NCFI POLYURETHANES

TECHNICAL DATA SHEET

NCFI Polyurethanes
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NCFI SPRAY SYSTEM 14-007

DESCRIPTION:

NCFI 14-007 is a two-component, HFC-245fa blown, all PMDI based spray polyurethane foam system designed for use as an insulation material. NCFI 14-007 has been formulated to spray at 2.3–2.7 pcf depending on typical lift thicknesses of 0.75 to 3 inches and it is available in seasonal speeds.

DISTINGUISHING CHARACTERISTICS:

- Excellent Physical Strength Properties
- Excellent Insulation Properties
- Good Interlayer Adhesion
- Low Moisture Vapor Transmission

TYPICAL RESIN PROPERTIES:

	14-007 R	14-007 A
Viscosity	600 cps	200 cps
Lbs./Gallon	9.9 lbs.	10.2 lbs.
Appearance	transparent, dark liquid	transparent, brown liquid
Shelf Life	6 months	6 months

MIX RATIO:

	14-007 R	14-007 A
By Volume	100 parts	100 parts

TYPICAL REACTION PROPERTIES:

Hand Mix @ 50°F

	Summer	Spring/Fall
Cream Time	7 seconds	6 seconds
Tack Free Time	16 seconds	12 seconds
Rise Time	28 seconds	22 seconds

Machine Spray @ 130°F

Tack Free Time	8 seconds	5 seconds
Firm Time	180 seconds	130 seconds

TYPICAL PHYSICAL PROPERTIES:

Core Density ASTM D 1622	2.5 pcf
Compressive Strength @ Yield ASTM D 1621	35 psi
Closed Cell Content NCFITM-300	>95%
Water Absorption, ASTM D 2842	0.026 lbs/ft^2
Dimensional Stability, 28 day, ASTM D 2126	
200°F dry heat	3.5% vol change
-20°F cold	0.3% vol change
158°F/100% RH	4.0% vol change
k-factor, initial ASTM C 518	0.160 BTU-in./hr.sq.ft.°F
Resistance to Solvents	Excellent
Maximum Service Temp	180°F

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

NCFI 14-007 APPLICATION INFORMATION

EQUIPMENT AND COMPONENT RATIOS:

NCFI 14-007 should be sprayed using standard spray equipment with 1/1 by volume proportioning pumps capable of maintaining 800-1200 psi dynamic pressure. The Graco Reactor E-30 with a Fusion gun is preferred. Preheater temperatures should be set at a minimum of 115 - 130°F. 130°F is the optimum process temperature. NCFI 14-007 **R** is connected to the **resin/polyol** pumps with NCFI 14-007 **A** being connected to the **isocyanate** pumps.

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 80°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.

PREPARATION OF SURFACE TO BE SPRAYED:

All surfaces to be sprayed should be clean, dry, and free of dew or frost. All metal to which foam is to be applied must be free of oil, grease, etc.

OPTIMUM ADHESION TEMPERATURE OF SURFACE TO BE SPRAYED:

On general work where the surface to be sprayed will remain at ambient temperature or cooler, the surface should be between 70°F and 120°F. In this range the warmer the surface the better the adhesion.

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 the Center 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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