



NCFI, Polyurethanes
 Div. of Barnhardt Manufacturing Co.
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TECHNICAL DATA SHEET

6/04

NCFI POUR SYSTEM 20-014

DESCRIPTION:

NCFI 20-014 is a two component, water blown, all PMDI based pour-in-place polyurethane foam system designed as a taxidermy foam for molding animal forms. This system represents the mid-range of the density spectrum for animal form molding.

DISTINGUISHING CHARACTERISTICS:

- Excellent Flow
- Light Colored Blemish Free Surface
- Thin Non-glassy Skin
- Low Density Non-friable Core

TYPICAL RESIN PROPERTIES:

	<u>20-014 R</u>	<u>20-014 A</u>
Viscosity	1400 cps	200 cps
Lbs./Gallon	9.0 lbs.	10.2 lbs.
Appearance	transparent, amber liquid	transparent, brown liquid
Shelf Life	6 months	6 months

MIX RATIO:

	<u>20-014 R</u>	<u>20-014 A</u>
By Weight	100 parts	115 parts
By Volume	100 parts	100 parts

TYPICAL REACTION PROPERTIES:

Hand Mix @ 72°F

Cream Time	25 seconds
Gel Time	100 seconds
Tack Free Time	130 seconds
Rise Time	160 seconds
Demold Time	45 minutes
Density (FRC)	3.0 pcf

TYPICAL PHYSICAL PROPERTIES:

Core Density	4.5 pcf
Compressive Strength	65 psi
Closed Cell Content	>90%
Water Absorption, ASTM D2842	≤0.06 lbs/ft ²
Resistance to Solvents	Excellent
Resistance to Mold and Mildew	Excellent
Maximum Service Temperature	180°F

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

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NCFI 20-014 APPLICATION INFORMATION

EQUIPMENT AND COMPONENT RATIOS:

NCFI 20-014 can be mixed by hand or 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 60°F - 90°F. NCFI 20-014 **R** is connected to the **resin/polyol** pumps with NCFI 20-014 **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 70°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 90°F. Prolonged exposure to temperatures below 60°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.

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 "MDI-Based Polyurethane Foam Systems: Guidelines for Safe Handling and Disposal" publication AX-119 published by Alliance For The Polyurethanes Industry 1300 Wilson Blvd, Suite 800, Arlington, VA 22209.

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

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