Product Data

Next Generation Secondary Coatings

Secondary Coating DeSolite® DS-2042

Product Description

Next Generation DeSolite® Supercoatings are developed for both Wet-on-Wet and Wet-on-Dry processes that provide superior microbending performance and robust field application.

Physical Characteristics

Liquid Coating	Typical Properties
Viscosity, --- at 25°C, mPa•s --- at 35°C, mPa•s	 6,002 2,104
Density, 23°C, kg•m^{-3}	1,130
Liquid Refractive Index, 23°C	1.514
Surface tension, 23°C, dynes•cm^{-1}	22.8

Cured Coating* (Tested at <1% R.H.)	Typical Properties
Glass Transition Range (DMA***), °C at E'$_{1000\ MPa}$	10.6
Glass Transition Range (DMA***), °C at E'$_{100\ MPa}$	86.1

Cured Coating* (Tested at 23°C, 50% R.H.)	Typical Properties
Segment modulus, 2.5% strain, MPa	1,078
Elongation, %	9
Tensile strength, MPa	38

Product Benefits

- Enables high draw speeds
- Exceptional microbending performance
- High n_d for 2 pt. bending and tensile methods
- Excellent cavitation resistance
- Optimized adhesion for ribbon, loose-tube and aging performance

Cured Coating* (continued) (Tested at 23°C, 50% R.H.)	Typical Properties
Degree of Cure (UV dose at 95% of Ultimate Secant Modulus, J•cm^{-2})	0.28
Dynamic water sensitivity (150 µm films) -- peak absorption, % -- extractables, %	 3.1 0.3
Refractive Index	1.534
Hydrogen generation (24 hrs, 80°C in air, 75 µm films, µl•g^{-1})	0.15

*Real Time Dynamic Mechanical Analysis

**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

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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
Recommended shelf life is 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

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

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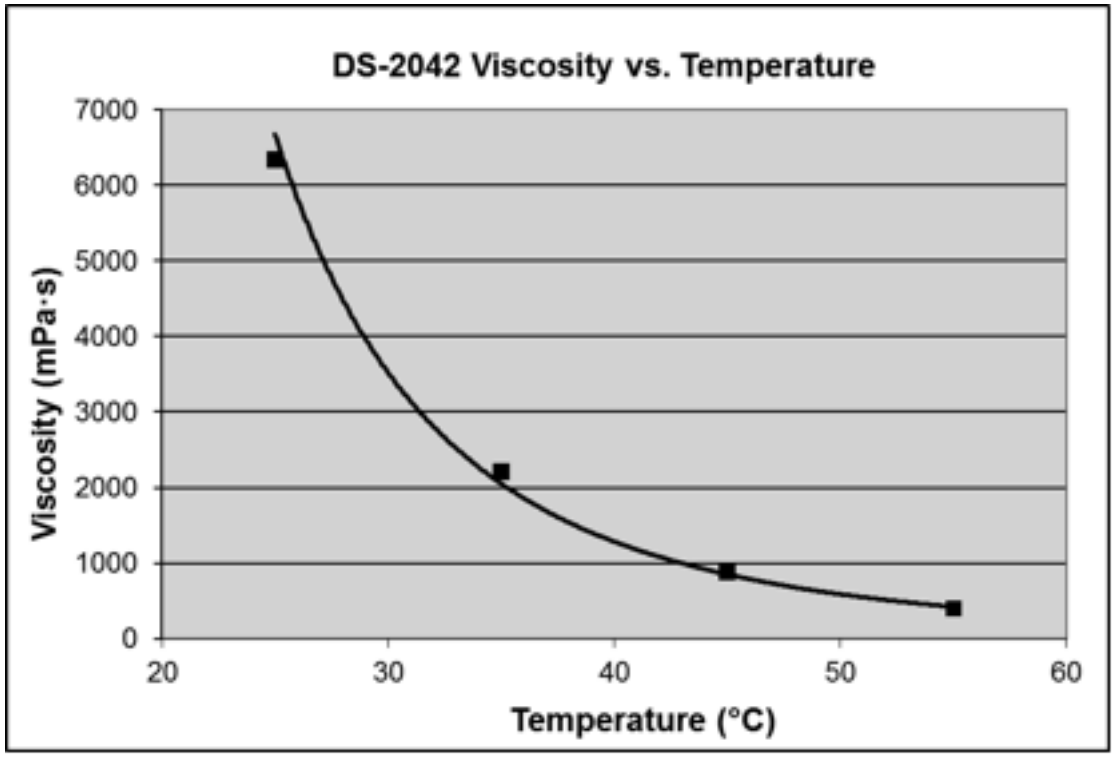
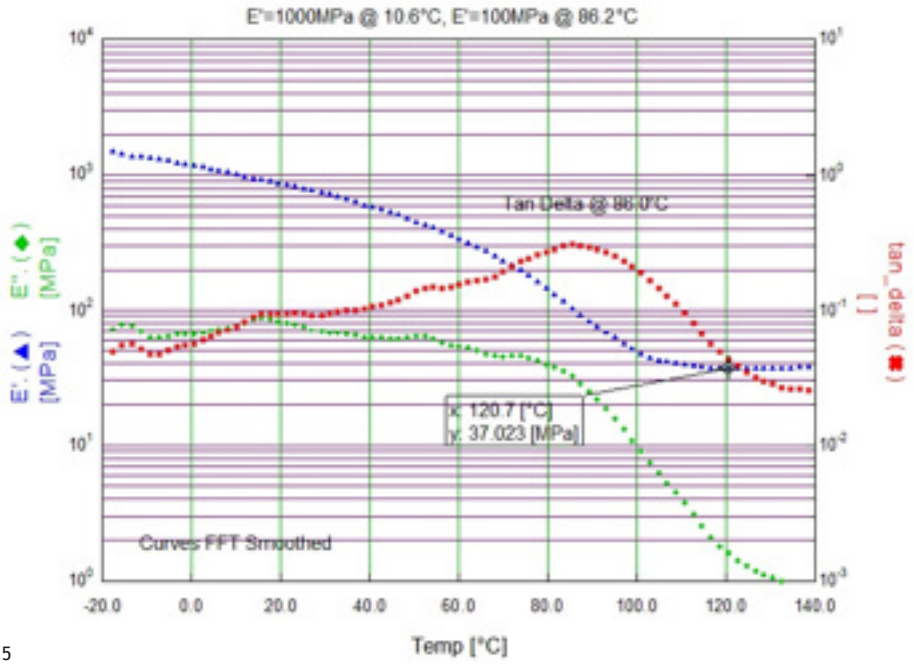


DMA Graph



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