# **ACRYLITE® LED 8N LD96**

#### Polymethyl Methacrylate Acrylic

#### **Evonik Cyro LLC**

#### Message:

ACRYLITE® LED 8N LD96 Acrylic Molding Compound is a highly transparent light guide material based on ACRYLITE® 8N.

In addition to the typical properties of ACRYLITE®, such as

Excellent weather resistance

**UV-stability** 

Good flow, high mechanical strength

ACRYLITE® LED 8N LD96 is developed for edge lit LED applications. The light scattering properties convert the light guide to a full illuminated panel. Furthermore, the material allows for a competely transparent view through the light guide when it is not illuminated. This opens a new degree of freedom for designers. ACRYLITE® 8N LD12 is recommended for panels with a distance of 48 cm to 96 cm between two light injecting LED strips.

Injection molding or extrusion.

General Information

Features	Good Flow				
	Good UV Resistance				
	Good Weather Resistance				
	High Clarity				
	High Strength				
Uses	Lighting Applications				
	Lighting Diffusers				
Agency Ratings	EC 1907/2006 (REACH)				
Appearance	Clear/Transparent				
Forms	Pellets				
Processing Method	Extrusion				
	Extrusion Injection Molding				
		Unit	Test Method		
Processing Method	Injection Molding	Unit g/cm³	Test Method ASTM D792		
Processing Method  Physical	Injection Molding  Nominal Value				
Processing Method  Physical  Specific Gravity	Injection Molding  Nominal Value  1.19	g/cm³	ASTM D792		
Processing Method  Physical  Specific Gravity  Apparent Density	Nominal Value 1.19 0.66	g/cm³	ASTM D792 ASTM D1895		
Processing Method  Physical  Specific Gravity  Apparent Density  Melt Mass-Flow Rate (MFR) (230°C/3.8 kg)	Nominal Value 1.19 0.66 3.3	g/cm³ g/cm³ g/10 min	ASTM D792  ASTM D1895  ASTM D1238		
Physical Specific Gravity Apparent Density Melt Mass-Flow Rate (MFR) (230°C/3.8 kg) Molding Shrinkage - Flow	Nominal Value 1.19 0.66 3.3 0.40 to 0.70	g/cm³ g/cm³ g/10 min	ASTM D792  ASTM D1895  ASTM D1238  ASTM D955		
Physical Specific Gravity Apparent Density Melt Mass-Flow Rate (MFR) (230°C/3.8 kg) Molding Shrinkage - Flow Water Absorption (Equilibrium)	Injection Molding  Nominal Value  1.19  0.66  3.3  0.40 to 0.70  < 0.30	g/cm³ g/cm³ g/10 min %	ASTM D792  ASTM D1895  ASTM D1238  ASTM D955  ASTM D570		
Physical Specific Gravity Apparent Density Melt Mass-Flow Rate (MFR) (230°C/3.8 kg) Molding Shrinkage - Flow Water Absorption (Equilibrium) Hardness	Injection Molding  Nominal Value  1.19  0.66  3.3  0.40 to 0.70  < 0.30  Nominal Value	g/cm³ g/cm³ g/10 min %	ASTM D792 ASTM D1895 ASTM D1238 ASTM D955 ASTM D570 Test Method		
Physical Specific Gravity Apparent Density Melt Mass-Flow Rate (MFR) (230°C/3.8 kg) Molding Shrinkage - Flow Water Absorption (Equilibrium) Hardness Rockwell Hardness (M-Scale)	Injection Molding  Nominal Value  1.19  0.66  3.3  0.40 to 0.70  < 0.30  Nominal Value  95	g/cm³ g/cm³ g/10 min % White	ASTM D792 ASTM D1895 ASTM D1238 ASTM D955 ASTM D570 Test Method ASTM D785		
Physical Specific Gravity Apparent Density Melt Mass-Flow Rate (MFR) (230°C/3.8 kg) Molding Shrinkage - Flow Water Absorption (Equilibrium) Hardness Rockwell Hardness (M-Scale) Mechanical	Injection Molding  Nominal Value  1.19  0.66  3.3  0.40 to 0.70  < 0.30  Nominal Value  95  Nominal Value	g/cm³ g/cm³ g/10 min % W Unit	ASTM D792  ASTM D1895  ASTM D1238  ASTM D955  ASTM D570  Test Method  ASTM D785  Test Method		

Yield	4.0 to 6.0	%	
Break	4.0 to 6.0	%	
Flexural Modulus	3450	MPa	ASTM D790
Flexural Strength	112	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact (23°C, 6.35 mm)	19	J/m	ASTM D256
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load (1.8			
MPa, Annealed, 6.35 mm)	100	°C	ASTM D648
Vicat Softening Temperature	108	°C	ASTM D1525
CLTE - Flow (0 to 100°C)	7.2E-5	cm/cm/°C	ASTM D696
Optical	Nominal Value	Unit	Test Method
Transmittance (3200 μm)	92.0	%	ASTM D1003
Haze (3200 µm)	< 1.0	%	ASTM D1003
Yellowness Index (3.20 mm)	< 1.0	YI	ASTM D1925

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### Recommended distributors for this material

## Susheng Import & Export Trading Co.,Ltd.

Tel: +86 21 5895 8519

Phone: +86 13424755533 Email: sales@su-jiao.com

No. 215, Lianhe North Road, Fengxian District, Shanghai, China

