

PLUSFOAM-R-102-74(HFO)

Closed Cell Spray Polyurethane Foam

TECHNICAL DATA SHEET

PLUSFOAM-R-102-74 (HFO) is a two component, medium density, closed cell, spray applied, rigid polyurethane foam system. HFO system is used as the blowing agent. The product is used as thermal insulation, air barrier and vapor barrier or retarder according to the applied thickness. The product can be sprayed on concrete, masonry, wood, metals, plaster board and chipboard.

- Polyol part contains special blowing agent for a better insulation property.
- "Zero" Ozone Depletion Potential (ODP) and GWP < 1 Polyurethane Spray Foam System
- Low free rise density in uniform foam structure.
- Easy to cover huge areas by less amount of PU foam.
- Excellent fire resistance against to flame source.
- Recommended uses area; every kind of concrete/bricks surface and wooden areas as wood finishing, shiplap, pergola areas etc.
- Covering edge and corners by excellent flowability performance.

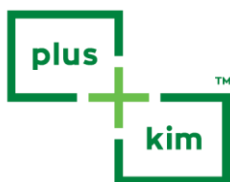
RECOMMENDED USES

- Agricultural Applications
- Tank Insulation
- Air barrier Systems
- Thermal and Sound Insulation

REACTION PROFILE

Cream Time (second)	Gel Time (second)	Tack Free Time (second)	Free Rise Density (LB/Cubic Foot)
3-4	-	6-7	2.18 – 2.25

*Tests are done manually in a laboratory. The test was done with the laboratory mixer at 2500 rpm. Component temperature set 68°F during the test. The given values will change for low pressure machine and high-pressure machine. The given durations begin with mixing of the components.

**PHYSICAL PROPERTIES**

	Result	Test Method
Core Density (LB/Cubic Foot)	2.18 – 2.25	ASTM D-1622
R-Value 1" (Fox 314) ft ² ·°F·h/BTU	6.76	ASTM C-518
Air Leakage Rate (ft ³ /sft ²)	Zero	ASTM E-283
Air Impermeable (L/s-m) 1"	<0.02	ASTM 2178
Water Vapor Transmission	1.0 perm-in	ASTM E-96
Water Absorption (%)	< % 1	ASTM D 2842
Compressive Strength (PSI)-%10	29	ASTM D-1621
Tensile Strength (PSI)	40	ASTM D-1623
Dimensional Stability (%)	< %2	ASTM D-2126
Fungi Resistance	Zero Rating	ASTM C-1338
Closed Cell Content	> %90	ASTM D-2856

FIRE PROPERTIES

Surface Burning Characteristics	Value	Test Method
Flame Spread Index (FSI)	0-25	ASTM E-84

LIQUID COMPONENT PROPERTIES

Component A: PLUSNATE-R-100-01

Component B: PLUSFOAM-R-102-74

Properties (Physical)	Component A (ISO)	Component B (Polyol Resine)
Viscosity at 77 °F	150-250 cP	450-550 cP
Liquid Density at g/ml 77 °F	1.22 – 1.23	1.19 – 1.21
Mixing Ratio (Volumetric)	100	100
Shelf Life (Month)	12	4
Storage Temperature	59 - 77 °F	59 - 77 °F

RECYCLED & RENEWABLE CONTENT

Recyclable Content	12.5 %
Renewable Content	1.0 %

RECOMMENDED PROCESSING PARAMETER

Parameter	Result
Drum Quantitiy-A(MDI)	551 lb
Drum Quantitiy-B(Polyol)	507 lb
Initial Hose Heat Setpoint Temperature	104-113°F
Initial Heater Primer Temp. Set-B (oF)	104-113°F
Pressure B-Side-PSI	1305-1595 PSI
Pressure A-Side-PSI	1305-1595 PSI
Substrate & Ambient Temperature (oF)	Summer > 50 °F Winter > 15 °F
Moisture Content of Substrate (%)	< 20%
Moisture Content of Concrete (%)	< 10%

PROCESS CONDITION

- Mixing ratio of component should be as written above.
- Temperatures of raw materials should be between 104-113 °F
- At the process during the application component's pressure should be 1305-1595 PSI.
- Thickness of each layer should be between 0.75 and 1.5 inc.
- Ambient temperature should be 41°F- 104°F. At the other conditions Polyurethane chemical structure may be shown different facilities.

Temperature variables during production should be as;

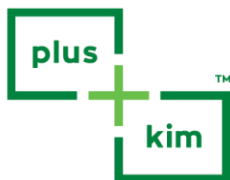
Raw Materials	104-113 °F
Component Pressure	1305-1595 PSI.

Relative humidity

Should be less than 85%

Wind speed less than 30 km/h

- It is critical to satisfy required temperature conditions mentioned to obtain desired quality for polyurethane regarding adhesion, foam appearance and curing etc.
- Necessary air should be provided to mixing head to obtain good mixing quality.
- It is recommended to check suitability of the system routine production.



STORAGE AND HANDLING

Component A should be stored between 59-77 °F and component B should be stored between 59-77 °F. Component A should be protected from freezing. The shelf life of component B is 4 months, component A is 12 months.

Do not store material on rigs other than what is required for the current application needs. Material left inside rigs can easily exceed this recommended temperature in the warmer months. The excessive heat will degrade the component B (resin) material and the blowing agent will gas out rendering the material useless. If the material was transported in freezing conditions, store it in room temperature for a minimum of 24 hours to get proper material condition. Do not attempt to heat up drum during storage.

CAUTION: If components are below suggested temperatures, the increased viscosity of the components may cause pump cavitation resulting in unacceptable SPF application. If components are above suggested temperatures, there may be loss of blowing agent resulting in diminished yield.

HEALTH SAFETY AND ENVIRONMENTAL INFORMATION

Isocyanate and polyol components might affect respiratory organs, eyes. It can be allergic reaction when inhale and in contact with skin. Attention should be paid when using these materials. MSDS information must be read before use. Waste Material Data Sheet Located Methods and Environmental Legislation should be disposed of in accordance.

Please read Safety Data Sheet before use.

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