

HC1127/7781 Prepreg consist of 7781 E-glass fabric impregnated with rigid, thermosetting, fire resistant, modified phenolic resin. It is a phenolic prepreg for aircraft interior applications.

The prepreg is intended for use in the fabrication of interior sandwich panels and laminates which are subject to FAR 25.853 heat and smoke release limits. It has slight tack.

FEATURES

- Rigid, Thermosetting, Fire Resistant, Modified Phenolic Resin
- Low Flame, Smoke and Toxicity (FST) Properties
- OSU Heat Release Well Below Current Regulations
- Slight Tack
- For Aircraft Interior Applications

PHYSICAL PROPERTIES

PRODUCT NAME	HC1127/7781
Fabric	Glass Fabric #7781
Resin Content (%)	41 ± 3
Volatiles ¹ (%)	2.7 Max.
Resin Flow ² (%)	18 ± 4
Gel Time ³ (sec.)	120 ~ 300
Tack	Slight Tack

¹ Test Condition : 10 min., 121 °C (250 °F)

² Test Condition : 10 min., 3.5 kgf/cm², 121 °C (50 psi, 250 °F)

³ Test Condition : 130 °C (266 °F)

MECHANICAL PROPERTIES

PROPERTIES	VALUES
Tensile	Strength (ksi)
	53.2 MPa
Compression	Modulus (msi)
	3.17 GPa
Long Beam Flex.	Strength (ksi)
	72.4 MPa
Flatwise Tensile	Modulus (msi)
	3.57 GPa
Peel Strength	Load (ksi)
	32.3 MPa
	P/Y (lb/in.)
	119.4 lb/in.
	Strength (psi)
	284.3 MPa
	Core
	11.8 MPa
	Foam
	20.19 MPa

FLAMMABILITY PROPERTIES

PROPERTIES		LAMINATE VALUES	SANDWICH VALUES
60 Second Vertical Burn	Self-Extinguish Time (sec.)	1.1	0.43
	Burn Length (in.)	1.01	1.49
	Drip Time (sec.)	No Drip	No Drip
30 Second 45° Brun	Self-Extinguish Time (sec.)	0	0
	Afterglow	No Afterglow	No Afterglow
	Flame Penetration	No Flame Penetration	No Flame Penetration

OSU HEAT RELEASE and SMOKE DENSITY

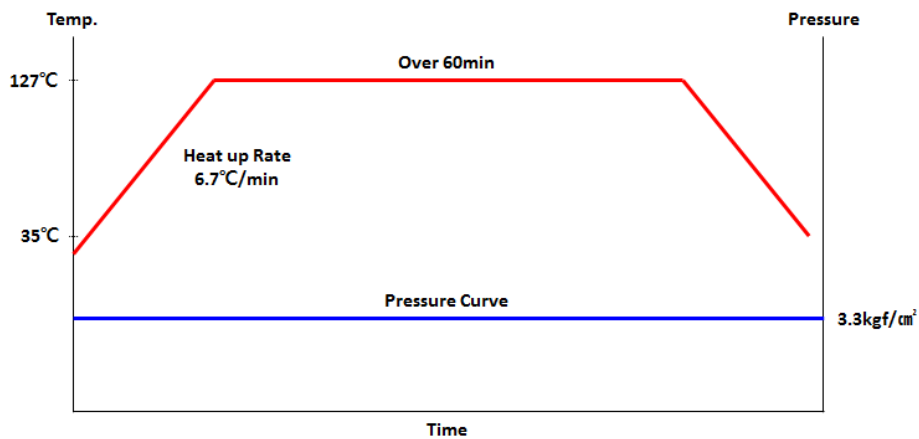
PROPERTIES		LAMINATE VALUES	SANDWICH VALUES
2 min. Total Heat Release (kW-min./m ²)		14.2	26.4
Peak Heat Release (kW/m ²)		48.9	25.1
NBS Smoke Chamber at 2.5 W/cm ² Heat Flux (Ds at 4 min.)		3.3	1.36

CURING CYCLE

PRESS

PRODUCT NAME	HC1127/7781
Cure Method	Press
Cure Cycle	127 °C (+8 °C / -6 °C) for at least 60 min.

Pressure Cure Cycle



SHELF LIFE

HC1127/7781

STORAGE TEMPERATURE		SHELF LIFE
Storage Temp.		Below -12 °C (10 °F)
Storage Life		300 day at or below -12 °C (10 °F) from date of manufacture

HC1127/7781 Rev. 1 : Sep. 25, 2020