



Panlite®

The ideal choice

TEIJIN Human Chemistry, Human Solutions
TEIJIN KASEI EUROPE B.V.



 **K.D. FEDDERSEN**
DISTRIBUTION

Human Chemistry, Human Solutions

...is the motto of the traditional Japanese company Teijin. This guiding principle continues to characterise the manufacturer of engineering plastics, founded in 1918, to this day. Teijin was the first polycarbonate producer in Asia (1960) and is today an established manufacturer of polycarbonate products.

A strong focus on research and development as well as the sustainable corporate strategy aiming at high customer satisfaction guarantee high product quality. K.D. Feddersen Distribution is your contact for Teijin's Panlite®(PC) and Multilon®(PC+ABS).



Polycarbonate with excellent performance

Panlite® from Teijin is characterised by its high transparency, heat resistance, toughness and dimensional stability. Teijin relies on a manufacturing process for its polycarbonate that differs from that of other producers.

The so-called solvent process ensures a very pure product with excellent optical properties.

Due to this production process, the thermal stability in the melt is excellent and the risk of a yellow tinge in the final product minimised. Due to its high transparency, **Panlite®** is the ideal choice for polycarbonate applications in vehicle construction, e-mobility, lighting, building services, optics, electrical & electronic and other industries.

Panlite® – The ideal choice

In addition to the standard grades, the polycarbonate range also includes UV-modified grades that are suitable for use in outdoor areas exposed to UV radiation and moisture. The PC flame retardant portfolio has a fire classification up to UL 94 V-0. Selected Panlite® grades meet the requirements of the glow wire test up to a maximum temperature of 960 °C.

For lighting applications, there is a broad portfolio of light-diffusing polycarbonate grades. Particularly, the flame-retardant, light-diffusing Panlite® grades, with UL 94 V-2 and V-0 respectively, offer improved luminous flux in the visible wavelength of light. These Panlite® light diffusion products are also impressive due to their white color tone in OFF mode.



Panlite® ML-7500ZCL

Illuminate safely

Polycarbonate, flame-retardant, UV-stabilised, light-diffusing

- Flame retardant (UL Yellow Card V-0)
- Very good UV and weather resistance (UL Yellow Card f1)
- Very good light scattering and homogeneous illumination

Application examples

Illuminated displays, buttons, controls, luminaire covers, escape route indicators

Properties

Color	Milky white	
UL – Yellow Card	✓	
Flammability – UL 94, IEC 60695-11-10, -20	V-0	1.00 mm, ALL
	V-0	3.00 mm, ALL
Outdoor suitability* – UL 746C	f1*	
Glow Wire Flammability Index (GWFI) – IEC 60695-2-12	930 °C	1.00 mm
	960 °C	3.00 mm
Comparative Tracking Index (CTI) – UL 746A	PLC 2 (Tracking Index (V): 250–399)	
Relative Temperature Index (RTI) – RTI Imp UL 746B	125 °C	1.00 mm
	125 °C	3.00 mm
Ball Indentation Test (125 °C) – IEC 60695-10-2	✓	
Melt Volume-Flow Rate (MVR) (300 °C; 1.2 kg) – ISO 1133	18 cm ³ /10 min	

*(f1) indicates that the material meets both UV and water immersion requirements according to UL 746C. The material is suitable for outdoor use with exposure to UV radiation, wetness and underwater conditions in accordance with UL 746C.

Special features

Homogeneous light distribution, avoidance of luminous hotspots, improved illumination		
Transmission	63 %	1.00 mm
	53 %	2.00 mm
Haze	99 %	1.00 mm
	99 %	2.00 mm
Degree of dispersion	50 °C	1.00 mm
	60 °C	2.00 mm

More products and information on request.

Panlite® ML-3500ZBL

Optimum illumination

Polycarbonate, UV-stabilised, light-diffusing

- Good impact strength
- Very good UV and weather resistance (UL Yellow Card f1)
- Very good light scattering and homogeneous illumination

