame Retardant Paste	RTV133 Black	• UL File No. E36952 • UL94 V-0** • AMS 3374	
High-heat applications; encapsulate and seal heating elements. Useful up to 260C (500F).		High Strength High Temperature Paste	RTV106 Red††	• FDA Compliance • MIL-A-46106* (RTV106 only)	
High Temperature		High Strength	General Purpose Paste	IS806 Red††	• UL File No. E36952 • NSF • USDA
			High Temperature Pourable	RTV116 Red††	• MIL-A-47040
			High Strength Paste	RTV159 Red††	
Low volatile adhesive; use as electronic gasketing adhesive for critical aerospace applications.	Non-Corrosive Paste	RTV142 White	5856053-Navy Sea Sys.		
High strength adhesive; use for gasketing, aircraft maintenance and electrical insulation.	High Strength Paste	RTV157 Gray††	-		

Packaging Key

03T = 2.8 fl. oz. metal tube	12C = 10.1 fl. oz. cartridge
3TG = 2.8 fl. oz. plastic tube	5GP = 5 gallon pail (40 lbs.)
12T = 10.3 fl. oz. tube	55G = 55 gallon drum (450 lbs.)
06S = 5.4 fl. oz. cartridge	

Electrolines Est.

Lubricants & Silicones



GE SILICONES

Key Substrate Adhesion Typical Lap Shear (psi) and/or Peel (ppi)	Useful Temperature Range C (F)	Specific Gravity	Hardness, Shore A Durometer	Tensile Strength, MPa (psi)	Elongation (%)	Dielectric Strength kV/mm (V/mil)	Dielectric Constant	Packaging (see key below)
Steel, Glass, PVC, Acrylic Polycarbonate Peel (60)	-60 to 205 (-75 to 400)	1.4	26	2.60 (370)	750	16.5 (420)	3.9 @ 60 Hz	12C 5GP 55G
Steel, Aluminum, Glass, Polycarbonate Peel (40)	-60 to 205 (-75 to 400)	1.5	40	2.50 (320)	425	20 (500)	2.8 @ 60 Hz	12C 5GP 55G
Copper, Brass, Aluminum, Nylon/PP0*, PC/PBT Lap (100), Peel (30)	-60 to 205 (-75 to 400)	1.04	25	1.86 (275)	230	20 (500)	2.8 @ 60 Hz	12C 5GP 55G
Copper, Brass, Aluminum, Polycarbonate, Polyester (PBT) Lap (150), Peel (40)	-60 to 205 (-75 to 400)	1.09	35	3.73 (550)	400	18 (450)	2.8 @ 60 Hz	03T 12C 5GP 55G
Copper, Brass, Aluminum, ABS, Nylon/PP0 Lap (200), Peel (60)	-60 to 205 (-75 to 400)	1.12	37	5.49 (800)	600	20 (500)	2.8 @ 60 Hz	03T 12C 5GP
Aluminum, Steel, Glass Polyester (PBT) Lap (150)	-60 to 205 (-75 to 400)	1.05	30	2.75 (400)	450	19.5 (500)	2.8 @ 60 Hz	3TG 3TG/12C/5GP/55G 12T/12C/5GP/55G 12C/5GP
Aluminum, Steel, PC/PBT, Polyester (PBT) Lap (140)	-60 to 205 (-75 to 400)	1.04	23	2.06 (300)	450	20 (500)	2.9 @ 60 Hz	3TG 12C 5GP/55G
Aluminum, Steel, Glass, PC/PBT, Polyester (PBT) Lap (120), Peel (15)	-60 to 205 (-75 to 400)	1.05	25	2.20 (325)	325	15.6 (400)	2.8 @ 60 Hz	03T 12T 5GP 55G
PC/PBT, Polyester (PBT) Lap (200), Peel (25) Primed	-60 to 205 (-75 to 400)	1.58 1.33	42 35	3.33 (500) 2.35 (350)	230 260	13.7 (351)	6.3 @ 1000 Hz	06S
Aluminum, Steel, Glass, Ceramic, Polyester (PBT) Lap (200)	-60 to 204 (-75 to 400)	1.06	30	3.14 (450)	500	-	-	12C 3TG 5GP
Copper, Brass, Aluminum, PC/PBT, Polycarbonate, Polyester (PBT) Lap (200)	-60 to 205 (-75 to 400)	1.23	46	4.51 (650)	250	20 (500)	2.8 @ 100 Hz	12C 5GP 55GP
Aluminum, Steel, Glass, PC/PBT, Polyester (PBT) Lap (200), Peel (30)	-60 to 260 (-75 to 500)	1.07	30	2.55 (375)	400	19.5 (500)	2.8 @ 60 Hz	3TG/12T/06S/12C/ 5GP/55G
	-60 to 260 (-75 to 500)	1.05	22	1.67 (250)	425	19.5 (500)	2.9 @ 60 Hz	12C/5GP/55G
Lap (125), Peel (25)	-60 to 260 (-75 to 500)	1.09	28	2.45 (350)	350	19.7 (500)	2.6 @ 60 Hz	03T / 06S / 5GP
Lap (60)	-60 to 260 (-75 to 500)	1.09	20	7.07 (1025)	350	15.6 (400)	2.8 @ 60Hz	12T/5GP/55G
Aluminum, Steel, Glass, Polycarbonate Lap (300), Peel (60)	-60 to 204 (-75 to 400)	1.09	34	3.78 (550)	400	20 (500)	2.8 @ 60 Hz	55G
Aluminum, Steel, Glass PC/PBT, Polyester (PBT) Lap (60)	-60 to 204 (-75 to 400)	1.09	28	6.21 (975)	825	20.7 (525)	2.9 @ 60 Hz	03T 06S 5GP

