

GP[®] 445D05 Phenolic Impregnating Resin

PRODUCT INFORMATION

GP[®] 445D05 resin is a high temperature phenolic resin developed for use in the manufacture of fiber-reinforced polymer (FRP) that meets the requirements of Military Specification MIL-R-9299C, Grade A. The product is formulated to provide low smoke generation, flame resistance and strength as well as fire resistance.

APPLICATIONS

GP 445D05 resin is used as coating for Nomex[®] honeycomb and as an impregnating resin for composites. Applications of honeycomb and composites include aircraft interiors, armored vehicles, ballistics, fire-safe construction materials, and other high temperature applications.

CERTIFICATION

GP 445D05 resin meets the requirements of Military Specification MIL-R-9299C, Grade A.

STORAGE AND HANDLING

GP 445D05 resin 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. Shelf life when stored at a maximum of 40°F (5°C) is 6 months. The product is shipped in drum and bulk quantities.

Additional information on the safe handling of GP 445D05 resin is in the Safety Data Sheet available from Georgia-Pacific Chemicals.

TYPICAL PROPERTIES

Product Composition	Phenol-formaldehyde Resole
Appearance/Form	Amber to Brown Liquid
Non-Volatiles, %	64 - 68
Viscosity @ 77°F (25°C), cPs	500 - 1000
pH	8 - 9
Hot Plate Stroke Cure Time @ 302°F (150°C), seconds	170 - 210
Free Formaldehyde, %	0.8 maximum

FIRE AND SMOKE PROPERTIES

TEST	METHOD	RESULTS
OSU Heat Release	ASTM E-906 (KW-min-m ² /kw-m ²)	9/17
NBS Smoke Density	ASTM F-814	1

Test specimens: 6-ply laminate cured @ 325°F for 10 min. under 250 psi. Resin content = 34.3%.