

# Cryogenic Prepreg

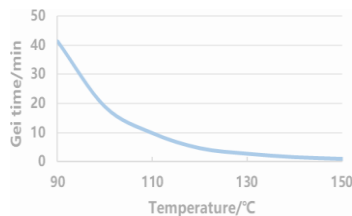


## TDS CALTUD-200 Low-temperature resistant prepreg

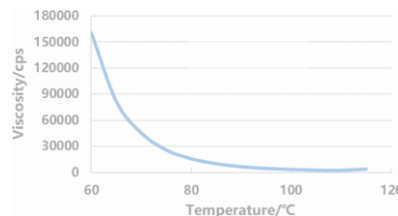
CALTUD-200 a toughened, medium-viscosity, low-temperature-resistant epoxy prepreg. It can be processed using autoclave, vacuum bagging, or compression molding, and cures at temperatures between 90 °C and 150 °C. It offers excellent mechanical properties and exceptional low-temperature performance, capable of withstanding environments as cold as -269 °C (liquid helium). It is suitable for use in fields requiring low-temperature resistance, such as medical devices, sporting equipment, and cryogenic containers.

### RESIN PROPERTIES

GEL CURVE



VISCOSITY CURVE



### PREPREG PROPERTIES

Fiber Type	Weave Pattern	Fiber Areal Weight (g/m <sup>2</sup> )	Prepreg Areal Weight (g/m <sup>2</sup> )	Resin Content (%)
E-glass	UD	200±10	294±10	32±3

### SHELF LIFE AND INSTRUCTIONS

Pot life: <26°C, RH<65%, 30 days

Shelf life: -18°C, <12 months

Instructions for use: After being taken out of the cold storage, the prepreg should be allowed to warm up for 6-12 hours at room temperature. The remaining materials after use should be sealed and put into the cold storage immediately.

### CURING CONDITION

Oven: Vacuum pressure shouldn't be less than -0.085Mpa and rate of heating should be 1-3 °C/minute. For ideal curing, hold for 60 minutes at 130 °C. Avoid rapid cooling. The mould should be removed only after cooling to 50-60 °C

Autoclave: Vacuum pressure shouldn't be less than -0.085Mpa, pressure should be 1-3 bar and rate of heating should be 1-3 °C/minute. For ideal curing, hold for 60 minutes at 130 °C. Avoid rapid cooling. The mould should be removed only after Cooling to 50-60 °C.

### MECHANICAL PROPERTIES OF CURED LAMINATE

	TEST RESULT*	TESTING STANDARD
0° Tensile Strength (MPa)	912	ASTM D 3039
0° Tensile Modulus (GPa)	40	ASTM D 3039
Flexural Strength (MPa)	993	ASTM D 7264
Flexural Modulus (GPa)	42	ASTM D 7264
Compressive Strength (MPa)	585	ASTM D 6641
Interlaminar shear strength (MPa)	70	ASTM D 2344

NOTED: The data provided are averages and for reference only. The results are not intended for specification purposes.