* Testing for the referenced MIL Specs is performed in accordance with current GE Silicones quality test methods, laboratory conditions and procedures, frequency, and sampling, which are not necessarily identical with the methods, conditions, procedures, frequency and sampling stated or referenced in the listed specification. Any certification will be limited to listed properties and will not imply or state conformity to any other aspect of the referenced specification, including but not limited to marking, packing, bar coding, testing or sampling. Contact GE Silicones for a comparison review.

* This rating is based on a standard, small-scale laboratory test and as such is not reliable for determining, evaluating, predicting, or describing the flammability or burning characteristics of the product under actual fire conditions.

†† These sealants are not for use in delicate electrical and electronic applications in which corrosion of copper, brass or other sensitive metals is undesirable.

Electrolines Est.

P. O. Box. 942 Yanbu Saudi Arabia Tel: +966 4 3225418 Fax: +966 4 3222213 Al-Jubail: Tel: +966 3 3622967 Fax: +966 3 3612967

GE Silicones

PENSIL® 300

Product Description

PENSIL® 300 is an one-part neutral cure silicone sealant for sealing joints to control the spread of fire, smoke, toxic gases and water during fire conditions.

PENSIL® 300 has excellent primerless adhesion to most common building materials: glass, timber, aluminium, steel, masonry and concrete.

The sealant's excellent movement accomodation makes it an ideal product for joints where fire resistance must be maintained without loss of adhesion or rupture resulting from normal environmental movement.

The fire retardant additives used in PENSIL® 300 do not contain halogens or isocyanates.

Applications

PENSIL® 300 has excellent fire resistant characteristics when used for scaling joints and gaps in fire rated structures.

- Perimeter joints around fire doors.
- Pipe, cable and channel entries through walls and floors.
- Cap beading fire protective glazing.
- Expansion joints.

Product Benefits

- Excellent fire prevention performance
 - conforms to several European specifications
- Versatility in applications
 - compatible with most building materials
 - high movement capability (+/-50%)
 - available in six colours
 - long term durability
- Ease of application
 - no mixing, easy gunnability
 - long tooling time (20 minutes)
 - excellent primerless adhesion to most common building materials.

PENSIL® 100 Firestop Sealant

Product Description

PENSIL 100 Firestop Sealant is a black, one-part neutral cure silicone sealant exhibiting superior performance in applications where sealing apertures in walls and floors are needed to control spread of fire, smoke, toxic gasses, and water during fire conditions.

Pensil 100 Firestop Sealant adheres without the use of primers to many building substrates. The sealant's excellent resistance to compression and tear makes Pensil 100 Firestop Sealant an ideal product for openings where fire ratings must be maintained without loss of adhesion or cohesion resulting from normal environmental conditions and movement.

Basic Uses: Pensil 100 Firestop Sealant is designed for use in Underwriters Laboratories (UL) classified through-penetration firestop systems. Typical penetrations in floors and walls include passages for simple electrical cables and pipes. This material can also insulate openings to prevent damage from occasional water spillage and dust penetration in sensitive areas.

Applications

- Concrete floors and walls
- Expansion, static, and perimeter joints
- Penetrations
 - Copper and steel pipes
 - PVC pipes
 - Telephone and PVC jacketed cables
 - Conduit and bus ducts
 - Insulated pipes
 - Blank openings
 - Busways