



## Product Data

# DeSolite® 3471-2-136

### Product Description++

Optical fiber secondary coating

### Characteristics

Liquid Coating	Typical Properties
Viscosity, --- at 25 °C, mPa•s --- at 35 °C, mPa•s	4750 2050
Density, 23 °C, kg•m <sup>-3</sup>	1121
Liquid Refractive Index, 23 °C	1.519
Surface tension, 23 °C, dynes•cm <sup>-1</sup>	24

Cured Coating* (Tested at <1% R.H.)	Typical Properties
Glass Transition Range (DMA**), °C at E' <sub>1000 MPa</sub>	29
Glass Transition Range (DMA**), °C at E' <sub>100 MPa</sub>	51

Cured Coating* (Tested at 23 °C, 50% R.H.)	Typical Properties
Segment modulus, 2.5% strain, MPa	731
Elongation, %	27
Tensile strength, MPa	29
Degree of Cure (UV dose at 95% of Ultimate Secant Modulus, J•cm <sup>-2</sup> )	0.2
Dynamic water sensitivity (250 µm films) -- peak absorption, % -- extractables, %	1.6 0.8

### Product Benefits

- Industry standard
- Fast cure
- Compatible with wet-on-wet or wet-on-dry coating process
- Compatible with multiple DeSolite primaries
- Patent-protected

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 <sup>-1</sup> )	0.2
Volumetric coefficient of expansion (DMA), 500 µm films -- in the glassy region (x10 <sup>-6</sup> ), °C <sup>-1</sup> -- in the rubbery region (x10 <sup>-6</sup> ), °C <sup>-1</sup>	<100 450
Aging after 8 weeks Thermal weight change, % -- at 95 °C -- at 125 °C	3 3

\*75 µm films cured in nitrogen at 1.0 J•cm<sup>-2</sup> 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

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® 3471-2-136 has a recommended shelf life of 18 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

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

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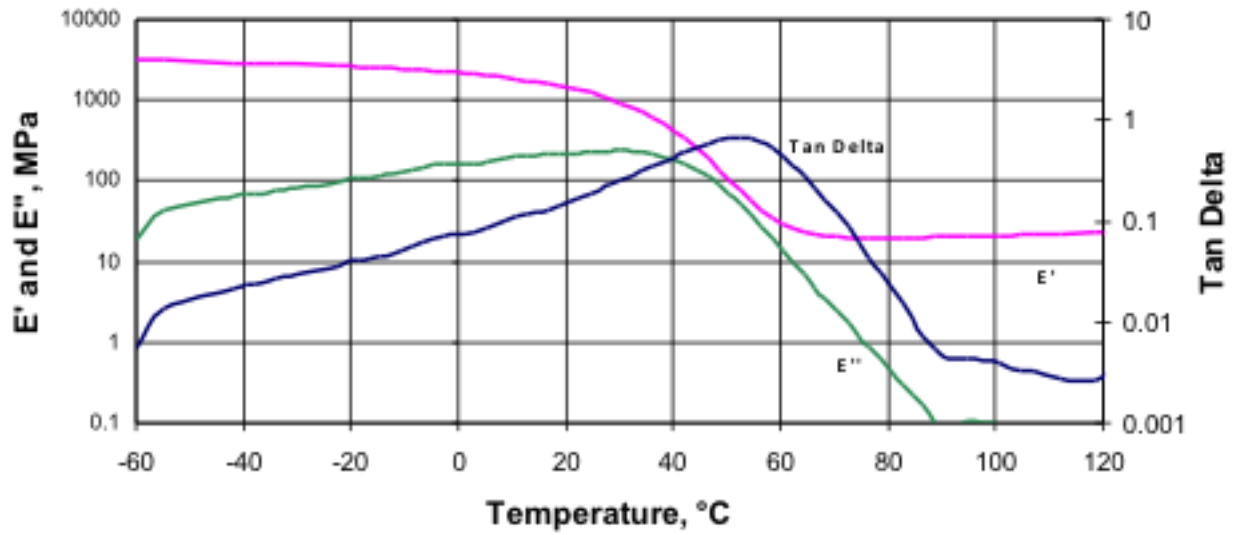
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### Dynamic Mechanical Analysis (DMA)



### Viscosity vs. Temperature

