MULTICLEAR® RPC

MULTICLEAR® RPC represents a resource-efficient material option within the MULTICLEAR® multiwall portfolio. Rather than being defined by structure, RPC is defined by material composition. By incorporating high-quality recycled polycarbonate content, MULTICLEAR® RPC enables circular material use while maintaining the characteristic mechanical strength, impact resistance and temperature performance of polycarbonate sheets.

The RPC material concept can be integrated into various MULTICLEAR® multiwall structures, including BOX, STRONG and other configurations within the portfolio. This allows sustainable and cost-efficient solutions to be implemented across different structural designs depending on project requirements.

MULTICLEAR® RPC is suitable for indoor and selected outdoor applications. The sheet can be supplied with one-sided UV protection to enable outdoor use. A wide range of thicknesses, colours and structural configurations is available to meet specific functional and economic demands.

Designed as a cost-optimized and environmentally conscious alternative to standard polycarbonate sheets, MULTICLEAR® RPC supports sustainable construction objectives without compromising essential performance properties.

Fire performance:
Classified B-s1, d0 according to EN 13501-1. The material is suitable for applications where reaction to fire classification is required.

ALSO AVAILABLE:
MULTICLEAR® HAMMER FINISH
MULTICLEAR® SOLAR CONTROL

MULTICLEAR® RPC BENEFITS:

- Resource-efficient material solution
- Incorporates recycled polycarbonate content
- High impact resistance
- Cost-optimized alternative within the MULTICLEAR® portfolio
- One-sided UV protection available

APPLICATION AREAS:

Internal partitions, agricultural and industrial structures, cladding, packaging solutions, transport boxes and other applications where durability, impact resistance and cost efficiency are key requirements.

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Polycarbonate material properties

Property	Value	Unit	Standard
Physical properties			
Density	1,2	g/cm^3	ISO 1183
Refractive index (20 °C)	1,586		ISO 489
Moisture absorption 24 h, 23 °C, 50% RH	0,15	%	ISO 62
Mechanical properties			
Tensile strength at yield (at break)	63 (70)	N/mm^2	ISO 527
Elongation at yield (at break)	6 (110)	%	ISO 527
Elastic modulus	>2300	N/mm^2	ISO 527
Flexural modulus	>2300	N/mm^2	ISO 178
Charpy unnotched impact strength -40 °C	NB	kJ/m^2	ISO 179/1eU
Charpy notched impact strength -30 °C	11	kJ/m^2	ISO 179/1eA
Izod notched impact strength +23 °C	65	kJ/m^2	ISO 180/1A
Izod notched impact strength -30 °C	10	kJ/m^2	ISO 180/1A
Thermal properties			
Coefficient of linear thermal expansion (23–80 °C)	$65x10^{-6}$	K^{-1}	ISO 11359-2
Heat deflection temperature, HDT A (1,80 N/mm^2)	132	°C	ISO 75
Heat deflection temperature, HDT B (0,45 N/mm^2)	142	°C	ISO 75
Vicat temperature VST/B 120	149	°C	ISO 306
Vicat temperature VST/B 50	148	°C	ISO 306
Thermal conductivity	0,20	W/m·K	ISO 8302

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