Dr. Fixit Blueseal

SPRAY APPLIED POLYURETHANE FOAM FOR THERMAL INSULATION

Description

Dr. Fixit Blueseal is a two component CFC & HCFC Free, polymeric MDI based system for producing rigid polyurethane foam with spray application for Thermal Insulation.

Standard Compliance

IS 12432 – Part 3 for Application.

Recommended Applications

- Roof
- Tanks
- Cold Storage

Features

- Low thermal conductivity, High Thermal Resistance
- Light Weight with high compressive strength
- Jointless Insulation, less heat ingress
- Easy and faster to spray.
- CFC & HCFC Free, Green Compliance

Method of Application

1 GENERAL SURFACE PREPARATION:

- Clean the surface by using grinding machine and ensure the surface is free from laitance, loose or friable materials, debris etc.
- Ensure the substrate has properly cured and the concrete is profile free, no ridges or troughs. All contaminants should be removed by mechanical vacuum assisted preparation equipment such as grinder/ shot-blasting/hand grinder to achieve preferred surface profile of CSP 2 or CSP 3.
- At Raft-Wall junction Angle Fillets/Vata/Coving must provide at size of 50 x 50 mm with cement sand Polymer modified mortar all around the periphery.

2 WATERPROOFING LAYER:

- The Waterproofing layer must be applied to the mother concrete substrate. The following products can be used: Dr Fixit Wonderproof 100, Dr Fixit Superseal 4500 PUH & Dr Fixit Superseal 500 GC.
- The Waterproofing layer to be properly cured before spray PU Foam activity is carried out.
- Before Spraying of the Foam surface must be properly cleaned to ensure proper bonding of the Foam

3 MACHINE AND EQUIPMENTS FOR SPRAY:

- Graco and Jaguar make machines are recommended. Pidilite Application Team Expert to suggest the latest machine configuration.
- Transfer pumps are recommended for material transfer from container to proportioner. The plural component proportioner must be able to supply each component within ± 2% of the desired mixing ratio by volume.
- Heated Hose to be set to deliver the material between a temperature range of +40°C to +45°C to the spray gun. These are especially recommended during the winters. Length of the hose also to be sufficient enough so that the temperature loss in transit is not more than 2 °C.
- 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.
- Compressor to delivery dry air to the mixing chamber, air dryer to be added to

4 APPLICATION DETAILS:

- Application must be carried out by certified trained sprayer.
- Ambient air temperature, wind velocity, substrate temperature & substrate moisture are critical determinants of Foam quality.
- 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 temperature better in terms of yield.
- Wind speeds less than 20 kmph are preferred for spraying as this results in reducing the wastages. If the Wind Speeds are very high Wind Shield to be provided.
- 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.
- Small size sample: 600X600 mm to be sprayed before start of each work. This will ensure foam quality and machine settings.
- Polyurethane Foam is formed when the two components are sprayed (base and activator) to form a monolithic seamless layer of rigid foam. Each spray to give a rise in the range of 10 -15mm.
- The Foam achieves 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 waterproof system and must not be allowed to keep exposed for more than 24 hours. This will lead to discoloration.
- As per the IS 12432 – Part 3 Code the Spray Foam to be continued on the vertical surface upto 500mm minimum with a multiplication factor of 1.2 considering the rebound losses.
- Regular test samples at various stages of project execution on which tests can be carried out for compliance of specifications.

Precautions & Limitations

- Material should be stored in shaded and covered place. Store drums at +20°C to +25°C for a minimum of at least 48 hours before use.
- Machine must be thoroughly cleaned before usage and mixing of our products with any other suppliers product is not recommended.
- 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.
- Refer to the latest Method Statement/SOP for a detailed application procedure

Technical Information

PROPERTY	UNIT	VALUE	TEST METHOD
Density	kg/m^3	> 55	ASTM D1622
Compressive Strength	kPa	> 500	ASTM D1621
Tensile Strength	kPa	> 500	ASTM D1623
Thermal Conductivity	W/mK	0.024 - 0.026	ASTM C 518* -2017

Water Absorption		< 1 %	ASTM D2842
Closed Cel Content	%	> 95	IS 11239 Part5, 1985 & ASTM D6226
Water Vapor Transmission	ng/Pa.s.m	< 2	ASTM E96
CFC & HCFC Content		Free	
Dimensional Stability 7 days @ -15°C 7 days @ +70°C	%	 < 1.0 < 1.5	ASTM D2126
Flammability		B2	DIN 4102

* Technical Information are typical values derived from testing under lab conditions and controlled atmosphere. Test values from field samples may vary depending on the site conditions

PITM – Pidilite Internal Test Method.

Shelf Life: Part A (Activator) – 12 months from the date of manufacturing.

Part B (Base) – 09 months from the date of manufacturing.

- Drums should be stored in shaded and covered place.
- Protect from moisture and moisture vapor, as it will react with the activator to form crystals in the material.

Packaging: Drums

Part A (Activator) : 250 kg

Part B (Base) : 210 kg.

Health & 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

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