POLYCASA® PS

Specialty Polystyrene

Polycasa

Message:

PS is the brand name for Polycasa's extruded Crystal Polystyrene sheets, offering solutions for many indoor applications. As well as clear, anti-reflex and standard opal white, a variety of colours and designs are also available as a result of the extrusion process Polycasa can offer.

CHARACTERISTICS

Good optical properties and a brilliant surface.

High light transmission (min 88% wavelength: 500 nm, thickness 3 mm).

Low price.

Low density (1.05).

Good chemical resistance and high rigidity.

UV-stabilised - remains colour constant for many years when used indoors. (On special request Polycasa PS sheets can be produced without UV-stabilisation. They then meet all current food contact legislation and can be used in contact with foodstuffs.) Possibility of corona treatment - process to increase surface tension. (The result after corona treatment is a surface that is unchanged to the naked eye,

but in fact is much more receptive to inks, coatings, and adhesives.)

Polycasa PS sheets also combine the following excellent properties:

Excellent transparency. Good surface hardness. Good recyclability. Low water absorption. APPLICATIONS Picture frames. Shower cabin doors (flat and curved). Indoor glazing.

General Information Additive UV Stabilizer Good Chemical Resistance Features Good UV Resistance **High Hardness High Light Transmission High Rigidity** Low Density Low to No Water Absorption Opticals **Outstanding Surface Finish Recyclable Material** Uses **Bathroom Accessories** Glazing Windows & Doors Clear/Transparent Appearance Colors Available White

