

# TECHNICAL DATA SHEET

## **EFIRON<sup>®</sup> LP-1100**

FOSPIA CO.,LTD

53, Jiwon-ro, Danwon-gu, Ansan-si, Gyeonggi-do,  
Korea Tel) +82-31-365-3697 Fax) +82-31-365-3681  
<http://www.fospia.com>

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## **A. MATERIAL DESCRIPTION**

EFIRON<sup>®</sup> LP-1100 is Primary coating for Glass Optical fiber. EFIRON<sup>®</sup> LP-1100 has suitable glass transition temperature, rapid cure property, low micro bending loss, non-water delamination, low odor, low volatilization, high oxidative and hydrolytic (moisture) stability which are required by optical fiber industry application.

### **1. CURING CONDITION**

EFIRON<sup>®</sup> LP-1100 has fast cure speed so it can be applied to 2,000 m/min line. The minimum UV dose for complete cure is about 0.2~0.4 J/cm<sup>2</sup> (UV-A range) under the nitrogen environment.

### **2. STORAGE**

EFIRON<sup>®</sup> LP-1100 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> LP-1100 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	3300 cPs
	at 35 °C	1400 cPs
Density	at 23 °C	1.05 g·cm <sup>-3</sup>
Refractive Index	at 25°C	1.480
Surface Tension	at 25°C	32 dynes·cm <sup>-1</sup>

### 2. Cured Coating

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

Glass Transition Temperature	
at Tan_delta Max	-41°C

#### Test at 23°C, 50% R.H

UV Dose at 95% of Ultimate Secant Modulus	0.35 J·cm <sup>-2</sup>
Secant Modulus at 2.5% Strain	0.4~0.7 MPa
Tensile Strength	0.3~0.7 MPa
Elongation	110 %
Refractive Index	1.482~1.484
Adhesion to Glass, per 25mm	
50% R.H	>1 N

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

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

