**Optical Solution Provider** 

# TECHNICAL DATA SHEET

# **EFIRON**<sup>®</sup> HRI-550

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## A. MATERIAL DESCRIPTION

EFIRON<sup>®</sup> HRI-550 is Hyper coating for Glass Optical fiber. EFIRON<sup>®</sup> HRI-550 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 HRI-550 has cure speed so it can be applied to 1,000 m/min line. The minimum UV dose for complete cure is about 1  $J/cm^2$  (UV-A range) under the nitrogen environment.

#### 2. STORAGE

EFIRON<sup>®</sup> HRI-550 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  $10^{\circ}$ C to  $30^{\circ}$ C.

#### 3. PRECAUTION

EFIRON® HRI-550 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.

## 1. Liquid Coating

Viscosity at 25 ℃ 700 cPs

Density at 23 °C  $1.10 \text{ g} \cdot \text{cm}^{-3}$ 

Refractive Index at 25 ℃ 1.5410

### 2. Cured Coating

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

Glass Transition Temperature

at Tan\_delta Max In testing

#### Test at 23 °C, 50% R.H

Secant Modulus at 2.5% Strain1,500 MPaTensile Strength48 MPaElongation3.0 %Refractive Index at 852nm1.5552

75  $\mu\!m$  film thickness, D-bulb, 1.0  $J/cm^2$  (UV-A Range: 315-400nm) with Nitrogen Box

<sup>\*</sup> Film preparation in Test A of EFIRON® test methods: