

# BARLO<sup>®</sup> COPOL

Technical datasheet



## **BARLO COPOL**

### **1. PRODUCT IDENTIFICATION**

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BARLO COPOL is a brand name for extruded Polyethyleneterephthalate Glycol (PETG) co polyester sheet from Quinn Plastics.

As a result of the extrusion process, Quinn Plastics can offer, in addition to the clear and the opal versions, a variety of colours and solutions to both indoor (BARLO COPOL) and outdoor (BARLO COPOL-uv) applications to suit a wide range of design requirements.

BARLO COPOL products can be used in thousands of diverse applications throughout the world, in architecture, transportation and industrial areas.

BARLO COPOL-uv sheet is protected on both surfaces from the adverse effects of UV-radiation and when exposed to moderate North European climates, will not show a significant change in yellowness index and mechanical properties as described below, for a period of 5 years from the date of sales by Quinn Plastics.

BARLO COPOL can be produced with various surface textures i.e. Prismatic, Haircell and Impala.

### **2. CHARACTERISTICS**

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- Good optical properties
- Brilliant surface
- Easy to vacuum form without pre-drying
- Low water absorption
- Very good chemical resistance
- High impact properties

### **3. APPLICATIONS**

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- Bus shelters (UV-version)
- Poster glazing
- Machine guards
- Medical appliance packaging
- Displays
- Refrigerators and cold storeroom equipment
- Lenticular lenses / Graphic Arts
- Lighting controllers for hazardous areas

### **4. FABRICATION AND FINISHING TECHNIQUES**

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BARLO COPOL sheet is easy to handle.

Milling, drilling, tapping, sawing, shearing and punching, die cutting, laser cutting, routing, forming and cold and hot bending do not offer any problems to the sheet range.

More detailed information on these items can be found in the "USER GUIDE", available on request.

**5. TECHNICAL INFORMATION**

<b>PROPERTY</b>	<b>METHOD</b>	<b>UNIT</b>	<b>BARLO COPOL</b>
<b>GENERAL PROPERTIES</b>			
Density	ISO 1183	g/cm <sup>3</sup>	1,29
Rockwell hardness	ASTM D- 785	R scale	
<b>MECHANICAL PROPERTIES</b>			
Flexural modulus	ISO 178	MPa	2350
Flexural yield strength	ISO 178	MPa	85
Tensile modulus	ISO 527-2	MPa	2400
Tensile strength	ISO 527-2	MPa	53
Elongation at break	ISO 527-2	%	14
<b>THERMAL PROPERTIES</b>			
Vicat temperature (B 50)	ISO 306	°C	78
Heat deflection Temp(B) 1.82 Mpa	ISO 75-2	°C	64
Heat deflection Temp(A) 0.45 Mpa	ISO 75-2	°C	69
Spec Heat capacity	IES 1006	J/gK	
Linear thermal expansion	DIN 53752	K <sup>-1</sup> ×10 <sup>-5</sup>	5.9
Thermal conductivity	DIN 52612	W/mK	0.162
Degradation temperature		°C	> 280
Max Service temperature		°C	69
Sheet forming temp range		°C	120-160
<b>OPTICAL PROPERTIES</b>			
Light transmission	DIN 5036-3	%	87
Refractive Index	ISO 489		
Haze	D 1003	%	< 1.1
<b>IMPACT STRENGTH</b>			
Charpy ( notched )	ISO 179-1	KJ/m <sup>2</sup>	1.53
Charpy ( unnotched )	ISO 179	KJ/m <sup>2</sup>	No break
<b>ELECTRICAL PROPERTIES</b>			
Dielectric constant 1 kHz	IEC 250		3.3
Volume resistivity	IEC 93	TΩ.cm	605
Surface resistivity	IEC 93	TΩ	662
Dielectric strength	IEC 60243-1	KV/mm	10.7
Dissipation factor 50 Hz	IEC 250		0.02