

Technical Data Sheet Rolic® ROF 5190-414

Description	Rolic® ROF 5190-414 is a solution of a photo-sensitive liquid crystal pre-polymer. In combination with Rolic LPP (linearly polymerizable polymer) it enables the design and production of anisotropic thin films such as quarter wave or half wave retarders, as well as viewing angle enhancement films.	
Rolic® LCMO	<p>Rolic® LCMO (Light Controlled Molecular Orientation) is a breakthrough technology for liquid crystal applications and stands for</p> <ul style="list-style-type: none"> • Excellent orientation and high contrast: Rolic's LPP (linearly photo-polymerizable polymer) and LCP (liquid crystal polymer) are based on highly functionalized polymers which offer the possibility to customize polarization direction, incident angle and exposure area according to final product needs; • Sub-micron resolution: Rolic® LCMO enables orientation patterns with submicron resolution, opening up new possibilities for the design and functionality of optical films. • Extended service life: Optical films produced with Rolic's LPP and LCP will maintain their orientation even under thermal stress, high humidity and exposure to intensive visible light. • Superior quality and quality consistency: Rolic® LCMO eliminates mechanical brushing. Liquid crystals and liquid crystal pre-polymers are aligned contact-free by linearly polarized UV light. Scratches, dust and electrostatic charges are avoided, the yield is increased. • High throughput for mass production: Due to high photo-sensitivity of Rolic's LPP and LCP, only few hundred milliseconds of LPUV-light exposure are needed to reliably induce the desired photo-alignment. 	
Typical Properties	Solvent	Butylacetate/cyclohexanone (80/20)
	Solids content	35 %
	Aspect	slightly yellowish liquid
	Odor	solvent like
	Viscosity (Ubbelohde)	4.8 mPas
	Flashpoint	24 °C
	Filtration	0.2 µm
	Photosensitivity	UV-A
	Exposure energy, under inert atm.	30-500 mJ/cm ²
Handling and Storage	Rolic® ROF 5190-414 is a light and temperature sensitive product.	
	Storage	room temperature, protected from light
	Shelf life	6 months

For more details, please refer to the Material Safety Data Sheet.

Disclaimer

IN REGARD TO THE PRODUCT, ROLIC MAKES NO WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR NONINFRINGEMENT OF ANY INTELLECTUAL PROPERTY RIGHTS. No statements or recommendations made herein are to be construed as an inducement to infringe any patent. Technical data and results are based upon tests under controlled laboratory conditions and must be confirmed by customer by testing for its intended conditions of use. ROLIC shall not be liable for any technical advice or technical information provided and does not assume any obligation or liability for the information in this document.