Technical Data Sheet

ALCOM LDDC PMMA 1000 UV GY1196-20

(Last update: 01.02.2024)

Base Polymer	Polymethylmethacrylate
Filler/Additive System	UV stabilised,special filler
Special Features	translucent,light scattering,injection moulding grade,impact modified
Market Segment	Lighting,electrical and electronic
Application Area	light transparent components,gardening tools
Typical Applications	display elements,operating elements

Pre-Drying Conditions	80 °C in a dry air (dessiccant) dryer for 2-3 h 80 °C in an air circulating dryer for 4-6 h max. moisture content <0,02 %
Processing Injection Moulding	melt temperature 220-260 °C mould temperature 50-70 °C
Storage	dry, protected from light

Properties	Value	Dimension	Test Norm
Mechanical Properties			
Flexural Modulus	1800	MPa	ISO 178
Flexural Stress (3.5% Strain)	50	MPa	ISO 178
Tensile Modulus	1700	MPa	ISO 527
Tensile Stress at Yield	44	MPa	ISO 527
Tensile Elongation at Yield	5.1	%	ISO 527
Tensile Elongation at Break	25	%	ISO 527
Impact Strength (Charpy, 23°C)	85	kJ/m²	ISO 179/1eU
Impact Strength (Charpy, -40°C)	23	kJ/m²	ISO 179/1eU
Notched Impact Strength (Charpy, 23°C)	6	kJ/m²	ISO 179/1eA
Notched Impact Strength (Charpy, -40°C)	1.5	kJ/m²	ISO 179/1eA
Thermal Properties			
Vicat B50	88	°C	ISO 306
HDT / A (1,8 MPa)	74	°C	ISO 75-1/-2
Rheological Properties			
Melt Index (MVR)	5	cm³/10min	ISO 1133
MVR temperature	230	°C	-
MVR load	3.8	kg	-
Shrinkage (24h)	0.5 - 0.8	%	ISO 294-4
Physical Properties			
Density	1160	kg/m³	ISO 1183

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Flammability

Flammability (1.5 mm)	HB	class	UL 94
Glow Wire (GWFI, 650°C, 1.0mm)	passed	-	DIN EN 60695
Glow Wire (GWFI, 650°C, 2.0mm)	passed	-	DIN EN 60695

Optical Properties

Total Transmission T(Y) (d=1,0mm, A, 2°)	29	%	ISO 13468
Total Transmission T(Y) (d=2,0mm, A, 2°)	9.5	%	ISO 13468
Haze T(Y) (d=1,0 mm, A, 2°)	95.5	%	ISO 13468
Haze T(Y) (d=2,0 mm, A, 2°)	95.5	%	ISO 13468
Half Power Angle T(Y) (d=1,0mm, A, 2°, high res.)	19	°	-
Half Power Angle T(Y) (d=2,0mm, A, 2°, high res.)	43	°	-