HCP3U Epoxid Prepreg System

Description

HCP3U is a high-performance epoxy resin system optimized for unidirectional carbon fiber prepregs that can be used in all applications where excellent mechanical and physical properties are required.
HCP3U is characterized by good flow and offers excellent surface finish and good transparency in both out-of-autoclave processing and autoclave processes. The recommended curing temperature is between 80°C and 150°C.

The main advantages of unidirectional carbon prepregs with the HCP3U resin system are:

- The carbon filaments are completely impregnated with resin to achieve optimum adhesion between the fibers and the matrix.
- All filaments are tensioned and absolutely parallel, allowing the prepreg to fully exploit the properties of each individual fiber and thus giving the composite material good physical and mechanical properties.
- Excellent suitability for structural components.
- The thickness of the prepreg is constant across the width.
- All physical parameters are subject to very strict tolerances, ensuring that weight, resin/fiber content, thickness, and width are very precise.
- Silicone-impregnated paper is used to separate the layers, which facilitates handling and the lamination process.

Delivery options

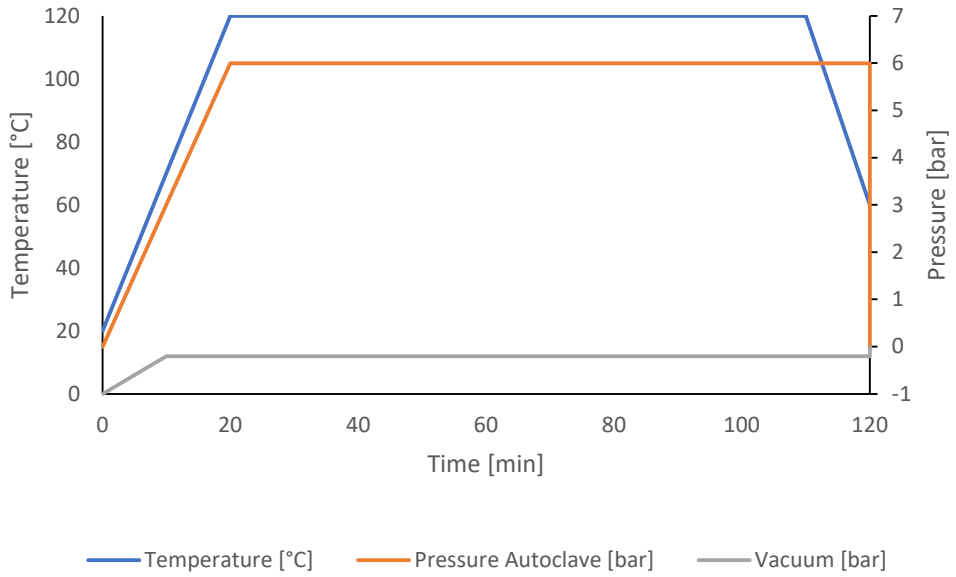
Carbonfiber areal weight: 30 -400 g/m²
Width: max.600 mm
Max. Roll Length: 200 m
Max. Core Diameter: 300 mm
Resin Content: 25 – 45 (+-1) Ma%

Information contained in this data sheets is up-to-date and correct as at the date of issue. As we can´t control or anticipate the conditions under which this product may be used, each user should review the information in specific context of the planned use. We will not be responsible for damages of any nature resulting from the use or reliance upon the information contained in this data sheet.

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Recommended Curing Cyclus

HCP3U can be cured in a temperature range between 80°C and 150°C. The rate of temperature increase should be adjusted to the thickness of the component. Thicker components and tools require slower heating rates; if necessary, the component temperature should be monitored during the curing process using thermocouples.



Curing Temperature: 80 -150 °C
Tg 70 -140 °C

Shelf-life:

4 months @ 18 °C
18 months @ -18 °C

Typical properties of composite laminate made from 140 g/sqm HCP3U:

Tensile Strength: 1800 MPa
Tensile Modulus: 140 GPa
ILS Strength: 73 MPa

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