

Special Reference Material Report

GM 27 and GM 28

High Resilience, Flexible Polyurethane Foam

With Fire Retardant

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 National Bureau of Standards, Office of Standard Reference Materials, as Special Reference Materials, GM 27 and GM 28.

The chemical and physical information provided for this material has been derived from data submitted to 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.

FORMULATION:

Weight Percent

Polyol - Glycerine based polyoxypropylene and ethylene glycol capped with primary hydroxyl groups, 4800 mol wt	56.5
Isocyanate - Toluene diisocyanate modified	29.1
Blowing agent - CO ₂ produced by isocyanate reaction with water	1.4
Catalyst - Tertiary amines	4.5
Flame retardant - Chlorinated phosphonate ester	8.5

PHYSICAL PROPERTIES:

	<u>U.S. Customary</u>	<u>SI</u>
Density, lb/ft ³ (kg/m ³)	2.70	43
H.D., 25 % R, lb/50 in ² (N/323 cm ²)	26	116
65 % R, lb/50 in ² (N/323 cm ²)	87	387
Sag factor	3.35	3.35
Tensile strength, lb/in ² (kPa)	12.6	87
Elongation, %	80	80
Tear strength, lb/in (N/m)	0.8	140
Compression set, %	7.3	7.3
Rebound, %	75	75

October 1, 1976