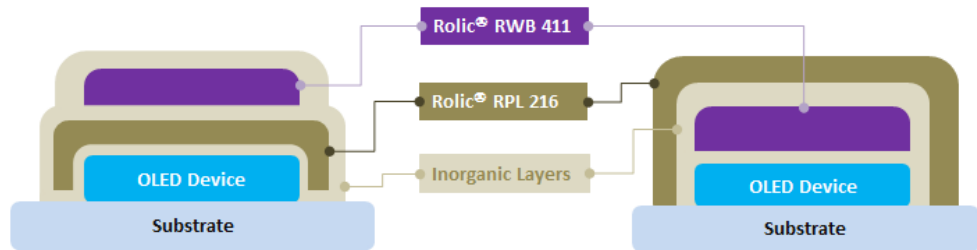


Technical Data Sheet Rolic® RWB 411

Description Rolic® RWB 411 is a photo curable resin used as getter and planarization layer in a high performance barrier stack for thin film encapsulation (TFE), e.g. in organic photo-voltaic (OPV) and organic light-emitting diode (OLED). Thanks to the dispersion of inorganic nano-size getter, the matrix delays the moisture penetration through the barrier layer and extends significantly the life time of the device. RWB 411 is clear and thus suited for a transparent encapsulation stack.

Two examples of OLED protected by the Rolic® Barrier Materials with RWB 411 as transparent interlayer with getter capability



- Features**
- VOC-free (volatile organic compound – free)
 - Suitable for coating in vacuum
 - UV-curable (<395nm)
 - Fast crosslinking in oxygen free atmosphere
 - Proprietary stable getter material evenly distributed in formulation
 - Formulation developed for ink-jet and slot die coating

Properties of liquid	Appearance	Clear yellowish liquid	
	Viscosity @ 25°C/55°C	70 mPa.s / 25 mPa.s	(Brookfield DVII-CP40)
	Density	1.01 g/cm ³	
	Refractive Index	1.47	(n _D 20°C)

Properties of Film	E _{modulus}	~1'500 MPa / ~100 MPa	(DMA @ 25°C/120°C)
	T _g	~100°C	(DMA)
	Transparency	>95% of glass reference	(T @420-650nm, 20µm on glass)
	Haze	<1%	(H @420-650nm, 20µm on glass)
	Water uptake	>1.5wt%	(24h @40°C/90%rh)

Processing Preferred printing technology for Rolic® RWB 411 is ink-jet printing with print head heated at 50°C-60°C and should be applied in a thickness range from 5 to 20µm. It is a UVA-curable material with a strong UVA-absorption up to 395nm, with fast cross-linking in an oxygen-free atmosphere. The typical UV dose level is between 1 to 3 J/cm²: it is anyhow recommended to conduct a ladder study for optimization of the curing conditions. For optimal interface adhesion, a surface treatment (e.g. O₂ plasma) of the organic or inorganic substrate is recommended before processing of Rolic® RWB 411.

Handling and Storage	Storage temperature	20°C – 25°C
	Storage container	product must be protected from light (store in original packaging only)
	Shelf life	3 months

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