

Product Data

DeSolite® DS-2015

Product Description

Optical fiber secondary coating

Characteristics

Liquid Coating	Typical Properties
Viscosity,	
at 25°C, mPa⋅s	5900
at 35°C, mPa⋅s	2040
Density, 23°C, kg·m ⁻³	1130
Liquid Refractive Index, 23°C	1.517
Surface tension, 23°C, dynes cm ⁻¹	22

Cured Coating* (Tested at <1% R.H.)	Typical Properties
Glass Transition Range (DMA**), °C	
at E' 1000 MPa	40
Glass Transition Range (DMA**), °C	
at E' 100 MPa	80

Cured Coating* (Tested at 23°C, 50% R.H.) Tensile properties obtained on 4-mil mylar:	Typical Properties
Secant modulus, 2.5% strain, MPa	950
Elongation, %	15
Tensile strength, MPa	35

Product Benefits

- The NEW industry standard
- Fast cure
- Suitable for wet-on-wet or wet-on-dry processes
- Compatible with all DeSolite® primary coatings and Cablelite® inks.

Cured Coating* (continued)	Typical
(Tested at 23°C, 50% R.H.)	Properties
Degree of Cure (UV dose at 95% of	
Ultimate Secant Modulus, J⋅cm ⁻²	0.3
)	0.3
Dynamic water sensitivity (150 µm	
films)	
peak absorption, %	2.3
extractables, %	1.0
Refractive index	1.537
Hydrogen generation (24 hrs, 80°C	
in air, 75 μm films, μl·g ⁻¹)	0.2
Coefficient of expansion (TMA), 500	
µm films	
in the glassy region (x10 ⁻⁶), °C ⁻¹	38
in the rubbery region (x10 ⁻⁶),	196
°C ⁻¹	170
Aging after 8 weeks	
Thermal weight change, %,	
at 85°C	3
at 85/85°C	2

 $^{^*}$ 75 µm films cured on 4 mil Mylar 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.

Updated: 3/09



^{**}Dynamic Mechanical Analysis (see DMA graph)

DeSolite® DS-2015



Test Methods

DSM Desotech's booklet titled, "Test Methods for DeSolite" UV Curable Fiber Optic Materials should be referenced for abstracts of test methods used to establish the data presented herein. Detailed test methods may be obtained through your Desotech sales representative.

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 recom-mended 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® DS-2015 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. 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. 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

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

Contact Us:

DSM Desotech Inc. 1122 St. Charles Street Elgin, Illinois 60120

USA

Tel: +1-847-697-0400 Fax: +1-847-468-7785 DSM Desotech bv P.O. Box 68

3150 AB Hoek van Holland No.

The Netherlands
Tel: +31-1743-15391
Fax: +31-1743-15530

DSM Desotech

11F, The Headquarters Building 168 Middle Xi Zang Rd. Shanghai 200001 CHINA

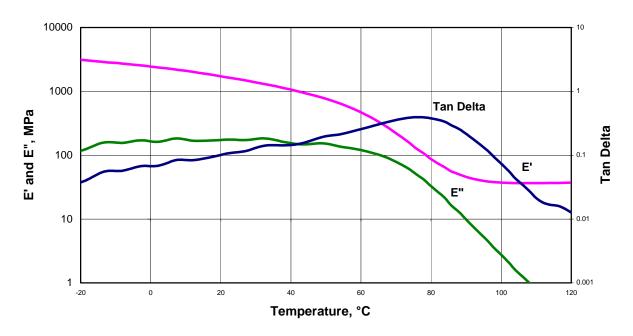
Tel: +86-21-61418188 Fax: +86-21-61417008

NOTICE: DeSolite is a registered trademark of Royal DSM N.V. The information presented herein is based on generally accepted analytical and testing practices and is believed to be accurate. However, DSM Desotech expressly disclaims any product warranties which may be implied, including warranties of merchantability and/or fitness for a particular purpose. DSM Desotech's products are sold subject to DSM Desotech's standard terms and conditions of sale, copies of which are available upon request. Purchasers are responsible for determining the suitability of the product for its intended use and the appropriate manner of utilitizing the product in purchaser's production processes and applications os as to insure safety, quality and effectiveness. Purchasers are further responsible for obtaining necessary patent rights to practice any invention in connection with the use of purchased product and any other product or process. DSM Desotech reserves the right to changes specifications of their products without notice.





Dynamic Mechanical Analysis (DMA)



Viscosity vs. Temperature

