DeSolite®
Optical Fiber Coatings

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)

DeSolite® DF-0009

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

$N = g•f \times 9.807 \times 10^{-3}$	$kg•mm^{-2} = MPa \times 0.102$
$psi = MPa \times 145$	$mPa•s = cps$

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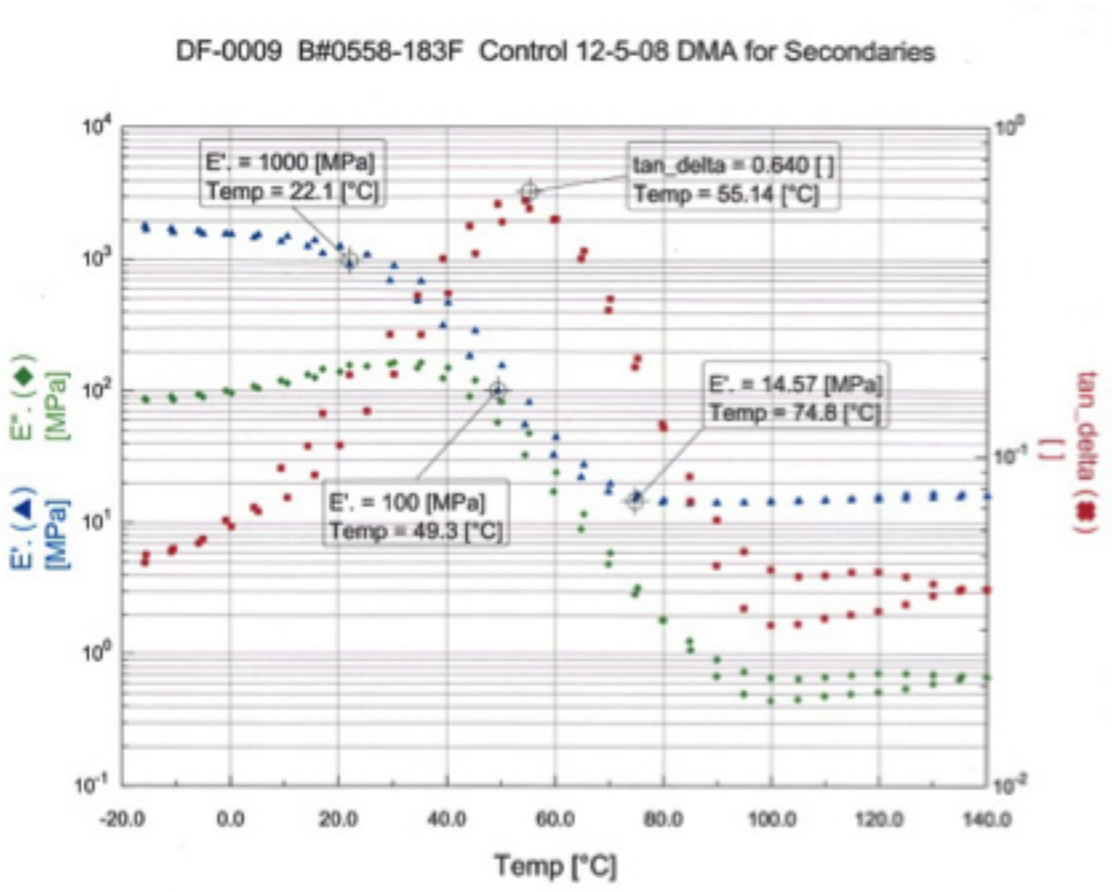
Dynamic Mechanical Analysis (DMA)



Temperature/Viscosity Curve of DF-0009