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FLEXIBLE FOAMS Product Data Sheet

Flexible Foam Series are two-component, self-skinning, non-CFC, polyurethane flexible foam systems. They offer excellent flow and fast de-molding times for increased production cycles. Thickness of skin can easily be controlled by proper mold temperature settings and the amount of mixed product packed in the mold. These foams can be hand mixed or machine dispensed. Small batch mixes are easily achieved using fast, aggressive mixing methods with larger mixes better achieved using a high shear mixing blade (Jiffy Mixer). *Add CU Pigments to create pre colored parts.*

Available Sizes: Quart Kit Gal Kit 5 Gal Kit 55 Gallon Drum Kit

Applications

Recommended for making molded components for aircraft, automobile, recreation vehicle and furniture industries (arm rests, head restraints, dashboards, crash pads, side panels, steering wheels and misc. moldings); special effects and puppets; any application where low-density flexible foam is required.

Typical Properties of Liquid Components @ 77F (25C)

Property	Test Method	Component A	Component B
Viscosity CPS	ASTM D-1638	41	1740
Specific Gravity	ASTM D-1638	1.17	1.04

	SP 200-4 A/B	SP 400-6 A/B	SP 100-8 A/B	SP 400-15 A/B
Foam Density- per Cubic Foot	4 lb	6 lb	8 lb	15 lb
Cream time, sec.	60	60	60	60
Rise time, sec.	90-120	90-120	90-120	90-120
De-mold time, min.	15-25	15-25	15-25	15- 25
MIXING RATIO BY WEIGHT				
Component A	34%	25%	34%	45%
Component B	66%	100%	66%	55%
*By Volume	47A / 100B	25 A / 100 B	47 A / 100B	N/A

PROCESSING

Mold Preparation: Polyurethane foams adhere to most surfaces and a release agent should be applied prior to casting. For non-silicone molds (Plaster, Urethane RTV Rubber, Metal) a suitable release is recommended—**PartAll Paste Wax** or **PartAll Film #10** (PVA). Mold should also be completely free of any moisture. For optimal castings, mold should be heated to 80-125F for initial casting. Once heated and cycled, mold should maintain heat for continued production.

Mixing: Shake or mix the A & B components prior to pouring weighted amounts. Material should be at good working temperature—80F. Mix materials by recommended weight of A and B —off ratios can result in poorly formed parts and surface finish. A quick, high-speed mix using a Jiffy Mixer blade attached to a drill motor or air motor works best. A mix time of 10-15 seconds is required to thoroughly integrate A & B. Over mixing or under mixing can result in rejected parts. Pour immediately into mold cavity, swishing liquid over mold surface to improve product's surface skin and allow mold to remain undisturbed until foam has cured. Small batch mixes are easily achieved using fast, aggressive mixing methods. Several experimental parts will be needed to adjust the amount of material to achieve a satisfactory part.

Curing and Demolding: Leave mold undisturbed until part is fully cured—15 to 25 minutes. As foam rises, avoid agitating or vibrating the mold, which may cause the foam cell structure to collapse. De-molding times with urethane flexible foams will change with size of cast piece and temperatures of materials and tools. Allow additional curing time for smaller size parts.

Storage/Shelf Life:

- A. Component A (Isocyanate) must be stored in tightly closed containers and kept protected from moisture and foreign materials. Storage area should be maintained at between 64F and 86F (18C - 30C).
- B. Component B (Resin) is hygroscopic. Containers must be kept closed to prevent absorption of moisture. Storage area should be maintained at between 64F and 86F (18C - 30C).

Shelf life of materials when kept in unopened sealed containers, at the recommended storage conditions, is 6 months. Containers should not be opened until ready for use. Once opened, storage life can be extended with the use of a purging gas—Nitrogen.

ACCESSORIES

Colorant

CU Pigment *Red, Yellow, White, Blue, Black, Brown, Fleshtone* All pigments should be added to the "B" side only at 1-2%. Castable urethanes are affected by direct and indirect sunshine and should be painted with oil based paint to protect color and surface.

Release

PartAll Paste Waxes Hi Temp Wax or Paste #2 Mold release for hard tooling molds.

PartAll Film #10 PVA liquid release, Cleans off part with warm soap and water.

THE INFORMATION AND DATA CONTAINED HEREIN ARE BASED ON INFORMATION WE BELIEVE RELIABLE. EACH USER OF THE MATERIAL SHOULD THOROUGHLY TEST ANY APPLICATION, AND INDEPENDENTLY CONCLUDE SATISFACTORY PERFORMANCE BEFORE COMMERCIALIZING. SUGGESTIONS OF USES SHOULD NOT BE TAKEN AS INDUCEMENTS TO INFRINGE ANY PARTICULAR PATENT.