Forms	Sheet		
Processing Method	Extrusion		
Physical	Nominal Value	Unit	Test Method
Density	1.05	g/cm³	ISO 1183
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (M-Scale)	150		ISO 2039-2
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus (4.00 mm)	3400	MPa	ISO 527-2
Tensile Stress (4.00 mm)	45.0	MPa	ISO 527-2
Tensile Strain (Break, 4.00 mm)	3.0	%	ISO 527-2
Flexural Modulus (4.00 mm)	3450	MPa	ISO 178
Flexural Stress (4.00 mm)	85.0	MPa	ISO 178
Impact	Nominal Value	Unit	Test Method
Charpy Unnotched Impact Strength	6.0	kJ/m²	ISO 179
Thermal	Nominal Value	Unit	Test Method
Thermal Vicat Softening Temperature	Nominal Value 101	Unit ℃	ISO 306/B50
Thermal Vicat Softening Temperature CLTE - Flow	Nominal Value 101 8.0E-5	°C cm/cm/°C	ISO 306/B50 DIN 53752
Thermal Vicat Softening Temperature CLTE - Flow Specific Heat	Nominal Value 101 8.0E-5 1800	Unit °C cm/cm/°C J/kg/°C	ISO 306/B50 DIN 53752
Thermal Vicat Softening Temperature CLTE - Flow Specific Heat Thermal Conductivity	Nominal Value 101 8.0E-5 1800 0.16	Unit °C cm/cm/°C J/kg/°C W/m/K	Test Method ISO 306/B50 DIN 53752 DIN 52612
Thermal Vicat Softening Temperature CLTE - Flow Specific Heat Thermal Conductivity Heat Deflection Temperature	Nominal Value 101 8.0E-5 1800 0.16 86	Unit °C cm/cm/°C J/kg/°C W/m/K °C	Test Method ISO 306/B50 DIN 53752 DIN 52612 ISO 75-2
Thermal Vicat Softening Temperature CLTE - Flow Specific Heat Thermal Conductivity Heat Deflection Temperature Maximum Service Temperature	Nominal Value 101 8.0E-5 1800 0.16 86 80.0	Unit °C cm/cm/°C J/kg/°C W/m/K °C	Test Method ISO 306/B50 DIN 53752 DIN 52612 ISO 75-2
Thermal Vicat Softening Temperature CLTE - Flow Specific Heat Thermal Conductivity Heat Deflection Temperature Maximum Service Temperature Refractive Index	Nominal Value 101 8.0E-5 1800 0.16 86 80.0 1.5850	Unit °C cm/cm/°C J/kg/°C W/m/K °C	Test Method ISO 306/B50 DIN 53752 DIN 52612 ISO 75-2 ISO 489
ThermalVicat Softening TemperatureCLTE - FlowSpecific HeatThermal ConductivityHeat Deflection TemperatureMaximum Service TemperatureRefractive IndexDegradation Temperature	Nominal Value 101 8.0E-5 1800 0.16 86 80.0 1.5850 > 280	Unit °C cm/cm/°C J/kg/°C W/m/K °C °C	Test Method ISO 306/B50 DIN 53752 DIN 52612 ISO 75-2 ISO 489
ThermalVicat Softening TemperatureCLTE - FlowSpecific HeatThermal ConductivityHeat Deflection TemperatureMaximum Service TemperatureRefractive IndexDegradation TemperatureSheet Temperature - Forming	Nominal Value 101 8.0E-5 1800 0.16 86 80.0 1.5850 > 280 130 to 170	Unit °C cm/cm/°C J/kg/°C W/m/K °C °C °C °C	Test Method ISO 306/B50 DIN 53752 DIN 52612 ISO 75-2 ISO 489
ThermalVicat Softening TemperatureCLTE - FlowSpecific HeatThermal ConductivityHeat Deflection TemperatureMaximum Service TemperatureRefractive IndexDegradation TemperatureSheet Temperature - FormingElectrical	Nominal Value 101 8.0E-5 1800 0.16 86 80.0 1.5850 > 280 130 to 170 Nominal Value	Unit °C cm/cm/°C J/kg/°C W/m/K °C °C °C Unit	Test Method ISO 306/B50 DIN 53752 DIN 52612 ISO 75-2 ISO 489 Test Method
ThermalVicat Softening TemperatureCLTE - FlowSpecific HeatThermal ConductivityHeat Deflection TemperatureMaximum Service TemperatureRefractive IndexDegradation TemperatureSheet Temperature - FormingElectricalSurface Resistivity	Nominal Value 101 8.0E-5 1800 0.16 86 80.0 1.5850 > 280 130 to 170 Nominal Value > 1.0E+14	Unit °C cm/cm/°C J/kg/°C W/m/K °C °C °C °C Unit ohms	Test Method ISO 306/B50 DIN 53752 DIN 52612 ISO 75-2 ISO 489 Test Method DIN 53482
ThermalVicat Softening TemperatureCLTE - FlowSpecific HeatThermal ConductivityHeat Deflection TemperatureMaximum Service TemperatureRefractive IndexDegradation TemperatureSheet Temperature - FormingElectricalSurface ResistivityVolume Resistivity	Nominal Value 101 8.0E-5 1800 0.16 86 80.0 1.5850 > 280 130 to 170 Nominal Value > 1.0E+14 > 1.0E+14	Unit °C cm/cm/°C J/kg/°C W/m/K °C °C °C °C Unit ohms ohms·cm	Test Method ISO 306/B50 DIN 53752 DIN 52612 ISO 75-2 ISO 489 DIN 53482 DIN 53482
ThermalVicat Softening TemperatureCLTE - FlowSpecific HeatThermal ConductivityHeat Deflection TemperatureMaximum Service TemperatureRefractive IndexDegradation TemperatureSheet Temperature - FormingElectricalSurface ResistivityVolume ResistivityOptical	Nominal Value 101 8.0E-5 1800 0.16 86 80.0 1.5850 > 280 130 to 170 Nominal Value > 1.0E+14 > 1.0E+14 Nominal Value	Unit °C cm/cm/°C J/kg/°C W/m/K °C °C Unit ohms ohms cm Unit	Test Method ISO 306/B50 DIN 53752 DIN 52612 ISO 75-2 ISO 489 DIN 53482 DIN 53482 Test Method DIN 53482 Test Method

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