

# TECHNICAL DATA SHEET

## EFIRON® LS-2001

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## **A. MATERIAL DESCRIPTION**

EFIRON<sup>®</sup> LS-2001 is Secondary coating for Glass Optical fiber. EFIRON<sup>®</sup> LS-2001 has suitable glass transition temperature, rapid cure property, free-point lump, water and chemical resistance, low volatilization, high oxidative and hydrolytic (moisture) stability which are required by optical fiber industry application.

### **1. CURING CONDITION**

EFIRON<sup>®</sup> LS-2001 has cure speed so it can be applied to 2,000 m/min line. The minimum UV dose for complete cure is about 0.3~0.4 J/cm<sup>2</sup> (UV-A range) under the nitrogen environment.

### **2. STORAGE**

EFIRON<sup>®</sup> LS-2001 can be polymerized under improper storage conditions. Store materials away from direct sunlight and presence of oxidizing agents and free radicals. Storage temperature range is between 10°C to 30°C.

### **3. PRECAUTION**

EFIRON<sup>®</sup> LS-2001 can cause skin and eye irritation after contact. Therefore, avoid direct contact with these materials. If contact occurs, immediately rinse affected areas copiously with water.

### **4. NOTES**

The information contained herein is believed to be reliable but is not to be taken as representation, warranty or guarantee and customers are urged to make their own tests.

## B. MATERIAL PROPERTIES

### 1. Liquid Coating

Viscosity	at 25 °C	4600 cPs
	at 35 °C	1700 cPs
Density	at 23 °C	1.11 g·cm <sup>-3</sup>
Refractive Index	at 25°C	1.512

### 2. Cured Coating

#### Test at <1% R.H

Glass Transition Temperature	
at Tan_delta Max	58 °C

#### Test at 23°C, 50% R.H

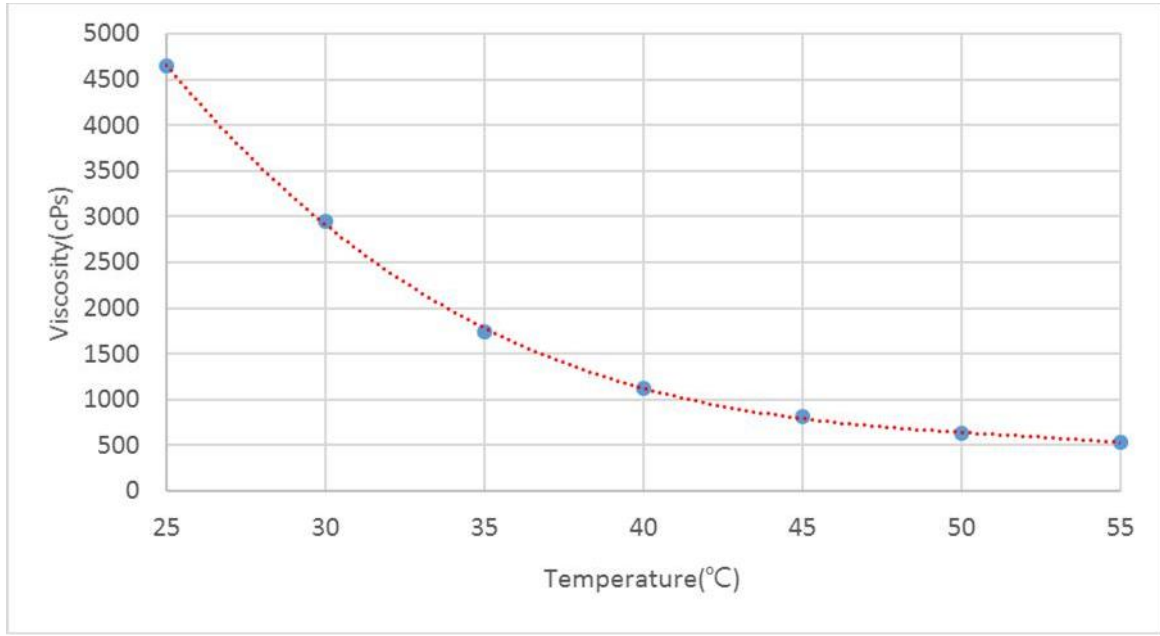
%RAU at 1J/cm <sup>2</sup> (75 μm)	93%
UV Dose at 95% of Ultimate Secant Modulus	0.37 J·cm <sup>-2</sup>
Secant Modulus at 2.5% Strain	720 MPa
Tensile Strength	28 MPa
Elongation	20 %
Refractive Index	1.53
Coefficient of Expansion, 500um film	
Glassy Region	9.9 ×10 <sup>-5</sup> °C <sup>-1</sup>
Rubbery Region	1.3 ×10 <sup>-4</sup> °C <sup>-1</sup>

\* Film preparation in Test A of EFIRON® test methods :

75 μm film thickness, D-bulb, 1.0 J/cm<sup>2</sup> (UV-A Range: 315–400nm) with Nitrogen Box.

## C. GRAPH & TABLE RELATED DATA

### 1. VISCOSITY PROFILE



### 2. Cure Energy

