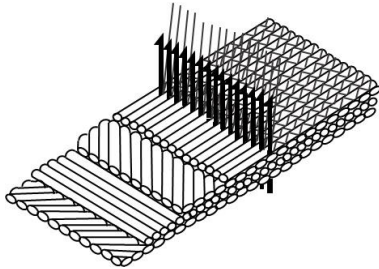


SHIMTEQ™ NCF D200CR

Double Bias Carbon Fiber Non Crimp Fabric combined with Resin



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概要

NCF D200CR is a single fabric containing 2 layers (orientated +45° and -45°) of continuous carbon fiber (CF) stitched by polyester with PA6 film inserted as 3rd layer between them. The NCF feature of high material properties, retaining of fiber alignment during molding, and high drapability is maintained. The material offers innovative material configuration that enables to impregnate resin directly from integrated resin film without infusion or RTM process. The material can be molded to high strength and extra stiffened composite product by pressure process with high temperature (> 250°C).

SPECIFICATIONS

Total material areal weight [g/m ²]	317	Resin layer thickness [μm]	100
Reinforcing fiber areal weight [g/m ²]	200	Material configuration	Sheet roll
Stitching yarn areal weight [g/m ²]	3	Package configuration	Cardboard
Reinforcing fiber tensile modulus [GPa]	230	Sheet width [mm]	1000
Number of fiber layers [ply]	2	Sheet length [m]	50
Number of resin layers [ply]	1	Roll weight [kg]	16

MATERIAL CONFIGURATION

	Material	Configuration
Reinforcement	CF	[+45/PA6/-45]
Matrix resin	PA6 film	
Stitching	Polyester	Chain

APPLICATION EXAMPLES

Wide range of light weight and/or high mechanical-/physical-strength-demanding fields (e.g. automotive and aerospace) molded by press-molding.

MOLDING PROCESS (EXAMPLE OF PRESS MOLDING)

1. Materials are charged in a release-treated mold die.
2. The mold die is closed and pressured up to 3 ± 0.1 MPa. Material-charged cavity is heated up to $250\pm 5^{\circ}\text{C}$ at a rate of $3\text{--}10^{\circ}\text{C}/\text{min}$.
3. Pressure is maintained for 10 ± 5 min.
4. Mold die is cooled to $<50^{\circ}\text{C}$ while maintaining the pressure.

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