Application examples

Illuminated displays, buttons, controls, covers for ambient lighting and lights

Properties

Color	Milky white	
UL – Yellow Card		
Flammability – UL 94, IEC 60695-11-10, -20	V-2	0.75 mm, ALL
	V-2	3.00 mm, ALL
Outdoor suitability* – UL 746C	f1*	
Comparative Tracking Index (CTI) – UL 746A	PLC 2 (Tracking Index (V): 250–399)	
Electric arc resistance – ASTM D495	PLC 5	
Relative Temperature Index (RTI) – RTI Imp UL 746B	115 °C	1.00 mm
	115 °C	3.00 mm
Heat Resistance Temperature – ISO 75-2/A (1.8 MPa)	126 °C	
Charpy notched impact strength (+23°C) – ISO 179	71 kJ/m ²	
Melt Volume-Flow Rate (MVR) (300 °C; 1.2 kg) – ISO 1133	18 cm ³ /10 min	

*(f1) indicates that the material meets both UV and water immersion requirements according to UL 746C. The material is suitable for outdoor use with exposure to UV radiation, wetness and underwater conditions in accordance with UL 746C.

Special features

Homogeneous light distribution, avoidance of luminous hotspots, improved illumination		
Transmission	68 %	1.00 mm
	55 %	2.00 mm
Haze	99 %	1.00 mm
	99 %	2.00 mm
Degree of dispersion	45 °C	1.00 mm
	57 °C	2.00 mm

More products and information on request.

Panlite® L-1250Z100

Keeping perspective

Polycarbonate, UV-stabilised

- Excellent transparency
- Very good UV and weather resistance (UL Yellow Card f1)
- Very good impact strength

Application examples

Optical housing parts or covers, viewing panels

Properties

Color	Transparent	
UL – Yellow Card	✓	
Flammability – UL 94, IEC 60695-11-10, -20	V-2	0.75 mm, ALL
Flammability – UL 94	HB	1.50 mm, ALL
Flammability – IEC 60695-11-10, -20	HB40	3.00 mm, ALL
Outdoor suitability* – UL 746C	f1*	
Comparative Tracking Index (CTI) – UL 746A	PLC 2 (Tracking Index (V): 250–399)	
Electric arc resistance – ASTM D495	PLC 5 (Sek.: 120–179)	
Relative Temperature Index (RTI) – RTI Imp UL 746B	115 °C	1.50 mm
	115 °C	3.00 mm
Heat Resistance Temperature – ISO 75-2/A (1.8 MPa)	126 °C	
Charpy notched impact strength (+23 °C) – ISO 179	76 kJ/m ²	
Melt Volume-Flow Rate (MVR) (300 °C; 1.2 kg) – ISO 1133	8 cm ³ /10 min	
Transmission – ASTM D1003	88 %	3000 µm

*(f1) indicates that the material meets both UV and water immersion requirements according to UL 746C. The material is suitable for outdoor use with exposure to UV radiation, wetness and underwater conditions in accordance with UL 746C.

Special features

Teijin uses a manufacturing process for the production of its polycarbonate that differs from that of other suppliers. The so-called solvent process ensures a very pure product with excellent optical properties. Due to this production process, the thermal stability in the melt is excellent; the risk of a yellow cast in the later end product is thus minimised. Due to its high transparency, Panlite® is ideally suited for optical applications. Other polycarbonates have a yellowish colour cast or are modified with a blue tint.

More products and information on request.

Panlite® LN-3520ZH

Function safely

Polycarbonate, flame-retardant, UV-stabilised

- Flame retardant (UL Yellow Card V-0)
- Very good UV and weather resistance (UL Yellow Card f1)
- Very good impact strength

Application examples

Enclosures/coverings for smart home, escape route safety systems, charging stations

Properties

Color	Black / grey / customised	
UL – Yellow Card		
Flammability – UL 94, IEC 60695-11-10, -20	V-0	1.00 mm, ALL
	V-0	3.00 mm, ALL
Outdoor suitability* – UL 746C	f1*	
Glow Wire Flammability Index (GWFI) – IEC 60695-2-12	930 °C	1.00 mm
	960 °C	3.00 mm
Comparative Tracking Index (CTI) – UL 746A	PLC 2 (Tracking Index (V): 250–399)	
Relative Temperature Index (RTI) – RTI Imp UL 746B	125 °C	1.00 mm
	125 °C	3.00 mm
Ball Indentation Test (125 °C) – IEC 60695-10-2		
Heat Resistance Temperature – ISO 75-2/A (1.8 MPa)	127 °C	
Charpy notched impact strength 3.0 mm (23 °C) – ISO 179-1eA	65 kJ/m ²	
Melt Volume-Flow Rate (MVR) (300 °C; 1.2 kg) – ISO 1133	11 cm ³ /10 min	

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More products and information on request.

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