

Sheetex® VFR-1000



Description

Sheetex® **VFR-1000** is a fire retardant vinyl ester sheet molding compound. It is available in chopped strand mat fiberglass.

Sheetex® **VFR-1000** is suitable for co-curing with Simpex® H425 prepreg by compression or vacuum bag molding.

Sheetex® **VFR-1000** can be black pigmented if it has to be co-cured with carbon fiber Simpex® H425 prepreg.

Uncured Sheetex® VFR-1000 Properties

Chopped mat	E-Glass
Mat Areal Weight (g/m ²)	≈ 450
Resin Areal Weight (g/m ²)	≈ 1150
Fast Curing time at 160°C (min)	5
Fast Curing time at 140°C (min)	10
Fast Curing time at 120°C (min)	20
Maximum T _g - DSC (°C)	140

Storage and Handling

Key Features and benefits

- **Uncured sheet**
 - ✓ Shelf life: **12 months @ 70°F (21°C)**, and 24 months @ 41°F (5°C).
 - ✓ Versatile curing temperature: 250-320°F (**121-160°C**).
 - ✓ Suitable for low pressure: 1-3 bar.

Typical Mechanical Performance

Specimen cured 20 min at 120°C+ 15 min at 145°C.

ρ,	g/cm ³ ASTM D-792	1.7
Tensile,	ASTM D-638	
Strength,	MPa	103
	Ksi	14.9
Modulus,	GPa	11.5
	Msi	1.7
Flexural,	ASTM D-790	
Strength,	MPa	225
	Ksi	32.7
Modulus,	GPa	11.5
	Msi	1.7

All prepregs are wrapped in a barrier film immediately after impregnation. During storing and handling, the following notes must be considered:

- Prepregs should be stored in their original packaging barrier film, or an equivalent film, at recommended temperature.
- If stored in a cold chest, before use, the prepreg roll has to be out of the freezer and remain tightly sealed for 48 hours, time required to reach ambient room temperature.
- It is highly recommended to handle the prepreg at a clean area where relative humidity is $\leq 50\%$ and ambient temperature is 20-23°C.

Safety Precautions

Usual precautions, as following, must be considered:

- During lamination, workers must avoid skin contact by wearing appropriate disposable protective gloves.
- Workers must wear clean protective coveralls or equivalent clothes before laminating or sanding.
- Workers must wear protective eyes glasses. In case of contamination, eyes must be flushed for 15 min and then medical treatment must be applied.
- After working, hands and contaminated skin, if any, have to be washed with soap and warm water. This has to be implemented as a routine practice.

Important Notice

The data reported in this sheet are based on representative samples. Since the method and circumstances of handling and processing are keys to the material performance, ABC Composite does not guaranty these data. Users should make their own assessment of the suitability of any product for the performance required.