

# Dr. Fixit Foamshield



## SPRAY APPLIED POLYURETHANE FOAM SYSTEM

### Description

Dr. Fixit Foamshield is a two component CFC & HCFC Free, polymeric MDI based system for producing rigid polyurethane foam by spray application and is available in two densities. One is between 45 - 50 kg/m<sup>3</sup> & other is 55 kg/m<sup>3</sup>.

### Standard complies:

IS 12432 - Part 3 for Application.

### Areas of Application

- Roof
- Walls
- Cold storages
- Tank Insulation

### Features & Benefits

- Low thermal conductivity, High Thermal Resistance
- Light Weight with High Compressive Strength
- Joint less insulation with least thermal bridging
- Easy to apply
- CFC & HCFC Free, Green Compliance

### Method of Application

#### 1 SURFACE PREPARATION:

- The substrate must be free from dust, oil, grease and loose particles.
- The substrate must be thoroughly cleaned, preferably with mechanical means to get rid of the dust and loose particles.
- The oil and grease on the substrate must be treated de-greased with suitable solvents.
- Any surface cracks and undulations cracks and crevices must be treated with sand and cement mortar mixed with latex polymers such as Dr. Fixit Pidicrete URP / Dr. Fixit Pidicrete MPB.

#### 2 APPLICATION DETAILS:

- Ambient air temperature, wind velocity, substrate temperature & substrate moisture are critical determinants of Foam quality.
- Applicator must recognize and anticipate climatic conditions prior to application to ensure the highest quality of Foam and to maximise yield.
- The substrate moisture content must not be more than 4% while spraying.
- Optimum results are obtained when the spray application is carried out when ambient air temperature and substrate temperature falls between +20°C and +48°C. Higher the better in terms of yield.
- Variation in the ambient air and substrate temperature will influence the chemical reaction. This will directly affect the foam expansion rate amount of rise, yield, adhesion and physical properties.
- Polyurethane Foam is formed when the two components are sprayed (base and activator) to form a monolithic seamless layer of rigid foam.
- The Foam achieved its 90% strength within four hours after spraying.
- As the product adheres to the vertical or horizontal surfaces a monolithic surface is achieved.
- Foam needs to be protected with a waterproofing system and must not be allowed to keep exposed for more than 48 hours.



### 3 APPLICATION EQUIPMENT

- Transfer pumps are recommended for material transfer from container to proportioner. The plural component proportioner must be able to supply each component within  $\pm 2\%$  of the desired mixing ratio by volume.
- Hose heaters to be set to deliver the material between a temperature range of  $+50^{\circ}\text{C}$  to  $+55^{\circ}\text{C}$  to the spray gun.
- Optimum hose pressure and temperature to vary with equipment manufacturer, type, substrate temperature, ambient temperature & specific application.
- Applicator to interpret the machine details, product details & surrounding details to arrive at acceptable gun chamber size, material pressure and proportioner output.
- Selecting the proper chamber size and proportioner's pre-heaters is critical.
- Mechanical purge spray guns (specifically direct impingement type or DI type) are recommended for highest foam quality.

### Technical Information

SR NO	PROPERTY	UNIT	FOAMSHIELD	Foamshield	STANDARD
1	Density	kg/m <sup>3</sup>	45 - 50	$\geq 55$	ASTM D1622
2	Compressive Strength	kPa	> 300	> 400	ASTM D1621
3	Tensile Strength	kPa	> 300	> 400	ASTM 1623
4	Thermal Conductivity	W/mK	$\geq 0.023$	0.023 - 0.025#	ASTM C 518
5	Water Absorption(vol)	%	<5%	<3%	ASTM D2842
6	Closed Cel Content	%	> 90	$\geq 95$	IS 11239 Part5, 1985 & ASTM D6226
7	CFC & HCFC Content		Free	Free	
8	Dimensional Stability	%	$\pm 2$	$\pm 1.5$	ASTM D2126
9	Flammability		B2	B2	DIN 4102

\* Technical Information are typical values and based on standard laboratory conditions.

At site the values may vary depending on factors such as surface & atmospheric conditions.

# Thermal Conductivity value are initial values and depend on temperature , humidity, moisture, machine etc.

### Precautions & limitations

- Material should be stored in shaded and covered place. Store drums at  $+20^{\circ}\text{C}$  to  $+25^{\circ}\text{C}$  for a minimum of atleast 48 hours before use.
- Do not recirculate components from proportioner back to the Drums
- Machine must be thoroughly cleaned before usage and mixing of our products with any other suppliers product is not recommended.
- Temperature of material inside the drums must be kept between  $+20^{\circ}\text{C}$  to  $+25^{\circ}\text{C}$  while in use and needs to be checked with help of a thermometer or an infrared gun.
- Moisture in the form of rain, fog, frost, dew or high humidity ( $> 85\%RH$ ) will react chemically with the mixed components, adversely effecting the foam formation, dimension stability and physical properties of the finished product.
- Wind velocities in the excess of 20kmph may result in excessive loss of exotherm and interfere with the mixing efficiency and affecting the foam surface, curing & physical properties.



## Packaging

- Drums Activator 250 Kg & Base 210 Kg

## Shelf Life

- Material to be sprayed within 9 months from the date of manufacturing.
- Material should be stored in shaded and covered place.
- Protect from moisture and moisture vapor, as it will react with the material to product as skin of surface material.

## Health and Safety

- MDI is classified as a dangerous substance and requires hazard warning label and must be handled with care.
- Safety goggles, impermeable protective gloves and overalls should be worn during handling & application.
- Contaminated clothes should be removed immediately to prevent skin contact.
- Person handling or spraying this product must go through the related literature & be well aware of the Safety Procedure and experience enough to handle this product.

## Other Products Categories available

Dr. Fixit brings you the widest range of Construction Chemicals



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