



Technical Data Sheet

DOWSIL™ SF 8421 EG Fluid

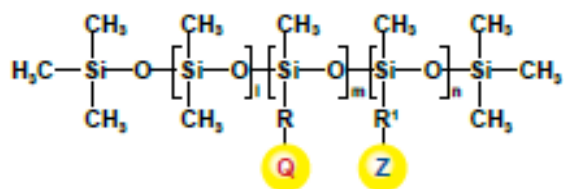
Epoxy and polyether modified silicone polymer

Features & Benefits

- Siloxane polymer which has good compatibility with organic resins
- Epoxy functionality helps reaction with polymers
- Impart stress relaxation in thermoset resins

Composition

- Epoxy and polyether modified polydimethylsiloxane



Q = Non-reactive functional group

Z = Reactive functional group

Applications

- Additive for thermoset resin composites
- Additive for epoxy molding compound
- Additive for phenolic resin

Typical Properties

Specification Writers: These values are not intended for use in preparing specifications.

Property	Unit	Result
Appearance		Colorless to pale yellow liquid
Viscosity	mm ² /s	2,400–4,000
Refractive Index		1.4380–1.4440
Epoxy Equivalent	g/mol	8,500–12,000
Electric Conductivity	μS/cm	< 15.0

Description

DOWSIL™ SF 8421 EG Fluid has both polyether functionality and epoxy functionality attached to polydimethylsiloxane. The epoxy functionality can react with organic functions such as phenol, amino, and polyether functionality to help compatibilize siloxane. The unique structure enables silicone to function as a reactive and dispersion additive.

How to Use

DOWSIL™ SF 8421 EG Fluid can be added to molten resin/ filler mixture between 0.1–3.0% and mixed well around 80–120°C. The process is typically conducted by hot 2-roll mill, but other mixing equipment can be adopted. The mixture can be crushed to make powder/ tablet, then molded at curing conditions.

Typical Formulations

1. Phenol resin	8.5%
2. Epoxy resin	6.5%
3. Silica	84.5%
4. DOWSIL™ SF 8421 EG Fluid	0.2%
5. Carnauba wax	0.15%
6. Triphenylphosphate	0.15%

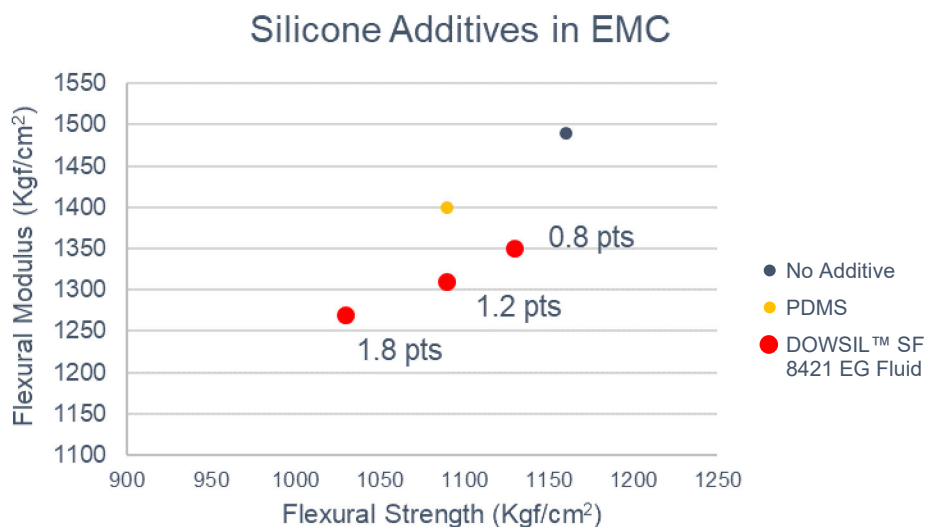


Figure 1: Flexural Strength and Flexural Modulus of the EMC with/without DOWSIL™ SF 8421 EG Fluid.

Handling Precautions

PRODUCT SAFETY INFORMATION REQUIRED FOR SAFE USE IS NOT INCLUDED IN THIS DOCUMENT. BEFORE HANDLING, READ PRODUCT AND SAFETY DATA SHEETS AND CONTAINER LABELS FOR SAFE USE, PHYSICAL AND HEALTH HAZARD INFORMATION. THE SAFETY DATA SHEET IS AVAILABLE ON THE DOW WEBSITE AT DOW.COM, OR FROM YOUR DOW SALES APPLICATION ENGINEER, OR DISTRIBUTOR, OR BY CALLING DOW CUSTOMER SERVICE.

Limitations

This product is neither tested nor represented as suitable for medical or pharmaceutical uses.

Health and Environmental Information

To support customers in their product safety needs, Dow has an extensive Product Stewardship organization and a team of product safety and regulatory compliance specialists available in each area.

For further information, please see our website, dow.com or consult your local Dow representative.

Disposal Considerations

Dispose in accordance with all local, state (provincial) and federal regulations. Empty containers may contain hazardous residues. This material and its container must be disposed in a safe and legal manner.

It is the user's responsibility to verify that treatment and disposal procedures comply with local, state (provincial) and federal regulations. Contact your Dow Technical Representative for more information.

Product Stewardship

Dow has a fundamental concern for all who make, distribute, and use its products, and for the environment in which we live. This concern is the basis for our product stewardship philosophy by which we assess the safety, health, and environmental information on our products and then take appropriate steps to protect employee and public health and our environment. The success of our product stewardship program rests with each and every individual involved with Dow products - from the initial concept and research, to manufacture, use, sale, disposal, and recycle of each product.

Customer Notice

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