Eccostock®SH

Rigid High Temperature Plastic Foam Sheet Stock

RIGID PLASTIC FOAM SHEET STOCK

Eccostock SH is a rigid polyurethane foam, which remains rigid and withstands high temperatures, for a short time even up to 163°C (325°F). Unlike most polyurethanes, Eccostock SH has an extremely low dissipation factor and low dielectric constant. It is a closed cell foam, pink in color.

FEATURES AND BENEFITS

- Rigid
- High Temperature Resistance

MARKETS

- Commercial Telecom
- Security and Defense

SPECIFICATIONS

TYPICAL PROPERTIES	ECCOSTOCK SH		
Bulk Density, lbs/ft³ (g/cc)	**2 (0.03)**	**8 (0.13)**	**14 (0.22)**
Temperature Range °C (°F)	-70 to 135 (-94 to 275)	-70 to 135 (-94 to 275)	-70 to 135 (-94 to 275)
Dielectric Constant (1 MHz)	1.04	1.12	1.25
Dielectric Strength, volts/mil	40	40	40
Dissipation Factor (1 MHz)	0.001	0.002	0.005
Compressive Strength, psi (kg/cm²)	30 (2.1)	250 (17.6)	600 (42.3)
Flexural Strength at 5% strain, psi (kg/cm²)	25 (1.8)	225 (15.8)	800 (56.0)
Flexural Modulus, psi (kg/cm²)	500 (35.2)	7,000 (493)	20,000 (1408)
Tensile Strength, psi (kg/cm²)	40 (2.8)	200 (14.1)	450 (31.7)
Shear Strength, psi (kg/cm²)	35 (2.5)	140 (9.9)	300 (21.1)
Coefficient of Thermal Expansion per °C	25×10^{-6}	40×10^{-6}	50×10^{-6}
Water absorption, % gain in 24 hours	3	1.5	1

Data for design engineer guidance only. Observed performance varies in application.
Engineers are reminded to test the material in application.

APPLICATIONS

- Eccostock SH is primarily used as a high-temperature structural member or thermal barrier in electrical/electronic applications.

AVAILABILITY

- Standard sheets are 30.5 x 61 cm (12” x 24”) in thicknesses of 2.5 cm, 5 cm, 7.6 cm, 10 cm & 15 cm (1”, 2”, 3”, 4” & 6”).
- It is available in bulk densities of 2, 4, 6, 8, 10, 12, & 14 lbs/ft³ (0.03, 0.06, 0.10, 0.13, 0.16, 0.19 & 0.22 g/cc).
- Eccostock SH is available in other thicknesses, sizes, and customer specified shapes upon request.

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INSTRUCTIONS FOR USE

- Eccostock SH at densities less than 3 lbs/ft³ (0.05 g/cc) may warp at temperatures above 93°C (200°F).
- Unicellularity: Not interconnected above 6 lbs/ft3 (0.10 g/cc). However, below this density there is a significant percentage of cells connected.
- Eccostock SH is easy to machine.

RELATED PRODUCTS

- Eccostock® FPH: High temperature foam-in-place casting resin with available bulk density depending on catalyst and mold design. When cured, it has identical properties to Eccostock SH of the same bulk density. (Eccostock SH is produced from Eccostock® FPH under precisely controlled laboratory conditions.)