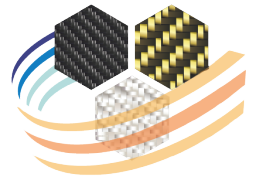


H359 EPOXY PREPREG PRODUCT DATASHEET

90°C (194°F) Curing Epoxy



GCI KOMPOZİT

PRODUCT DESCRIPTION

H359 is an epoxy pre-impregnation agent suitable for vacuum and oven curing. It is designed to be easy to handle in terms of transportation and handling.

Despite its high flow matrix, H359 provides a high quality surface when properly processed and cured. It is similar to the T359 prepreg system, but provides a higher level of mechanical strength than T359. An excellent choice for many industrial applications.

BENEFITS AND FEATURES

- High toughness
- Very good bonding properties
- Excellent mechanical properties
- Suitable for structural parts requiring high durability and excellent surface quality
- Good chemical resistance

TYPICAL REINFORCEMENTS

Fabric*	SM Carbon	E-Glass
FAW and Product Form	<ul style="list-style-type: none">• 300-600 TF** UD,• 200-1600 Stitched Fabric (Biaxial, Triaxial)	<ul style="list-style-type: none">• 100-600 PW/2x2Twill

*Please contact with us for further option.

**Thermal Fixed

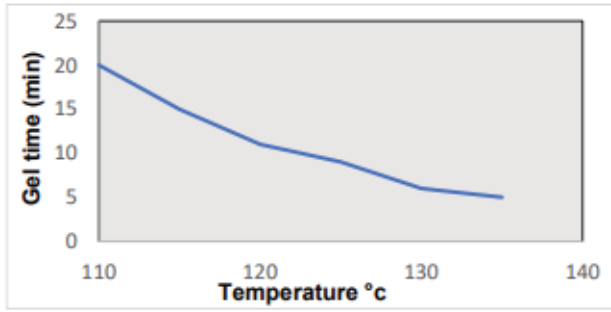
TYPICAL APPLICATIONS

- Wind Applications
- Marine Applications
- Automotive
- Sport and Leisure
- Industrial Applications

This technical datasheet is not a specification. All information is believed to be accurate with the performance, storage, and other characteristics of the product without acceptance of liability. Users are held to do their tests to check the suitability of the product for its particular purpose.

RESIN PROPERTIES

The resin system is mainly intended for industrial applications and is suitable for carrying high loads.



CURING SPECIFICATIONS

Specification	Minimum	Method
Curing temperature (°C)	90°C	DSC
Curing time (Hr) @ minimum curing temperature	10 Hr	DSC
Glass transition temp. Tg (°C)	115°C	DSC

TYPICAL OVEN VACUUM CURING CYCLE

- Apply a 24" Hg vacuum for 5 minutes before beginning the heat cycle.
- Raise laminate temperature from room temperature to 80°C (176°F) within 30-40 min.
- Hold laminate at 80°C (176°F) for 30 min.
- Raise laminate temperature from 80°C (176°F) to 120°C (248°F).
- Hold laminate at 120°C (248°F) for 120 min.
- Cool the laminate to at least 80°C (176°F), prior to releasing vacuum pressure.

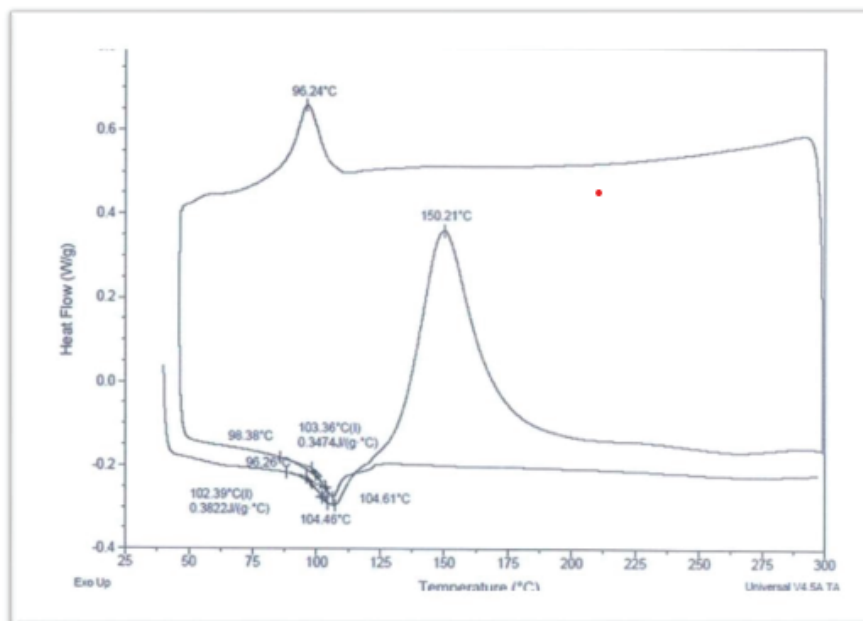
Notice: It should be understood that the curing period will begin only after the pre-impregnation temperature reaches the recommended temperature.

PRESS MOLDING CURING CYCLE

- 1) Preheat the press to 120 °C
- 2) Place the laminate in the hot press and keep the laminate at this temperature by applying 3 - 7 bar 3 - 7 bar (0.3-0.7 MPa) pressure for 120 minutes.
- 3) Remove the laminate from the mold (cool below 95-100 °C (if possible))

ALTERNATIVE CURING CYCLES

Temperature (°C)	Gel time (mins)	Dwell time (Hrs:mins)	DSC Tg (°C)
90	-	10:00	110-115
100	-	6:00	119-123
120	6-10	2:00	120-125
130	2-5	-	-



Wet Tg

SHELF LIFE, STORAGE CONDITIONS AND HANDLING

H359 prepregs are wrapped in a barrier film immediately after impregnation. During storing and handling, the following notes must be considered:

- H359 prepregs should be stored in their original packaging barrier film, or an equivalent film, at -18°C.- Before use, the prepreg roll has to be out of the freezer and remain tightly sealed for 48 hours, the time required to reach ambient room temperature.
- Thanks to its excellent thermoforming feature, it offers suitable placement for every process after 48 hours at room temperature.
- It is highly recommended to handle the prepreg at a clean area where the relative humidity is $\leq 52\%$ and the ambient temperature is 20-23°C.

Temperature	Time
4°C (40°F)	6 months
-18°C (0°F)	12 months
Working life at 24°C (75°F)	48 hours (B-stage state) (It is easily shaped and made suitable for the process)

MECHANICAL PROPERTIES

VACUUM CURED STITCHED FIBER LAMINATES

Properties	Fiber Direction	Test Method	MI/MA	Units	Mechanical Properties Dry
Tensile Strenght	0°	TS EN ISO 527-4	MI MA	MPa	532,8
Tensile Modulus	0°	TS EN ISO 527-4	MI MA	MPa	42500
Compression Strenght	0°	ASTM D695	MI MA	MPa	>146
Compression Modulus	0°	ASTM D695	MI MA	MPa	1970
Flexural Strength	45°	TS EN ISO 14125	MI MA	MPa	707
Flexural Modulus	45° 0°	TS EN ISO 14125	MI MA	MPa	41026

400 GSM TWILL CARBON FABRIC

2h 120°C

SAFETY NOTES

Usual precautions, as follows, must be considered:

- During lamination, workers must avoid skin contact by wearing appropriate disposable protective gloves.
- Clean protective coveralls or equivalent clothes must be worn before laminating and also sanding.
- Protective glasses must be worn to avoid eye contamination. 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.