

RPC black 900

Solid polycarbonate sheet with reclaimed content



Your benefits:

- made with reclaimed material
- high impact strength
- applicable in a wide range of temperatures
- good fire behaviour

RPC black 900 are black sheets made from reclaimed polycarbonate. Like conventional polycarbonate sheets, **RPC black 900** sheets offer high impact strength over a wide temperature range with good fire behaviour.

Applications:

RPC black 900 sheets are suitable for vacuum formed parts for material containers and pallets, all types of vehicle trim, industrial paneling and street furniture.

RPC black 900 sheets can be thermoformed and show good weather resistance.

	Test Conditions	Typical Values ⁽¹⁾	Unit	Test Method
PHYSICAL Density Water absorption saturation Water absorption equilibrium	water at 23°C 23°C, 50 % relative humidity	1200 0.3 0.12	kg/m ³ % %	ISO 1183-1 ISO 62 ISO 62
MECHANICAL Tensile modulus Yield stress Yield strain Charpy impact strength	1 mm/min 50 mm/min 50 mm/min 23°C, unnotched	> 2200 > 55 5 no break	MPa MPa % kJ/m ²	ISO 527-1,-2 ISO 527-1,-2 ISO 527-1,-2 ISO 179-1eU
THERMAL Vicat softening temperature Thermal conductivity Coefficient of linear thermal expansion Temperature of deflection under load	50 N, 50°C/h 23°C 23 bis 55°C 1.80 Mpa	148 0.2 0.65 128	°C W/(m.K) 10 ⁻⁶ /K °C	ISO 306 ISO 8302 ISO 11359-1,-2 ISO 75-1,-2

⁽¹⁾These values are not intended for specification purposes.

RPC black 900

Solid polycarbonate sheet



Exolon Group ECORANGE represents a line of products which attribute to improved sustainability by having a lower ecological footprint.

Availability:

RPC is available in thicknesses of 2-6 mm. Sheets can be supplied with 2 smooth sides (**RPC black 900**) or with 1 patterned side (**RPC black 900 C** or **RPC black 900 G**).
Minimum order quantity: on request.

Sizes:

Available extrusion widths:
2 smooth sides: 1,250/ 2,050 mm.
1 patterned side: 1,250/ 2,050 mm
Other widths on request.

Permanent Service Temperature:

Maximum service temperature without load in air: 120 °C
Minimum service temperature without load: -100 °C

Glow wire flammability test (*):

	Test method	2 mm	4 mm
GWFI (flammability index)	IEC 60695-2-12	960 °C	960 °C

(*): Fire certificates are limited in time and scope, always check if the mentioned certificate is valid for the purchased Polycarbonate sheet type at the date of delivery. Polycarbonate sheets may change their fire behavior due to ageing and weathering. The indicated fire rating was tested on new / unweathered Product in accordance with the indicated fire classification standards.

Machining:

Due to its excellent properties an **RPC black 900** sheet is easy to machine with usual tools. Sawing, drilling, routing, shearing and punching can be applied. Always use sharp tools that are suited for machining plastics.

Thermoforming:

Thorough predrying of **RPC black 900** sheets is essential for all thermoforming techniques in which the sheet temperature will rise above 160 °C. The recommended procedure is to use an

air circulating oven set at 120 °C for 4 to 24 hours, depending on sheet thickness. An **RPC black 900** sheet can be vacuum formed at temperatures of 175 – 205 °C. Use temperature controlled (120 °C) aluminium or steel moulds. A good release from the mould can be obtained by providing a draft angle of 4 to 6°.

Assembling:

Parts made of **RPC black 900** can be assembled with other plastics, metals and other materials by means of glueing, welding and several mechanical fastening techniques.

Painting and printing:

RPC black 900 sheets can be painted or printed with several standard techniques. Except for cleaning, no preliminary surface treatment is necessary. To avoid influence on the impact strength of **RPC black 900** sheets, paints must be suitable for use on polycarbonate. Suitable products are available from several manufactures of inks and paints, whose instructions must be carefully followed.

Chemical resistance:

RPC black 900 sheets have good resistance against mineral acids up to high concentrations, many organic acids, oxidising and reducing agents, mineral and animal greases and oil, neutral and acid salt solutions, saturated aliphatic and cycloaliphatic hydrocarbons and alcohols (except methyl alcohol). They are partially soluble in aromatic hydrocarbons and soluble in many halogenated hydrocarbons (methylene chloride and ethylene di-chloride are good solvents). Strong alkaline substances such as ammonia and amines decompose it. **RPC black 900** sheets have good resistance against most detergent based household cleaners.

Exolon Group also produces multiwall sheets in polycarbonate (Exolon® multi UV), and solid sheets in polycarbonate (Exolon® GP) and in polyester (Vivak® and Axpert®). For more information, take a look at www.exolongroup.com.



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