TIKIFOAM SPF 40

Spray Applied Polyurethane Foam

DESCRIPTION

TIKIFOAM SPF 40 is two component CFC free, blown polyurethane chemistry based foaming system with closed cells >95% for producing spray applied rigid polyurethane foam for high performance sustainable thermal insulation in building envelope.

ADVANTAGES

- Spray applied - rapid installation and quick setting
- Seamless - no thermal bridges - maximum energy saving
- Non-sagging
- VOC free
- Light weight- negligible dead load on structure
- Fully bonded – no water tracking behind foam
- High wind uplift resistance.
- Compressive resistance - withstands overlay load
- Durable and sustainable solution

USES

- For roof and wall insulation
- As insulating solution to generate cool roof system
- For tank insulation
- For insulation applications in cold storages
- As air barrier systems
- As light weight filler for filling sunk areas.

APPLICATION INSTRUCTIONS

SURFACE PREPARATION

The surfaces must be sound, clean, dry, and free from cracks, honeycombs, undulations, oil, grease, laitance and loose particles.

New concrete should be at least 28 days old with moisture content <4%.

ENVIRONMENTAL CONSIDERATION

Applicators must recognize and anticipate climatic conditions prior to application to ensure highest quality foam and to maximize yield.

Ambient air and substrate temperatures, moisture, and wind velocity are all critical determinants of foam quality.

The temperature of substrate should be >10^{0}C during spray application. Extreme ambient air and substrate temperature will influence chemical reaction of two components, directly affecting yield, adhesion and resultant physical properties of the foam insulation.

APPLICATION

TKIFOAM SPF 40 has quick reaction and gel time and application shall be done only by using PUR spray equipment.

Use of mobile two component, high-pressure plural spray machine equipped with transverse pump and with arrangement for constant preheating with heated hoses is recommended.

Before initiation of spray application, both components are separately pre-heated in plural spray machine to correct spray temperature of 35^{0}C to 50^{0}C to ensure proper viscosity and reaction between components during spray application.

For optimum spray result, component temperature should be maintained between 35^{0}C to 50^{0}C and spray pressure should be maintained between 80 to 100 bars.

The spray application of **TIKIFOAM SPF 40** can be done in layers, each 10mm to 50mm thick.

APPLICATION DATA

Properties	Values
Stirring Time @23^{0}C	4 Seconds
Cream Time @23^{0}C	2 to 4 Seconds
Gel Time (String Time) @23^{0}C	12 to 14 Seconds
Tack Free Time @23^{0}C	15 to 18 Seconds
Mixing Ratio, by Weight Component A:Component B	 100 : 109

SPECIAL CARE DURING & POST APPLICATION

- Thickness per pass must be determined as per site condition.
- The applied foam must be covered with suitable top coat within 7 days of application to avoid U.V degradation.
- Thermal conductivity may change if exposed for more than 7 days due to escape of blowing agent.
- Skin of the layers must be protected to avoid opening of cells.

COVERAGE**

To achieve average 50mm thickness on 1m^2 area, 2.3 Kg. of mixed **TIKIFOAM SPF-40** would be required. Consider 15% to 30% extra consumption for over-spray and air-borne wastage in windy environment.

**Coverage is approximate and it depends upon the site conditions and surface porosity at the time of application.

SUPPLY

TIKIFOAM SPF 40 is supplied as two-component system. Part A (Polyol) is packaged in 200 kg Blue-colour drum and Part B (ISO) is packaged in 250 kg Red-colour drum.

STORAGE

TIKIFOAM SPF 40 components must be stored between 15^{0}C to 30^{0}C. Store in a dry and cool place under the shed and protect from extremes of temperature, heat, direct sunlight.

SHELF LIFE

Shelf life is 6 months when stored as above and in original packing. Failure to comply with the recommended storage conditions may result in premature deterioration of the product or packaging.

SAFETY PRECAUTIONS

As with all chemical products, care should be taken during use and storage of **TIKIFOAM SPF 40** to avoid contact with eyes, mouth, skin, and foodstuffs until product is fully cured/dried.

PROPERTIES*

Properties	TIKIFOAM SPF 40	STANDARD
Core Density (Free Rise Density)	>40 Kg./m^3	DIN EN ISO 845
Compressive Strength	≥175 kPa	DIN 53423
Water Absorption	<2.5 %	DIN 52428
Water Vapor Diffusion Resistance Factor	60	DIN 52615
Dimension Stability @70^0C, 48h	≤1.5 %	----------
Closed Cell Content, by Volume	>95 %	ISO 4590
Tensile Adhesion (with Concrete Mortar Substrate)	0.21 mPa	----------
Thermal Conductivity (K-Value)	≤0.023 w/m^0K	DIN 52612
Reaction to Fire	Class B2	DIN 4102, Part 1
R-Value of 50mm Thick	≥2 m^2.K/w	----------
Flexural Strength	≥ 250 kPa	DIN 53423

*The performance data is typical and based upon controlled laboratory conditions. Actual performance on the job site may vary from these values based on actual site conditions.

VERSION: R3, 202004

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ISO 9001:2015