

Special Reference Material Report

GM 23 and GM 24

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 23 and GM 24.

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:

	<u>Weight Percent</u>
Polyol - Glycerine based polyoxypropylene and ethylene glycol, 3500 mol wt	62.9
Isocyanate - Toluene diisocyanate 2,4 Isomer 80%, 2,6 isomer 20%	23.5
Blowing agent - CO ₂ produced by isocyanate reaction with water	1.7
Blowing agent - Fluorocarbon	6.0
Catalyst - Organotin salt	0.2
Catalyst - Tertiary amines	0.3
Foam stabilizer - Silicone copolymer	0.7
Flame retardant - Chlorinated phosphonate ester	4.7

PHYSICAL PROPERTIES:

	<u>U.S. Customary</u>	<u>SI</u>
Density, lb/ft ³ (kg/m ³)	1.75	28
ILD, 25% R, lb/50 in ² (N/323 cm ²)	24	107
65% R, lb/50 in ² (N/323 cm ²)	49	218
Sag factor	2.04	2.04
Tensile strength, lb/in ² (kPa)	12	83
Elongation, %	200	200
Tear strength, lb/in (N/m)	1.6	280
Compression set, %	7.5	7.5
Rebound, %	53	53

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