

# DIELECTRIC SILICONE GREASE

## Chemplex 825

## Product Description

### DESCRIPTION

**Chemplex 825** Silicone Compound is a specially formulated grease like product containing selected silicone oils and inert silica fillers. This stiff, tacky compound has excellent dielectric properties, oxidation resistance and water repellency. It is essentially non-toxic and nonmelting and retains its pliability even after extended service. **Chemplex 825** is resistant to a variety of chemicals and is compatible with most plastics and rubbers. **Chemplex 825** has broad temperature range of -40 to 400°F (-40 to 204°C) which allows for use even in the most harsh environments.

### APPLICATIONS

**Chemplex 825** Silicone compound is used in severe applications as a lubricant and release agent. Applications where resistance to moisture and thermal degradation or electrical insulation are needed are prime opportunities to use **Chemplex 825**. Electrical connectors, cables, seals, and ignition systems are some of the areas of use for silicone compounds.

**Chemplex 825** was designed for use as a sea water repellent, grease-like compound with excellent sealing and dampening characteristics. Its high tack and chemical inactive make it an excellent choice for vacuum interfaces. **Chemplex 825** has excellent high temperature resistance and dielectric properties as well as being an excellent lubricant for rubber and plastics.

**Chemplex 825** also complies with the requirements of the FDA, 21 CFR 175.300. Meets or exceeds the requirements of Mil-S-8660C.

### CHARACTERISTICS

Property	Test Method	Condition	Typical Value
Appearance			White/Trans. paste
NLGI			2
Unworked Penetration	ASTM D-217	77° F	270
Worked Penetration	ASTM D-217	60 Strokes 77° F	280
4 Ball Wear Scar, m	ASTM D-2266	1hr, 2200 rpm, 167° F, 40 kg load	0.54
4 Ball EP Weld Point, kg	ASTM D-2596		250
Oxidation Stability, psi drop	ASTM D-942	24 hrs. @ 100° C	1
Roll Stability, % change	ASTM D-1831		+14
Bleed, %	FTM-791.321-3	24 hrs. @ 200° C	0.8
Evaporation, %	FTM-791.321-3	24 hrs. @ 200° C	1.0
Dielectric Strength, volts/mil	ASTM D-149	0.05" Gap 0.01" Gap	830 890
Dielectric Constant	ASTM D-150	50 Hz 1000 Hz	2.91 2.91
Dissipation Factor	ASTM D-150	50 Hz 1000 Hz	0.0015 0.0016
Volume Resistivity, Ohm-cm	ASTM D-257	RT 177° C	1.88 X 10 <sup>13</sup> 1.30 x 10 <sup>12</sup>
Arc Resistance, sec	ASTM D-495	RT	157
Specific Gravity		25° C/25° C	0.96
Temperature Range			-40 to 204°C (-65 - 400°F)
Breakdown Voltage, volts	ASTM D-149	0.05" Gap	42,000
Dielectric Withstand, volts		AL/CU, Torque 32 ft. lbs.	10,000

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### **AVAILABILITY**

**Chemplex 825** is available in 1 gram packets, 5 gram packets, 5.3 oz tubes, 14 oz. grease gun cartridges, 1 pound cans, 8 pound cans, 5 gal (40 pound) pails, & 55 gallon (440 pound) drums. Each size is subject to stock.

### **How to Use**

**Chemplex 825** can be applied by various methods including automated pumping systems, by hand, by brushing, or by wiping. This is a thick paste material.

### **STORAGE**

The compound should be stored at 75°F or below for periods up to one year. **Chemplex 825** has a shelf life of 1 year from date of shipment when stored in sealed container at 75°F or below. Extended storage life is probable, but the compound should be checked for consistency before use.

### **RESTRICTIONS**

Do not use with highly oxidative chemicals such as liquid oxygen, chlorine or peroxides, nor surfaces to be painted. Not for use as a load bearing for metal to metal surfaces.

### **Chemical Resistance**

**Chemplex 825** is resistant to a wide variety of organic and inorganic chemicals including most oils and alkaline solutions. Aqueous solutions and dilute acids have little effect on **Chemplex 825**. Thorough testing should be done for each specific application to verify compatibility. This product is not recommended for use with highly oxidative chemicals such as chlorines, peroxides or liquid oxygen.

### **CLEANING**

Spilled silicone greases and compounds will cause slippery conditions. Wipe up and clean spills immediately to prevent possible injury.

Silicone greases and compounds may be cleaned with the use of hydrophobic solvents (non-polar) such as chlorinated ethanes, toluene, hexane, or mineral spirits. They are generally unaffected by hydrophilic solvents (polar) such as alcohols, ketones, ethers, or water.

Whenever solvents are used all proper safety precautions must be observed. It is advisable to consider all solvents toxic and use them only in well ventilated areas with proper protective equipment such as goggles, gloves, clothing, and respirators. Avoid prolonged exposure to solvents. Be aware of their flammability status.

Consult applicable OSHA, EPA and other federal, state and local regulations on the use and disposal of solvents.

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