

## Polyshade DMW21

### Twin-wall polycarbonate sheet of 10 mm thickness

**Product description:** multi-wall polycarbonate sheet with one side co-extrusion UV layer

**Benefits:** UV resistant, high impact, ten (10) years limited product warranty against breakage, yellowing, and loss of light transmission.

**Applications:** construction, transportation, industry, etc.

**Color:** Clear/on request

Property	Standard	Condition	Unit	Values
<b>Physical</b>				
Density	ISO 1183-1	23°C	g/cm <sup>3</sup>	1.20
Light transmission	ASTM D1003	TR001 (Clear)	%	78
	ASTM D1003	WE002 (Opal white)	%	17
Total solar energy transmittance (SHGC)	ISO 9050	TR001 (Clear)	%	0.71
	ISO 9050	WE002 (Opal white)	%	0.22
Shading Coefficient (SC)	-	TR001 (Clear)	-	0.82
	-	WE002 (Opal white)	-	0.25
Poisson's ratio	ASTM E132	-	-	0.38
Water absorption(saturation value)	ISO 62	Water at 23°C	%	0.30
Water absorption(equilibrium value)	ISO 62	23°C, 50%RH	%	0.15
<b>Mechanical</b>				
*Tensile strength at break	ISO 527-1,-2	50mm/min	Mpa	65
*Tensile strength at yield	ISO 527-1,-2	50mm/min	Mpa	60
*Tensile modulus	ISO 527-1,-2	1 mm/min	Mpa	2200
*Elongation at break	ISO 527-1,-2	50mm/min	%	100
*Flexural strength	ISO 178	2mm/min	Mpa	95
*Flexural modulus	ISO 178	2mm/min	Mpa	2300
*Charpy notched impact strength	ISO 179/1eA	23°C/4mm	KJ/m <sup>2</sup>	80
*Charpy unnotched impact strength	ISO 179/1eU	23°C/4mm	KJ/m <sup>2</sup>	NB
*Izod notched impact strength	ISO 180/1A	23°C/3mm	KJ/m <sup>2</sup>	70
*Izod unnotched impact strength	ISO 180/1U	23°C/3mm	KJ/m <sup>2</sup>	NB

### Thermal

*Temperature of deflection under load	ISO 75-1,-2	1.80 Mpa 120°C/h	°C	130
*Vicat softening temperature	ISO 306	50N, 120°C/h	°C	145
*Coefficient of thermal expansion	ISO 11359-1,-2	23 to 55°C	10 <sup>-5</sup> /K	6.5
*Thermal conductivity	ISO 8032	23°C, 50%RH	W/ (m*K)	0.20

### Electrical

Surface resistivity	IEC 60093	-	Ω	1.00×10 <sup>16</sup>
Volume resistivity	IEC 60093	-	Ω·m	1.00×10 <sup>14</sup>

### Flammability

Oxygen index	ISO 4589-2	A	%	27
Fire Rating	EN13501-1	10 mm	Class	B-s1,d0

\* These property values have been derived from resin data for the material used to produce this sheet product.

- 1) Above values are typical values only, not specifications.
- 2) In case of colored products, these figures might vary slightly.