EFiRON®

Updated 18/02/01

Optical Solution Provider

TECHNICAL DATA SHEET

EFIRON® Ribbon Matrix Resin

R-1000

FOSPIA OPTICAL SOLUTIONS

FOSPIA CO., LTD

53, Jiwon-ro, Danwon-gu, Ansan-si, Gyeonggi-do, Korea
Tel) +82-31-365-3680 Fax) +82-31-365-3681
http://www.fospia.com

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A. MATERIAL DESCRIPTION

EFIRON® R-1000 Ribbon Matrix Resin is a UV radiation-curable acrylates useful for optical fiber coating processes. EFIRON® R-1000 can be easily removed from the cladding without damage to the optical fibers for splicing and connection procedures.

It has suitable glass transition temperature, rapid cure property, non-yellowing, thermal resistance, high oxidative and hydrolytic (moisture) stability, which are required by optical fiber industry applications.

1. CURING CONDITION

Minimum UV dose of EFIRON® R-1000 for complete cure is 150~250 mJ/cm^2 (UV-A range) under a nitrogen environment. It has fast cure speed so it can be applied to 600 m/min line.

2. STORAGE

EFIRON® R-1000 Ribbon Matrix Resin can polymerize under improper storage conditions. Store materials away from direct sunlight and presence of oxidizing agents and free radicals. Storage temperature range is between 10℃ to 30℃ in a closed space can provide a long shelf time of 1 year.

3. PRECAUTION

EFIRON® R-1000 Ribbon Matrix Resin materials 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

Viscosity	at 25 ℃	4,300 cPs
	at 35 ℃	1,700 cPs
Density	at 20 ℃	1.52 $g \cdot cm^{-3}$
Refractive Index at 25℃, 589 nm		1.5087

2. CURED

95% Cure Energy	0.19 $J \cdot cm^{-2}$
Refractive Index at 6 33nm	1.5266
at 852 nm	1.5207
at 1550 nm	1.5139
Glass Transition Temperature	
At Tan_delta Max	In testing
Secant Modulus	
At 2.5% Strain	450 MPa
Tensile Strength at Break	24 MPa
Elongation at Break	21 %