


**Manufacturer:**

Covestro

**Product Name:**

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

**Manufacturer Part Number:**

COV-DP-1021-10KG

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

**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 <sup>-3</sup>             | 1,030              |
| Liquid Refractive Index, 23°C                 | 1.481              |
| Surface tension, 23°C, dynes•cm <sup>-1</sup> | 34                 |

| Cured Coating* (Tested at <1% R.H.)                           | Typical Properties |
|---|--------------------|
| Glass Transition Range (DMA***), °C at E' <sub>1000 MPa</sub> | -57                |
| Glass Transition Range (DMA***), °C at E' <sub>100 MPa</sub>  | -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)<br>-- peak absorption, %<br>-- extractables, % | 1.3<br>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 <sup>-1</sup> )  | 0.05               |
| Volumetric coefficient of expansion (DMA), 500 µm films<br>-- in the glassy region (x10 <sup>-6</sup> ), °C <sup>-1</sup><br>-- in the rubbery region (x10 <sup>-6</sup> ), °C <sup>-1</sup> | 239<br>863         |
| Adhesion to glass, per 25mm<br>-- 50% R.H. (Nx10 <sup>-2</sup> )<br>-- 95% R.H. (Nx10 <sup>-2</sup> )  | 33<br>30           |

\*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)

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



[Learn More](#)



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## DeSolite® DP-1021



### 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

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

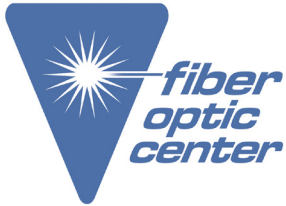
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Any samples provided by Covestro are for testing purposes only and not for commercial use.

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UPDATED 05-July-2023



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## DeSolite® DP-1021



### Dynamic Mechanical Analysis (DMA)

