# Toray CFRT<sup>®</sup> XRP



**Toray Performance Materials Corporation** 

## PRODUCT DATA SHEET

## DESCRIPTION

Toray PMC CFRT® (XRP) is a reinforced thermoplastic composite laminate that brings innovative technology to orthotic and glass fiber reinforcement with polypropylene (PP) applications. It satisfies both the workshop need for ease of fabrication and the patient need for comfort and performance. Parts and devices made from thermoplastic sheets, of polypropylene, are reinforced in strategic locations by thermobonding the XRP panel to the polypropylene part during vacuum forming or drape molding. The result is a part with increased strength and stiffness, without having to raise the basic sheet thickness. We offer XRP in four different grades.

#### **FEATURES**

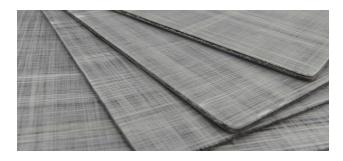
- > Glass fibers for maximum reinforcement
- > Increased strength and stiffness of local areas
- Polypropylene matrix, to heat weld to polypropylene and copolymer materials
- > Thin and lightweight
- > Allows reduction of part thickness
- > Easily molded to deep contours
- > Can be adjusted with local heat

## **PRODUCT TYPE AND COMPOSITION**

Glass fiber content: 55% Polypropylene: 45% (Noted: Percentages are by volume and are nominal values)

## **TYPICAL APPLICATIONS**

- > Braces
- Foot inserts
- > Reinforcements
- Sockets



## **MATERIAL PARAMETERS**

| Available Sizes     | Full Panel 91.5 x 122.0 cm (36 x 48<br>inches), Full & Quarter Panel 45.5 x 61<br>cm (18 x 24 inches) |
|---------------------|---|
| Standard Color      | Gray  |
| Forming Temperature | 200°C (400°F)   |

## SHELF LIFE

Stable indefinitely at 25°C (77°F) Please refer to the TPMC Processing Instructions.

## **PROPERTIES**

| Produc              | ct Data | XRP Products/Grades |         |         |         |
|---------------------|---------|---------------------|---------|---------|---------|
| Properties          | Units   | 110                 | 112     | 114     | 116     |
| Thickness           | mm      | 1.50 mm             | 1.78 mm | 2.28 mm | 3.32 mm |
| Rigidity            | N-cm    | 458                 | 580     | 1043    | 2330    |
| Flexural<br>Modulus | GPa     | 17.6                | 13.9    | 9.1     | 7.1     |

\*Reinforcement panels are available in a number of grades, for general reinforcement as well as uni-directional reinforcement.

\*Approximates (based upon single test specimen)

\*Test method = ASTM D790-10

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