

GLASS FIBRE REINFORCED POLYESTER LAMINATES

1.- General characteristics:

MODULCAR RUGOSA laminate

- Outer side: UV protection super gloss gel coat.
- Inner side: Rough, painted or not (recommended adhesive: resin).
- Inner side: Rough & Hand-sanding, painted or not (recommended adhesive: polyurethane) for *MODULCAR RUGOSA LIJADA* laminate. G450RL, G600RL,...
- Inner side: Flat, painted or not (not recommended for any adhesive) for *MODULCAR LISA* laminate. G450L, G600L,...

Characteristics	ud	Gel Coat&Rough				
		G450R	G600R	G750R	G900R	G1200R
Thicknesses	mm	1,2	1,5	2	2,5	3
UV protection gel coat	gr/m ²	500	500	500	500	500
Glass Fibre	gr/m ²	450	600	750	900	1200
Weight	kg/m ²	2,43	3,00	3,57	4,23	4,85
Density	gr/cm ³	1,6	1,6	1,5	1,3	1,3
Glass Fibre content	%	24	25	26	28	30
Roll diameter	cm	74	76	80	85	90
Barcol hardness (UNE 53270)	° Barcol	40-45	40-45	40-45	40-45	40-45
Tensile strength (UNE 53280)	MPa	69,0	71,0	73,1	79,8	83,3
Tensile modulus (UNE 53280)	GPa	4,3	4,3	4,4	4,5	4,5
IZOD impact strength	kJ/m ²	51	54	59	63	78
Elongation at break (UNE 53280)	%	1,6	1,6	1,6	1,6	1,6
HDT (ASTM D 64488)	°C	>250°	>250°	>250°	>250°	>250°
Thermal expansión coefficient (UNE 53126)	10 ⁻⁶ /°C	63	63	63	63	63

The data shown above is for guidance only because of raw materials properties.

MODULCAR CALIBRADA laminate

- Outer side: UV protection super gloss gel coat.
- Inner side: Sanding & calibrated, painted or not (recommended adhesive: polyurethane).
- Notice: calibrated means laminate has the same thickness all over the sheet.

Characteristics	ud	Gel Coat&Sanding				
		G450C	G600C	G750C	G900C	G1200C
Thicknesses	mm	1,2	1,5	2	2,5	3
UV protection gel coat	gr/m ²	500	500	500	500	500
Glass Fibre	gr/m ²	450	600	750	900	1200
Weight	kg/m ²	2,01	2,40	2,90	3,30	4,09
Density	gr/cm ³	1,6	1,6	1,5	1,3	1,3
Glass Fibre content	%	24	25	26	28	30
Roll diameter	cm	56	58	60	65	68
Barcol hardness (UNE 53270)	° Barcol	40-45	40-45	40-45	40-45	40-45
Tensile strength (UNE 53280)	MPa	69,0	71,0	73,1	79,8	83,3
Tensile modulus (UNE 53280)	GPa	4,3	4,3	4,4	4,5	4,5
IZOD impact strength	kJ/m ²	51	54	59	63	78
Elongation at break (UNE 53280)	%	1,6	1,6	1,6	1,6	1,6
HDT (ASTM D 64488)	°C	>250°	>250°	>250°	>250°	>250°
Thermal expansión coefficient (UNE 53126)	10 ⁻⁶ /°C	63	63	63	63	63

The data shown above is for guidance only because of raw materials properties.

According to customers' requests, we manufacture no gel coat laminates, requested RAL color laminates, over 3mm thickness laminates, flameproof laminates, translucent street laminates,... Please, send us your requests to: modulcar@inpre.es

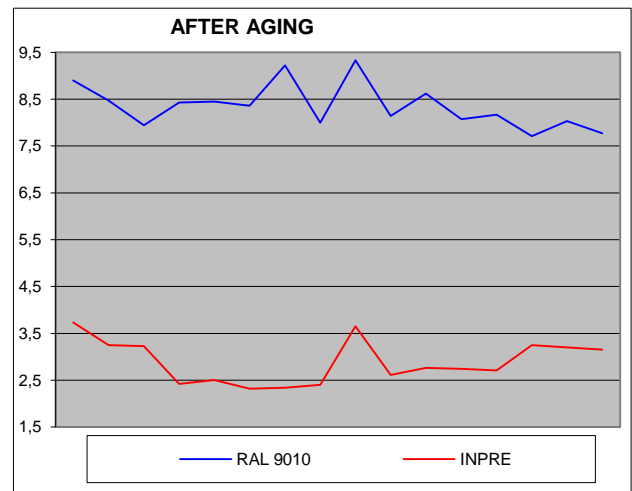
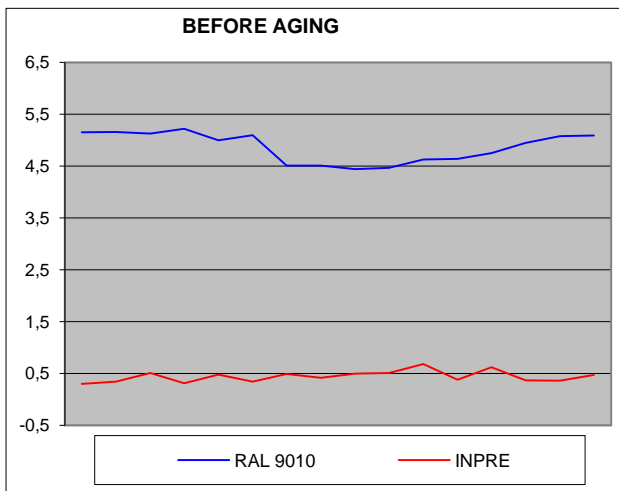
2.- Color endurance to weather conditions:

This chart shows MODULCAR laminate’s endurance to weather conditions.

- RAL 9010
- INPRE color (MODULCAR): INPRE-MODULCAR’s exclusive white.

“b” factor shows white laminate changing to yellow while aging.

Samples are analyzed after 1,000hrs aging in QUV Panel. UV light series are 4hrs (UV-A 340) with condensation.



Tests are elaborated by an independent laboratory:

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