



## Material Characteristics

**NCFI-3RH** is a 3lb per ft<sup>3</sup> fast-reacting, hydrophobic / hydro-insensitive system formulated for residential slab lifting. it provides great spread while still allowing precise control for lifting sidewalks, driveways, and interior floors as well as light commercial applications. Its hydrophobic nature makes it ideal for saturated soils and water-filled voids.

### Applications

**Foundation Repair**  
**Trip Hazard Mitigation**  
**Floor Leveling**  
**Highways and Roadways**  
**Airport Runways and Taxiways**  
**Joint Matching**  
**Deep Soil Injection**

### Unique Advantages

**Fast Expansion Design**  
**Hydrophobic / Hydro-Insensitive**  
**High Control for Structural Lifting**  
**Contains No Solvents**  
**Strengthens Loose Soil**  
**Water Blown System**

## Reactivity at 110°F

<b>Cream Time</b>	2 seconds
<b>Gel Time</b>	8 seconds
<b>Tack Free Time</b>	15 seconds
<b>Rise Time</b>	27 seconds
<b>Cure Time</b>	95% @ 30min. Full cure at 24hrs

## Chemical Resistance

<i>Solvents...</i>	<b>Excellent</b>
<i>Mold and Mildew...</i>	<b>Excellent</b>

## Performance

<i>Wet Environments...</i>	<b>Excellent</b>
<i>Lifting Capacity...</i>	<b>Excellent</b>

## Physical Properties

<b>Physical Properties</b>	<b>Test Method</b>	<b>Free Rise</b>
Density	ASTM D1622	3.0 pcf
Compressive Strength	ASTM D1621	41 psi
Compressive Modulus	ASTM D1621	1155 psi
Tensile Strength	ASTM D1623	67 psi
Tensile Modulus	ASTM D1623	1330 psi
Water Absorption	ASTM D2842	≤0.04lbs/ft <sup>2</sup>
Closed Cell Content		>92%
Max Service Temp		200°F
Elongation	ASTM D1623	6.1%
Shear Strength	ASTM C273	90 psi
Shear Modulus	ASTM C273	1050 psi
Flexural Strength	ASTM D790	70 psi
Flexural Modulus	ASTM D790	1490 psi



## Special Testing

<b>NYDOT Hydro-Insensitivity test, GTP-9</b>		<b>&gt;92% density retention &gt;93% comp strength retention</b>	
Dimensional Stability, % volume change, 28 days aging (ASTM D-2126)	<b>Heat age at 158°F</b>	<b>Freezer at -20°F</b>	<b>Humid age at 100% RH &amp; 120°F</b>
	-1.5%	-0.1%	-1.0%

## Component Properties

Component	B-NCFI-3RH	A2-000
Appearance	Transparent Liquid	Clear Brown Liquid
Brookfield Viscosity @20rpm	600 cps at 72°F	200 cps at 72°F
Specific Gravity	1.06	1.24
Weight per Gallon	8.85 lbs	10.3 lbs
Storage Temperature	50-100°F	50-100°F

## Mix Ratio

By weight...	118 parts A-side: 100 parts B-side
By volume...	100 parts A-side: 100 parts B-side

## Processing Parameters

<b>A-side Temperatures</b>	100 – 120°F
<b>B-side Temperatures</b>	100 – 120°F
<b>Mixing Pressure</b>	1000 psi static 800 psi dynamic

## Storage and Handling

For optimum shelf life, the recommended storage temperature is 50°F to 100°F. **Do not expose A-side to lower temperatures – freezing may occur.** Avoid moisture contamination during storage, handling, and processing. After opening, pad the containers and day tanks with either nitrogen or dry air (desiccant cartridge or air dryer @ -40°F dew point). Store components at 70°F to 90°F for several days prior to use to minimize viscosity issues. Shelf life of B-side is 6 months and A-side is 2 years for factory sealed containers.

## Application Cautions

Careful consideration should be given to selection and application of any NCFI Polyurethane foam system where excessive foam mass build-up can occur. Excessive polyurethane foam lift thickness will result in high internal temperatures within the injected foam, which can result in degraded foam properties, or in extreme cases, fire or spontaneous combustion. **Any flammability rating contained in this literature is not intended to reflect hazards presented by this or any other material under actual fire conditions.** Each person, firm or corporation engaged in the 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. Please consult NCFI Polyurethanes for safety considerations, polyurethane system selection and application recommendations.

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