



## Product Information

# DOWSIL™ EG-3810 Dielectric Gel

One-part, heat-cure, very soft, thermally stable silicone gel



### Key Features

- Excellent thermal stability from -60°C to +200°C
- Reliable protection against damaging environmental conditions
- Superior buffer against mechanical stress
- Reliable dielectric insulation
- Cures quickly

### Benefits

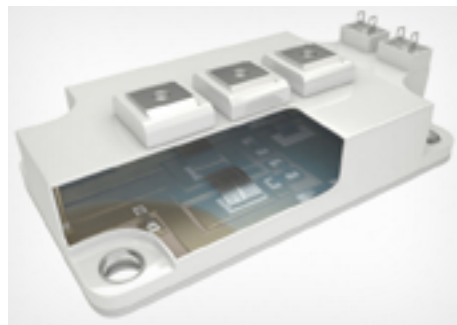
- Long-lasting, reliable device performance in extreme conditions
- Protects delicate leads against thermal cycling, impact and vibration
- Improved productivity

### Typical Applications

- Power conversion, such as IGBT modules
- Automotive under-the-hood PCB system assemblies
- Industrial sensors and actuators

### Application Method

- Automated or manual needle dispense



DOWSIL™ EG-3810 Dielectric Gel is a one-part, heat-cure, dielectric silicone material that delivers outstanding thermal stability over a broad temperature range, extending from -60°C to above 200°C. The ultralow modulus of this advanced silicone gel also minimizes stress on delicate PCB system components

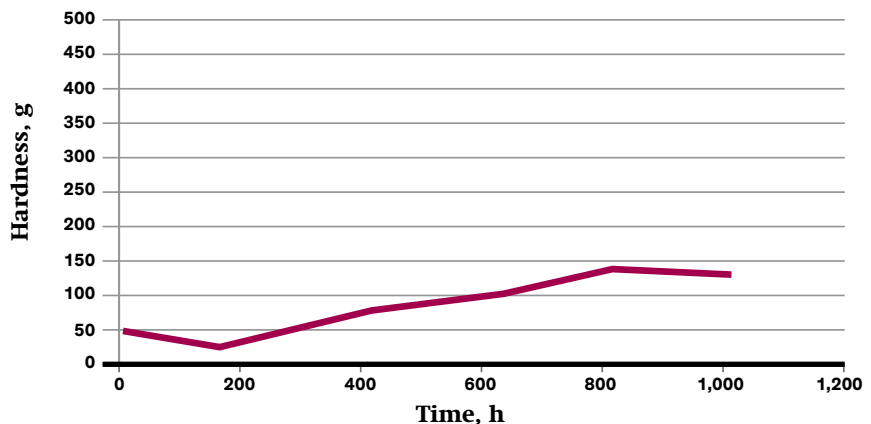
resulting from thermal cycling, impact and vibration.

These properties enable DOWSIL™ EG-3810 Gel to deliver long-lasting performance as a protective potting material for power conversion applications, such as insulated gate bipolar transistor (IGBT) modules. Its unique combination of thermal stability and low modulus also make it an appealing solution for automotive PCB system assemblies, sensors and actuators that must operate reliably over large temperature ranges.

### Potential Uses

Potting material for power conversion and other modules that must operate reliably over a broad temperature range.

Variation of gel hardness with time upon heat exposure at 200°C (CTM 1107)



Imagine

## Material Properties

Property	DOWSIL™ EG-3810 Dielectric Gel
Description	Low-/high-temperature gel
Form	One-part
Color	Clear/colorless
Viscosity	690 cP 690 mPa.s
Specific Gravity (uncured)	0.97
Heat Cure Time at 125°C	15 minutes
Heat Cure Time at 150°C	10 minutes
Gel Hardness (measured at 10 mm)	78 grams
Penetration	80 at 1/10 mm
Penetration ¼ cone	84 at 1/10 mm
Dielectric Strength	533 volts/mil 21 kV/mm
Dielectric Constant at 110 Hz	2.9
Dielectric Constant at 100 kHz	2.9
Dielectric Constant at 1 MHz	2.9
Volume Resistivity	2E+15 ohm-cm
Dissipation Factor at 110 Hz	1.6E-04
Dissipation Factor at 100 kHz	2.2E-05
Dissipation Factor at 1 MHz	4.5E-04

**Specification Writers:** These values are not intended for use in preparing specifications. Please contact your local Dow sales office before writing specifications on this product.

## Learn More

We bring more than just an industry-leading portfolio of advanced silicone-based materials. As your dedicated innovation leader, we bring proven process and application expertise, a network of technical experts, a reliable global supply base and world-class customer service.

To find out how we can support your applications, visit [consumer.dow.com/pcb](http://consumer.dow.com/pcb).

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