



Product Data

DeSolite® DF-0009

Product Description

DeSolite® DF-0009 is an optical fiber single coat designed for higher temperature fiber applications.

Performance Characteristics

Liquid Coating	Typical Properties
Viscosity, 25°C, mPa•s	6,700
Density, 23°C, kg•m ⁻³	1,120
Liquid Refractive Index, 23°C	1.520

Cured Coating* (Tested at <1% R.H.)	Typical Properties
Glass Transition Range (DMA**), °C at E' _{1000 MPa}	2
Glass Transition Range (DMA**), °C at E' _{100 MPa}	48
Cured Refractive Index	1.540
TGA weight loss 120 hrs @ 200° C, %	9.9

Cured Coating* (Tested at 23°C, 50% R.H.)	Typical Properties
Segment modulus, 2.5% strain, MPa	700
Elongation, %	15
Tensile strength, MPa	23
Degree of Cure (UV dose at 95% of Ultimate Secant Modulus, J•cm ⁻²)	0.9

*75 µm films cured in nitrogen at 1.0 J•cm⁻² using one D lamp, unless stated otherwise. UV dose determined with an IL-390 radiometer manufactured by International Light, Inc.

**Dynamic Mechanical Analysis (see DMA graph)



Test Methods

Test methods available upon request.

Filtration

DeSolite® Optical Fiber Coatings are manufactured using fine filtration techniques designed to minimize particulate matter and to ensure high strength and uniform product performance.

Storage Conditions

DeSolite® materials should be stored in their original containers at temperatures between 15° and 30° C. The bottles that are used for these are UV opaque and allow for air to diffuse through the plastic which prevents premature gelation.

Shelf Life

DeSolite® DF-0009 has a shelf life of 2 years from the date of manufacture, provided recommended storage conditions are properly maintained.

Safety Information

This product is formulated with multifunctional acrylates which may cause skin and eye irritation and/or skin sensitization. Safety data sheets for each product are available from your Covestro sales representative. All safety and handling recommendations should be followed carefully.

Conversions

$$\begin{aligned} N &= g \cdot f \times 9.807 \times 10^{-3} & \text{kg} \cdot \text{mm}^{-2} &= \text{MPa} \times 0.102 \\ \text{psi} &= \text{MPa} \times 145 & \text{mPa} \cdot \text{s} &= \text{cps} \end{aligned}$$

Contact Us:

Covestro Desotech Inc.
1122 St. Charles Street
Elgin, Illinois 60120
USA
Tel: +1-847-697-0400

Covestro Desotech b.v.
Slachthuisweg 30
3151 XN Hoek van Holland
The Netherlands
Tel: +31-1743-15391

Covestro Desotech Specialty Chemicals Ltd
476 Li Bing Road
Zhangjiang Hi-Tech Park
Pudong New Area
Shanghai 201203, China
Tel: +86-21-6141-8064

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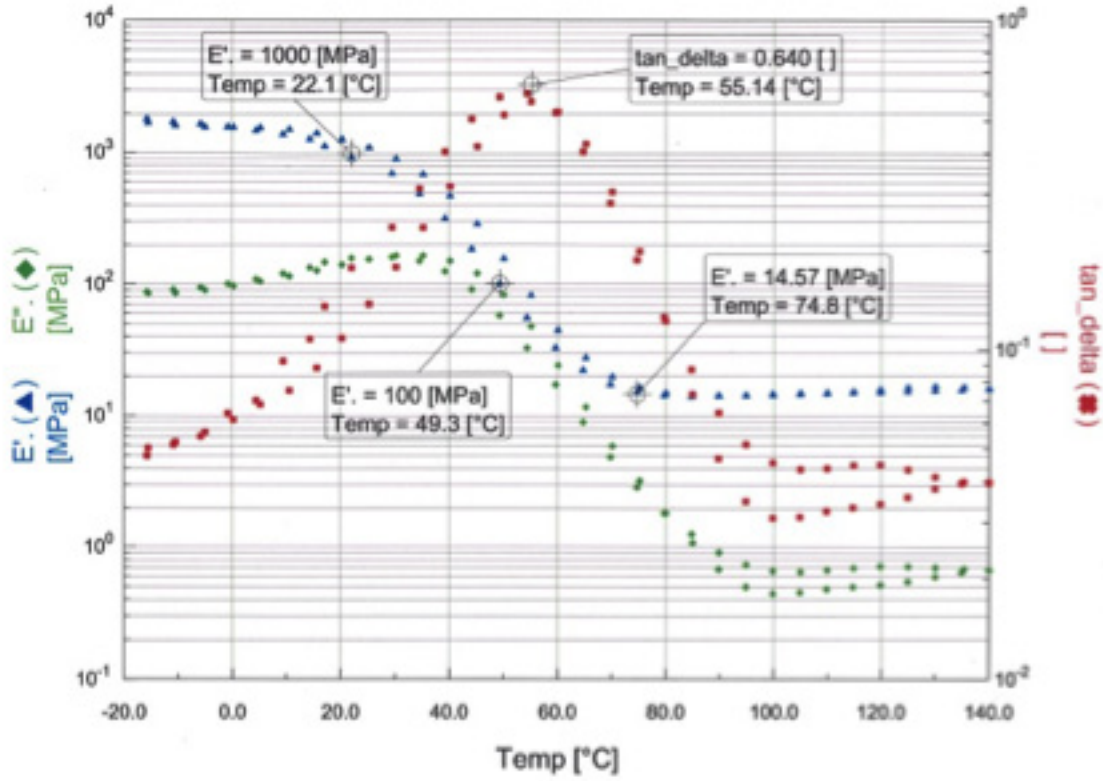
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Dynamic Mechanical Analysis (DMA)

DF-0009 B#0558-183F Control 12-5-08 DMA for Secondaries



Temperature/Viscosity Curve of DF-0009

