

## Product Data

# Cablelite<sup>®</sup> 3287-9-85

### Product Description

Cablelite<sup>®</sup> 3287-9-85 is a medium modulus matrix material that can be used in many different ribbon structures. One of its unique properties is its use as an overcoat matrix for bonding subunit ribbon assemblies. This product is recommended for splittable ribbon configurations.

### Product Benefits

- Medium modulus
- Low viscosity
- Patent-protected

### Performance Characteristics

Liquid Coating	Typical Properties
Viscosity, 25°C, mPa·s	5000
Density, 23°C, kg·m <sup>-3</sup>	1070

Cured Coating* (Tested at <1% R.H.)	Typical Properties
Glass Transition Range (DMA**), °C at E' 1000 MPa	4
Glass Transition Range (DMA**), °C at E' 100 MPa	66

\*Dynamic Mechanical Analysis (see DMA graph)

### Performance Characteristics (cont'd)

Cured Coating* (Tested at 23°C, 50% R.H.)	Typical Properties
Secant modulus***, 2.5% strain, MPa	281
Elongation***, %	15
Tensile strength***, MPa	17
Degree of Cure (UV dose at 95% of Ultimate Secant Modulus, J·cm <sup>-2</sup> )	0.8
Water Absorption after 24 hrs., 250 µm films, %	0.9
Hydrogen generation (24 hrs, 80°C in air, 75 µm films, µl·g <sup>-1</sup> )	0.2

\*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)

\*\*\*TEM properties on polyester were obtained after 1 to 2 hours conditioning at 22 +/-2°C and 50% +/-5 RH.

Updated: 9/11

## Test Methods

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Detailed test methods may be obtained through your DSM Desotech sales representative.

## Filtration

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

## Storage Conditions

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Cablelite<sup>®</sup> matrix 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

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Cablelite<sup>®</sup> matrix materials have a shelf life of 18 months from the date of manufacture, provided recommended storage conditions are properly maintained.

## Safety Information

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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 [www.dsmdesotech.com](http://www.dsmdesotech.com). 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

