EFiRON®

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Optical Solution Provider

TECHNICAL DATA SHEET

EFIRON® Polymer Clad Series

PC-452AP

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® PC-452AP coating is a radiation-curable acrylate useful for polymer cladding making processes. EFIRON® PC-452AP coating 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® PC-452AP for complete cure is 1000 mJ/cm^2 under a nitrogen environment. However, the minimum dosage is heavily dependent upon the thickness of the PC layer.

2. STORAGE

EFIRON® PC-452AP polymer cladding coating 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℃.

3. PRECAUTION

EFIRON® PC-452AP polymer cladding coating 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 ℃	5,200 cPs
Density	at 20 ℃	1.52 $g \cdot cm^{-3}$
Refractive Index at 25℃, 589 nm		1.442
Surface Tension		In Testing

2. CURED

Refractive Index at 852 nm	1.452
Glass Transition Temperature	
At Tan_delta Max	90℃
Secant Modulus	
At 2.5% Strain	560 MPa(In Testing)
Tensile Strength at Break	30 MPa(In Testing)
Elongation at Break	13 %(In Testing)
Water Sensitivity (24 Hour, 50 ℃)	
Weight Change	In testing
Extractable	In testing
Coefficient of Expansion	
Glassy Region	In testing
Rubbery Region	In testing
Shrinkage on Cure	<10.0 %

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