

# GP<sup>®</sup> 145K26 Resin/GP<sup>®</sup> 4826 Phenolic System for FRP

## Product Information

### DESCRIPTION

GP<sup>®</sup> 145K26 phenolic resin with GP<sup>®</sup> 4826 acid catalyst was developed by Georgia-Pacific Chemicals for use in the manufacture of fiber reinforced plastic (FRP) products. The resin system is suitable for vacuum infusion, hand layup, resin transfer molding (RTM), and filament winding. FRP products manufactured with the GP 145K26/GP 4826 system demonstrate the flame resistance and low smoke generation required in many composite applications where fire and smoke are a concern such as in the aerospace, construction, and mass transit industries.

### USES AND APPLICATION

By varying the amount of the catalyst mixture in the GP 145K26 resin, desired pot life and cure speed can be achieved; e.g., decreased catalyst mixture level results in increased pot life.

The laminate, hand laid or RTM, should be cured for two hours at a temperature of 140°F - 176°F (60°C - 80°C). Mechanical strength and glass transition temperature can be enhanced by post-cure at 180°F - 210°F (82°C - 100°C). Slow heating rate and gradual increase in post-cure temperature are suggested to avoid blistering and optimize the performance of finished FRP products.

With filament winding, initial cure should be performed on the mandrel using infrared, hot air, or hot water heating sources at 160°F - 180°F (71°C - 82°C). Temperatures higher than 180°F may cause blistering. After demolding, post-cure at 180°F - 210°F is recommended.

For fiberglass reinforcement, phenolic-compatible glass should be used.

For application-specific questions, please contact your Georgia-Pacific Chemicals technical or sales representative.

### STORAGE AND HANDLING

GP 145K26 resin and GP 4826 catalyst should be used in areas with good ventilation. Storage at temperatures below 40°F (5°C) is recommended for the resin, which should be brought to room temperature prior to use. GP 4826 acid catalyst can be stored at room temperature.

**866-4GP-CHEM**

[www.gp-chemicals.com](http://www.gp-chemicals.com)

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## Product Information

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### STORAGE AND HANDLING (continued)

As with any resin/acid system, precise and thorough mixing of the resin and catalyst mixture is essential to achieve uniform cure and optimum quality.

Georgia-Pacific Chemicals supplies GP<sup>®</sup> 145K26 resin and GP<sup>®</sup> 4826 catalyst in drums and bulk quantities.

Additional information on the safe handling of GP 145K26 resin and GP 4826 catalyst is in the Safety Data Sheets available from Georgia-Pacific Chemicals.

#### Typical Properties of GP 145K26 Resin

Type	Phenol-Formaldehyde Resole
Appearance	Amber to Brown Liquid
Non-Volatiles, %	68 – 72
Viscosity @ 25°C, cps	150 – 350
pH	7.3 – 7.8
Specific Gravity @ 25°C	1.21 – 1.25
Weight, lbs/gallon	10
Flash Point, °C	>90
Free Formaldehyde, %	1.0 Maximum
Storage Life @ 25°C	30 Days

#### GP 145K26/GP 4826 System

GP 145K26/GP 4826 System, pbw	Pot life, Minutes <sup>1</sup>	Cure Speed, sec. @ 194°F (90°C) <sup>2</sup>
100/ 6	60	90
100/ 7	45	75
100/ 8	30	45

<sup>1</sup> Pot Life is measured by Brookfield Viscosity increase to 3000 cps in 1000-gram mass.

<sup>2</sup> Cure Speed Measured by Hot Plate Stroke test @ 194°F.

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