## **DeSolite**<sup>®</sup> 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 <sup>-3</sup>	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*	Typical
(Tested at 23°C, 50% R.H.)	Properties
Secant 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 <sup>-2</sup> )	0.9

 $^*75~\mu m$  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)

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#### **Test Methods**

Please refer to your DeSolite<sup>®</sup> Product Manual for test methods used to establish the data presented herein. Detailed test methods may be obtained through your DSM Desotech sales representative.

#### Filtration

DeSolite<sup>®</sup> materials are manufactured using fine filtration techniques designed to minimize particulate matter and to ensure high strength and uniform product performance.

#### **Storage Conditions**

DeSolite<sup>®</sup> 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<sup>®</sup> materials have a shelf life of 18 months 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. DSM Desotech makes available a booklet titled, "Safe Handling of UV-Curable Materials" which describes the proper use of its UV-curable products. This booklet may also be found online at <u>www.dsmdesotech.com</u>. Material safety data sheets for each product are also available from your DSM Desotech sales representative. All safety and handling recommendations should be followed carefully.

#### Conversions

N = g⋅f x 9.807 x 10 <sup>-3</sup>	kg·mm <sup>-2</sup> = MPa x 0.102
psi = MPa x 145	mPa⋅s = cps

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### Dynamic Mechanical Analysis (DMA)