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

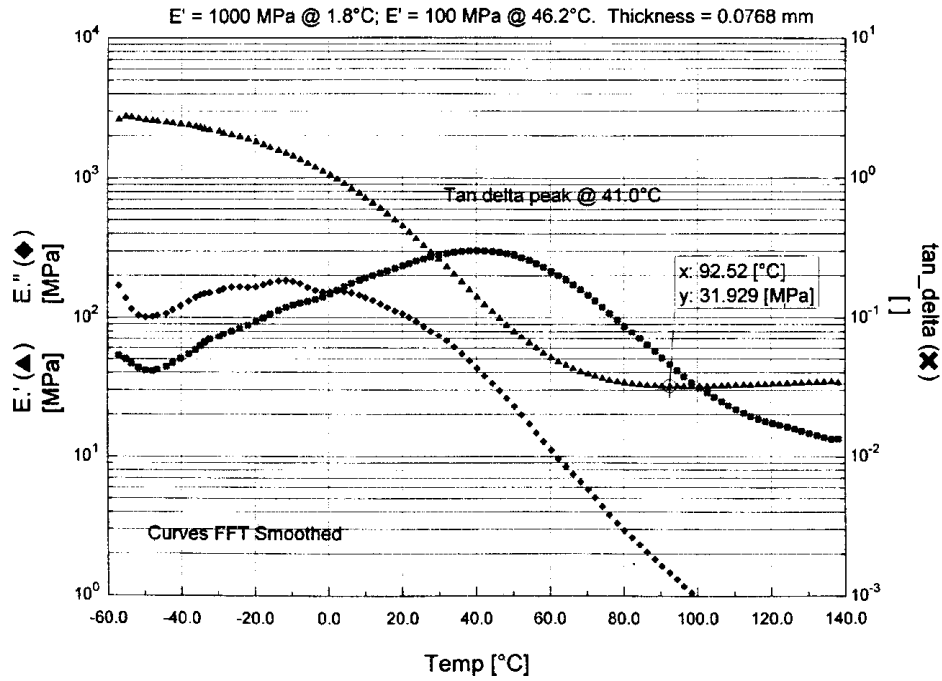
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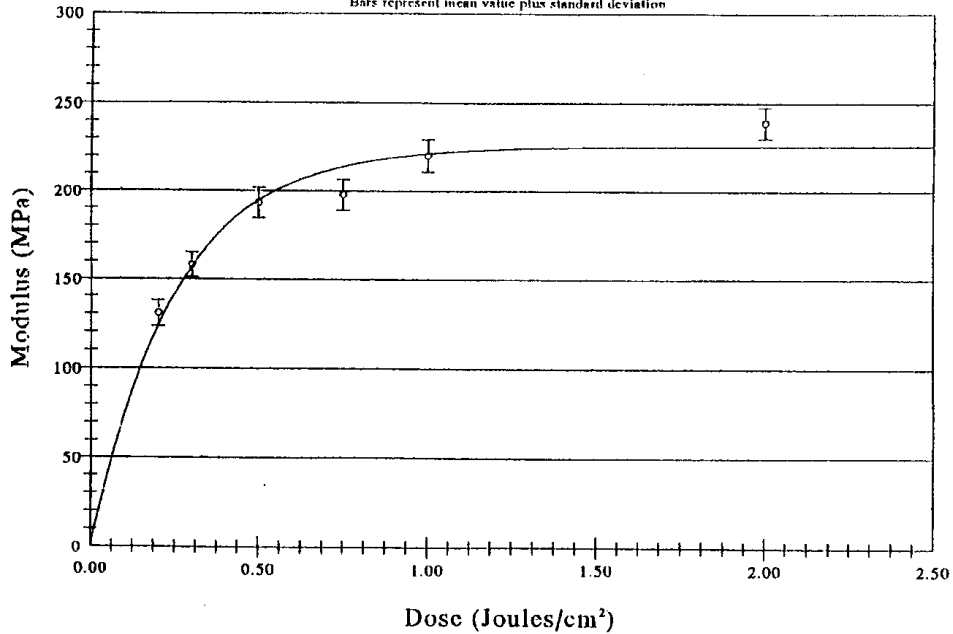
### Dynamic Mechanical Analysis (DMA)



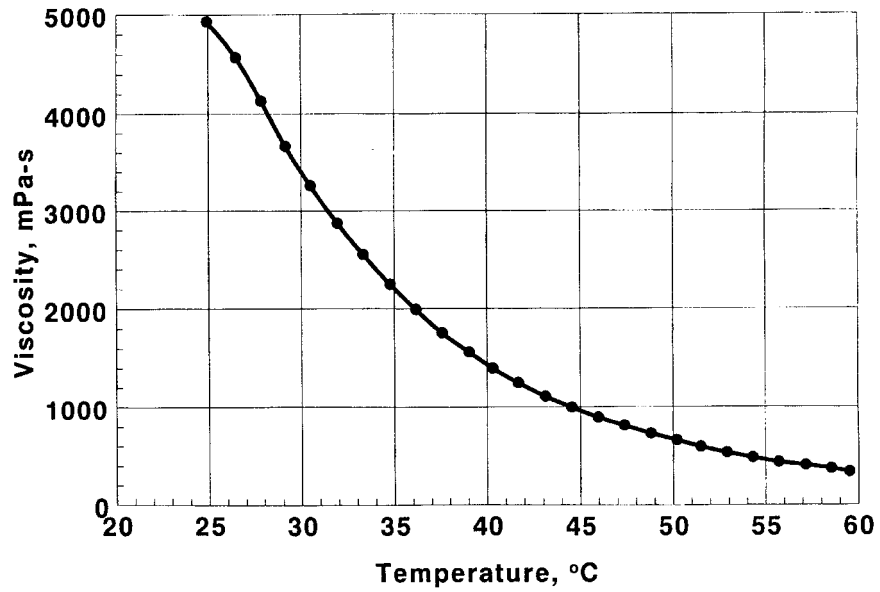
### Dose Sensitivity

$$\text{Modulus} = 225.85[1 - \exp(-3.95 \times \text{Dose})]$$

Bars represent mean value plus standard deviation



### Viscosity vs. Temperature



### Accelerated Aging

