

Special Reference Material Report

GM 57 and GM 58

Phenolic Foam

(Phenol Formaldehyde-Phenolic-resin expanded
with blowing agent)

This material was prepared to provide a uniform lot of cellular plastic for use in fire research. Produced under the sponsorship of the Products Research Committee (PRC) on the Fire Safety Aspects of Cellular Plastic Products, these materials are being distributed by the NBS Office of Standard Reference Materials as Special Reference Materials, GM 57 and GM 58.

The chemical and physical information provided for this material has been derived from data submitted to the PRC by the manufacturers of the material and/or independent testing laboratories. Neither PRC nor NBS assumes any responsibility for the accuracy of this information.

Applicable American Society for Testing and Materials (ASTM) test methods are indicated.

<u>Property</u>	<u>ASTM Test</u>	<u>Rating</u>
Weight, lb/ft ² (1" basis)	NA	0.41
Thermal Conductivity, K-Factor, BTU·in/h·ft ² ·°F at 75°F	C-177	0.23
Closed Cell Content, %	D-2856	ND*
Compressive Strength, psi at 5% deflection	D-1621	30
Compressive Modulus, psi	D-1621	ND
Tensile Strength, psi	D-1623	
Parallel		ND
Perpendicular		ND
Flexural Strength, psi	C-203	ND
Shear Strength, psi	C-273	
Parallel		ND
Perpendicular		ND
Shear Modulus, psi	C-273	
Parallel		ND
Perpendicular		ND
Coefficient of Linear Expansion, in/in·°F	D-696	1.7 × 10 ⁻⁵
Water Absorption, % by volume, 24 hrs under 5.1cm (2 in) head	D-2842	3
Water Vapor permeability, perms	C-355	3-7
Dimensional Stability	D-2126	ND
Surface Burning Characteristics	E-84	
<u>Thickness</u>		
<u>Flame Spread Classification**</u>		
NA	15**	
Insulated Steel Deck Assembly	20	15
Continuous Operating Temp., °F	Factory Mutual	Class I
		300

* ND = Not Determined

** THIS NUMERICAL FLAME SPREAD RATING IS NOT INTENDED TO REFLECT HAZARDS PRESENTED BY THIS OR ANY OTHER MATERIAL UNDER ACTUAL FIRE CONDITIONS.