

WS Hampshire Inc.

Over 100 Years of Non-Metallic Material Fabrication

Ryertex

The leading brand of Phenolics for over 50 years

Ryertex Grade FR4

TECHNICAL DATA BULLETIN

GRADE: FR4

U. L. LISTED: Yes

DESCRIPTION: Ryertex FR4 is a woven glass fabric composite combined with an epoxy resin system. It is engineered as a NEMA grade product that contains bromine providing the flame retardant property. It is the most commonly used epoxy glass product on the market with high demand driven by the PCB board industry due to the flame retardant property of this material.

It is a high performance, rigid industrial laminate that has outstanding mechanical properties that exceed nearly all other thermosets. It is a Class B electrical insulator at temperatures to 325°F. Low water absorption.

Grade FR4 thermosets are used in heavy industrial applications for bearings, bushings and wear parts.

TYPICAL PROPERTIES

GENERAL PHYSICAL PROPERTIES	UNITS	VALUE
Specific Gravity	-	1.85
Rockwell Hardness	M	98
Moisture Absorption	%	0.10
Flexural Strength	Psi	65,000 LW 52,000 CW
Tensile Strength	Psi	40,000 LW 32,000 CW
Izod Impact	Ft-lb/in	7.9 LW 7.3 CW
Compressive Strength	Psi	66,000
Bond Strength	Lb	2,300
Shear Strength	Psi	21,500
Temperature	°C	130/140

This data is believed to be accurate and based on general analytical data but is for informational use only. Data supplied above is considered "typical values" and not to be considered specific. It is the responsibility of the end user to insure they test the material to the application for assurance of compliance.