Manufacturer:
Covestro

Product Name:
Covestro Desolite® DP-1021 Primary Optical Fiber Coating, UV Cure (10 kg)

Manufacturer Part Number:
COV-DP-1021-10KG

DeSolite®
Optical Fiber Coatings

Product Data

DeSolite® DP-1021

Product Description

DeSolite® DP-1021 is a primary coating for multi-mode applications. It was designed for faster processing speeds and lower attenuation as compared to the previous generation multi-mode primary coatings.

Characteristics

Liquid Coating	Typical Properties
Viscosity, 25°C, mPa•s	6,000
Density, 23°C, kg•m^{-3}	1,030
Liquid Refractive Index, 23°C	1.481
Surface tension, 23°C, dynes•cm^{-1}	34

Cured Coating* (Tested at <1% R.H.)	Typical Properties
Glass Transition Range (DMA***), °C at E'$_{1000\ MPa}$	-57
Glass Transition Range (DMA***), °C at E'$_{100\ MPa}$	-45

Cured Coating* (Tested at 23°C, 50% R.H.)	Typical Properties
Segment modulus, 2.5% strain, MPa	0.70
Elongation, %	225
Tensile strength, MPa	0.6
Degree of Cure, RTDMA*** Gel Time, s	0.30
Dynamic water sensitivity (150 µm films) -- peak absorption, % -- extractables, %	 1.3 1.0
Refractive Index	1.487

Product Benefits

- Fast processing
- Low attenuation
- Good low temperature performance

Cured Coating* (continued) (Tested at 23°C, 50% R.H.)	Typical Properties
Hydrogen generation (24 hrs, 80°C in air, 75 µm films, µl•g-1)	0.05
Volumetric coefficient of expansion (DMA), 500 µm films -- in the glassy region (x10^{-6}), °C^{-1} -- in the rubbery region (x10^{-6}), °C^{-1}	 239 863
Adhesion to glass, per 25mm -- 50% R.H. (Nx10^{-2}) -- 95% R.H. (Nx10^{-2})	 33 30

*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)

*** Real Time Dynamic Mechanical Analysis - measures the mechanical property development from liquid to film state

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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
Protect DeSolite® coatings from all sources of ultraviolet light, including sunlight and fluorescent light, to prevent premature curing. It is recommended that DeSolite® coatings be stored in a dry place in unopened, undamaged, original containers at temperatures between 15°C and 30°C. Storage or shipment in cold conditions may result in a phase separation which is reversible and is corrected by heating for 24 hours at 50°C. If possible, the container should be gently rolled to assure uniform dissolution during this heating process.

Shelf Life
DeSolite® DP-1021 has a recommended shelf life of 12 months from the date of manufacture, provided that the above stated 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

$N = g \cdot f \times 9.807 \times 10^{-3}$ $kg \cdot mm^{-2} = MPa \times 0.102$

$psi = MPa \times 145$ $mPa \cdot s = cps$

UPDATED 05- July-2023

Learn More

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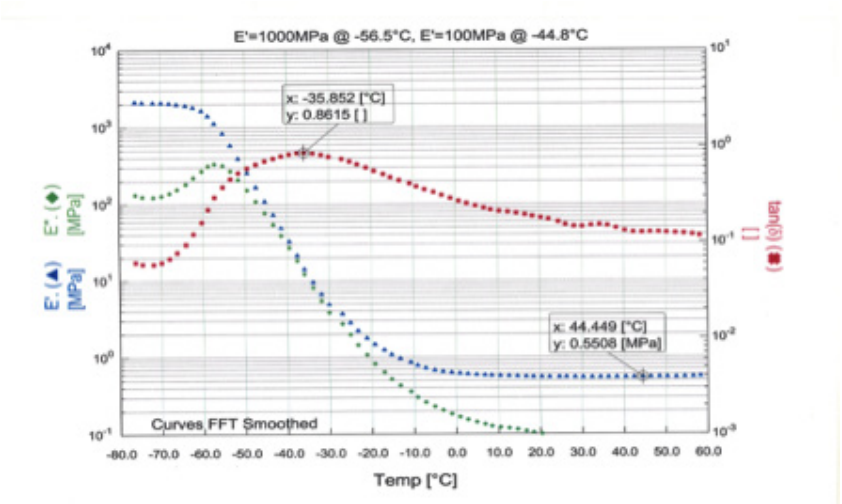
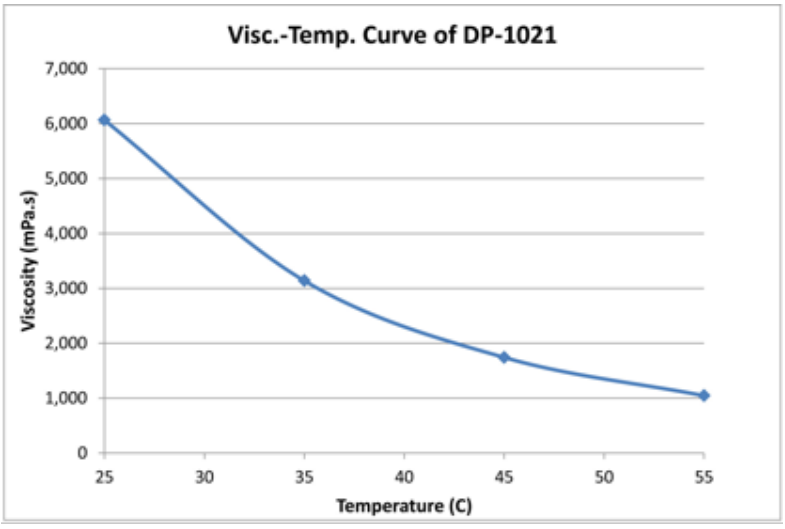
Click here for more details on the Covestro Desolite® DP-1021 Primary Optical Fiber Coating, UV Cure (10 kg)

DeSolite® DP-1021

Dynamic Mechanical Analysis (DMA)





Contact the professionals at Fiber Optic Center for a quote or to get more details.

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