

ACRYLITE® Optical

ACRYLITE® Optical SuPure® and ACRYLITE® POQ

Product

ACRYLITE® Optical SuPure® and ACRYLITE® POQ 66 are used for optically critical applications such as sophisticated light pipes that require the complete lack of visible black specks critical in boosting the effectiveness of light distribution through the light channel.

ACRYLITE® Optical POQ66 and ACRYLITE® Optical SuPure® acrylic compounds achieve the maximum purity in acrylic polymers. Both ACRYLITE® Optical grades use proprietary purification processes that ensures the polymers are free of any visible dust, fines and contaminant. These specialty compounds provide the high optical purity needed for applications that require high transmission efficiency in long light paths. The low absorption coefficient characteristics provide the best possible outcome for sophisticated light pipes, and interior lighting lenses.

ACRYLITE® Optical POQ66 has formulation refinements that further ensure its high optical pureness. Millions of pounds of ACRYLITE® Optical POQ66 have been sold into the manufacture of optical light guides for backlight units in TFT-LCE displays. Specially designed packaging options ensure that purity is maintained during delivery.

ACRYLITE® Optical POQ66 is excellent for long path light guide applications but it should not be

used for outdoor applications and should only be used with LED lighting sources.

ACRYLITE® Optical SuPure® acrylic polymer is an exceptionally pure polymer designed for applications that demand maximum cleanliness. Evonik's proprietary purification process starts at the manufacturing facility and extends to your operation's processing point, resulting in a solution of total purity. The ACRYLITE® Optical SuPure® solution provides a polymer free of dust, fines and contaminant that consistently delivers exceptional clarity and eliminates costly defects.

Ideal for automotive applications such as instrument cluster lenses, interior lighting and telematics covers. ACRYLITE® Optical SuPure® also provide outstanding results in optical applications since it offers better clarity and quality of light transmission than glass.

ACRYLITE® Optical SuPure® is available in 8N. Other grade options are available upon request.





Packaging Options

Material	Packaging Brand	Description
ACRYLITE® Optical POQ66	****	Gaylord , super sacks and other options available on request
ACRYLITE® Optical SuPure®	EverPure™	Premium bulk bag closed loop system ensuring the highest level of purity
ACRYLITE® Optical SuPure®	PureGuard™	Heat – sealed chimney liner system in Gaylord that effectively eliminates dust and contaminant



ACRYLITE® Optical – Properties by ISO Test Method

Property	ISO	ACRYLITE®	ACRYLITE®
	Method	Optical SuPure® 8N	Optical POQ66
OPTICAL			
Luminous transmittance D65 %	13468-2	92	92
Refractive Index	489	1.49	1.49
RHEOLOGICAL PROPERTIES			
Melt Volume Rate, MVR 230°C & 3.8kg cm ³ / 10min	1133	3	2.3
MECHANICAL			
Tensile Modulus, 1mm / min (Mpa)	527	3300	3200
Stress @Break, 5mm / min (Mpa)	527	77	69
Strain @ Break, 5 mm / min %	527	5.5	4
Charpy Impact Strength	179 / 1 eU	20	20
PHYSICAL			
Deflection Temperature Under Load 1.8 MPa °C	75	98	94.5
Vicat Softening Point, B / 50 °C	306	108	104
Glass Transition Temperature °C	IEC 10006	117	108
Density g / cm ³	1183	1.19	1.19
Water Absorption % max.	62	<2	<2
Coeff. Of Linear Therm. Expansion °C 0 – 50°C E=5 °K	11359	8	8
Fire Rating	DIN 4102	B2	B2
Flammability UL 94 1.6mm Class	IEC 707	UL 94 HB	UL 94 HB

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