

Canovelles, October 2023

 The company Mercantil Luz Negra, S.L. with registered office in
 C/Carles Buhigues 13, Polígono Industrial Can Castells, 08420 Canovelles (Barcelona, Spain)

CERTIFIES

That the following products described below have carried out the relevant technical tests according to the data:

Product reference: **18.003 - 18.006**
 Product name: **Frosted polycarbonate cover easy-on IP65**

Characteristics

Is a branched polycarbonate resin specially designed for extrusion of profiles, corrugated sheet and very complex multi-wall sheet. Offers a very high melt strength to calibrate effectively the most complex multi-wall sheet structures, such as a seven wall sheet or more, and to calibrate effectively complex profiles and corrugated sheet. Contained a UV absorber additive, but note that sheets for outdoor applications also require a protective UV-absorbing cap layer. It is recommended to coextrude a 50 µm thick cap layer.

Main characteristics:

- Very high melting strength
- Good impact resistance

Application:

- Complex multi-wall sheet
- Profiles

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Density	1.20 g/cm ³	1.20 g/cm ³	ISO 1183/B
Melt Mass-Flow Rate (MFR) (300°C/1.2 kg)	3.0 g/10 min	3.0 g/10 min	ISO 1133
Molding Shrinkage-Flow	5.0E-3 to 7.0E-3 in/in	0.50 to 0.70 %	ISO 294-4
Water Absorption			ISO 62
73°F (23°C), 24h	0.15 %	0.15 %	
Equilibrium, 73°F (23°C), 50% RH	0.32 %	0.32 %	

Mechanical	Nominal Value (English)	Nominal Value (SI)	Test Method
Tensile Modulus	334000 psi	2300 MPa	ISO 527-2/50
Tensile stress			ISO 527-2/50
Yield	8990 psi	62.0 MPa	
Break	9570 psi	66.0 MPa	
Stress Strain			ISO 527-2/50
Yield	6.0 %	6.0 %	
Break	90 %	90 %	
Flexural Modulus	334000 psi	2300 MPa	ISO 178
Flexural Stress	13600 psi	94.0 Mpa	ISO 178

Impact	Nominal Value (English)	Nominal Value (SI)	Test Method
Charpy Notched Impact Strength -22°F (-30°C) 73°F (23°C)	7.6 ft·lb/in ² 26 ft·lb/in ²	16 KJ/m ² 55 KJ/m ²	ISO 179/1eA
Notched Izod Impact Strength -22°F (-30°C) 73°F (23°C)	7.1 ft·lb/in ² 38 ft·lb/in ²	15 KJ/m ² 80 KJ/m ²	ISO 180/A

Thermal	Nominal Value (English)	Nominal Value (SI)	Test Method
Heat Deflection Temperature 66 psi (0.4 MPa), Annealed 264 psi (1.8 MPa), Unannealed 264 psi (1.8 MPa), Annealed	293 °F 259 °F 288 °F	145 °C 126 °C 142 °C	ISO 75-2/B ISO 75-2/A ISO 75-2/A
Vicat softening Temperature	302 °F	150 °C	ISO 306/B50
CLTE-Flow	3.9E-5 in/in/°F	7.0E-5 cm/cm/°C	ISO 11359-2

Electrical	Nominal Value (English)	Nominal Value (SI)	Test Method
Comparative Tracking Index 0.0787 in (2.00 mm), Solution A	250 V	250 V	ISO 60112

Flammability	Nominal Value (English)	Nominal Value (SI)	Test Method
Flame Rating 0.06 in (1.5 mm) 0.12 in (3.0 mm)	HB HB	HB HB	UL94
Glow Wire Flammability Index 0.04 in (1.0 mm) 0.08 in (2.0 mm) 0.12 in (3.0 mm)	1650 °F 1610 °F 1610 °F	900 °C 875 °C 875 °C	IEC 60695-2-12
Glow Wire Ignition Temperature 0.04 in (1.0 mm) 0.08 in (2.0 mm) 0.12 in (3.0 mm)	1430 °F 1430 °F 1430 °F	775 °C 775 °C 775 °C	IEC 60695-2-13

Optical	Nominal Value (English)	Nominal Value (SI)	Test Method
Refractive Index	1.586	1.586	ISO 489
Transmittance	89.0 %	89.0 %	ASTM D1003
Haze	1.0 %	1.0 %	ASTM D1003

Material formulated for the manufacture of profiles with high impact requirement.
The certificate is issued under the responsibility of the manufacturer (data issued by the manufacturer).

UL certificate

Polycarbonate (PC) pellets.

Note: Material designations may be followed by numbers and/or letters representing colour and/or granulation and/or lubrication.

Flammability	Value	Test Method
Flame Rating		UL94
1.5 mm, NC	HB	
3.0 mm, NC	HB	
Flammability		IEC 60695-11-10, -20
1.5 mm, NC	HB40	
3.0 mm, NC	HB75	

Electrical	Value	Test Method
High Amp Arc Ignition (HAI)		UL746
1.5 mm, NC	HPLC 0	
3.0 mm, NC	HPLC 0	
Comparative Tracking Index (CTI)	PLC 0	UL746
Dielectric Strength	17kV/mm	ASTM D149
High Voltage Arc Tracking Rate (HVTR)	PLC 0	UL746
Volume Resistivity	1.0E+15 ohms·cm	ASTM D257
Volume Resistivity	1.0E+15 ohms·cm	IEC 60093
Arc Resistance	PLC 5	ASTM D495
Electric Strength	17kV/mm	IEC 60243-1

Thermal	Value	Test Method
RTI Elec		UL746
1.5 mm, NC	80.0°C	
3.0 mm, NC	80.0°C	
RTI Imp		UL746
1.5 mm, NC	80.0°C	
3.0 mm, NC	80.0°C	
RTI Str		UL746
1.5 mm, NC	80.0°C	
3.0 mm, NC	80.0°C	

Physical	Value	Test Method
Dimensional stability	0.0%	ASTM D1042
Dimensional stability	0.0%	ISO 2796

Reach certificate

This is in response to your inquiry regarding the SVHC content into the following Product(s):

We are pleased to confirm that the products listed above do not contain any of the Substances of Very High Concern (SVHC) listed on the most current candidate list published on the ECHA website on January 17, 2022

(<http://echa.europa.eu/web/guest/candidate-list-table>)

above the reportable limits (0,1 % wt) based on composition information for the raw materials.

Material formulated for the manufacture of profiles with high impact requirement.

The certificate is issued under the responsibility of the manufacturer (data issued by the manufacturer).

The product described has been tested according to the standards listed above. It is possible to use the CE marking.

The certificate is issued under the responsibility of the manufacturer (data issued by the manufacturer).

For the record and at request of the interested party, this certificate has been issued.



Nuño Tellez
CEO



Canovelles, October 2023

 **LUZ NEGRA, SL**

Carles Buhigues, 13 – Poligono Can Castells
08420 Canovelles
Telf: +34 938 402 598
CIF: B60155959