

NCFI FLEXIBLE MOLDING SYSTEM 30-004

DESCRIPTION:

NCFI 30-004 is a two component, water blown, polyether, all PMDI based high resiliency flexible urethane foam system designed for medium load bearing molding applications. 30-004 is well suited for interior trim applications, such as headrests and armrests and heavy duty seating applications, such as motorcycle seating or other recreational vehicle seating. Product is available in two reaction speeds, regular and slow.

DISTINGUISHING CHARACTERISTICS:

- Excellent Flow
- Good Skin Quality in Cold Molds
- Low Component Viscosity
- Wide Processing Parameter Window

TYPICAL RESIN PROPERTIES:

	<u>30-004 R</u>	<u>30-004 A</u>
Viscosity	1400 cps	30 cps
Lbs./Gallon	8.6 lbs.	10.2 lbs.
Freeze Point	NA	45°F
Appearance	transparent, colorless liquid	transparent, brown liquid
Shelf Life	6 months	6 months

MIX RATIO:

	<u>30-004 R</u>	<u>30-004</u>
By Weight	100 parts	47 parts

TYPICAL REACTION PROPERTIES:

	Hand Mix @ 72°F, 100 Index	
	<u>Regular</u>	<u>Slow</u>
Cream Time	10 seconds	19 seconds
Rise Time	95 seconds	185 seconds
Demold Time	5 minutes	10 minutes
Density (FRC)	2.6 pcf	2.6 pcf

TYPICAL PHYSICAL PROPERTIES:

	100 Index
Overall Molded Density	3.3 pcf
Tensile Strength	18 psi
Tear Strength	1.0 pli
Elongation	100%
Firmness (IFD 4 inch thickness)	
25% Deflection	55 lb
65% Deflection	145 lb
SAG	2.6
Compression Sets (Cd, 22 hrs @ 158°F)	
50% Deflection, original	3.4%
75% Deflection, original	< 10%

The above values are average values obtained from laboratory experiments and should serve only as guide lines.

Caution:

Polyurethane products manufactured or produced from this liquid system may present a serious fire hazard if improperly used or allowed to remain exposed or unprotected. The character and magnitude of any such hazard will depend on a broad range of factors which are controlled and influenced by the manufacturing and production process, by the mode of application or installation and by the function and usage of the particular product. ***Any flammability rating contained in this literature is not intended to reflect hazards presented by this or any other material under actual fire conditions. These ratings are used solely to measure and describe the product's response to heat and flame under controlled laboratory conditions.*** Each person, firm or corporation engaged in the manufacture, production, application, installation or use of any polyurethane product should carefully determine whether there is a potential fire hazard associated with such product in a specific usage, and utilize all appropriate precautionary and safety measures.

NCFI 30-004

EQUIPMENT AND COMPONENT RATIOS:

NCFI 30-004 should be processed by pour machines designed to mix urethane chemicals. It is recommended that this system be processed with either HPIM machines or low pressure equipment with mechanical mix heads, both with the capability of controlling component temperatures to 70°F - 80°F. NCFI 30-004 **R** is connected to the **resin/polyol** pumps with NCFI 30-004 **A** being connected to the **isocyanate** pumps.

MOLDING RECOMMENDATION:

To obtain optimum yield, consistent part quality and quick demold times, the mold temperature must be 80°F or higher. Recommended temperature is 100°F. Heating molds with radiant or convection heat sources should be accomplished without producing 'hot spots'. Molds may be constructed of fiberglass, aluminum, epoxy or other thermal conductive material. Mold surfaces must be coated with a suitable release agent and dried before molding. Follow the recommendations of the mold release supplier. The mold design should offer adequate clamping pressure and allow trapped air to escape through vent holes in the top or the parting lines of the mold.

STORAGE AND USE OF CHEMICALS:

Keep temperature of chemicals at 80 °F for several days before use. Cold chemicals can cause poor mixing, pump cavitation or other process problems due to higher viscosity at lower temperatures. Storage temperature should not exceed 100°F. Prolonged exposure to temperatures below 50°F can cause the 'A' component to freeze. Do not store in direct sunlight. Keep drums tightly closed when not in use and under nitrogen pressure of 2 - 3 psi after they have been opened. Mix 'R' side well before using.

SAFE HANDLING OF LIQUID COMPONENTS:

Use caution in removing bungs from the container. Loosen the small bung first and let any built up gas escape before completely removing. Avoid prolonged breathing of vapors. In case of chemical contact with eyes, flush with water for at least 15 minutes and get medical attention. For further information refer to publication AX-119 "MDI-Based Polyurethane Foam Systems: Guidelines for Safe Handling and Disposal" published by The Alliance For The Polyurethanes Industry, 1300 Wilson Blvd, Suite 800, Arlington, VA 22209.

The information on our data sheets is to assist customers in determining whether our products are suitable for their applications. The customers must satisfy themselves as to the suitability for specific cases. North Carolina Foam Industries warrants only that the material shall meet its specifications; this warranty is in lieu of all other written or unwritten, expressed or implied warranties and North Carolina Foam Industries expressly disclaims any warranty of merchantability, fitness for a particular purpose, or freedom from patent infringement. Accordingly, buyer assumes all risks whatsoever as to the use of the material. Buyer's exclusive remedy as to any breach of warranty, negligence or other claim shall be limited to the purchase price of the material. Failure to adhere strictly to any recommended procedures shall relieve North Carolina Foam Industries of all liability with respect to the material or the use thereof.

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