

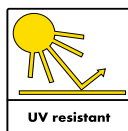
# Roofrite PU10

## Polyurethane foam and acrylic based waterproofing coating

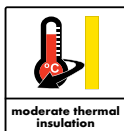
Long-lasting leak resistant roofing system, with efficient thermal protection for the metal roof structures

### CHARACTERISTICS

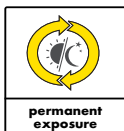
- ▶ Excellent UV resistance, weatherability & color retention properties
- ▶ Excellent resistance to water and vapour.
- ▶ High solar reflectance
- ▶ Moderate thermal insulation



UV resistant



moderate thermal insulation



permanent exposure

### DESCRIPTION

The system comprises of a thick layer of Polyurethane Foam and acrylic based weather and waterproofing coating - which is resistant to UV, other weathering agents and fully bonded to PU foam surface- representing the safest option for both permanent and temporary exposed metal roofs

### FIELDS OF APPLICATION

- industrial roofs
- metal roofs

### APPLICATION INSTRUCTIONS

Application procedures may vary slightly depending upon site conditions, the general recommended guidelines for the application of the waterproofing system is as follows:

#### Surface preparation

All the surfaces must be cleaned and made free of dust, dirt, moss, oil, grease and other loose particles.

#### Application of Polyfoam

Polyfoam SS-45A is CFC free, polymeric M.D.I based system for producing rigid urethane foam with a nominal core density of 45 kg/m<sup>3</sup> by spray process. The system may be applied to substrates where the surface temperature is of the order of 25 - 30°C. Grades, adjusted in reactivity, are available for both cold and hot condition.

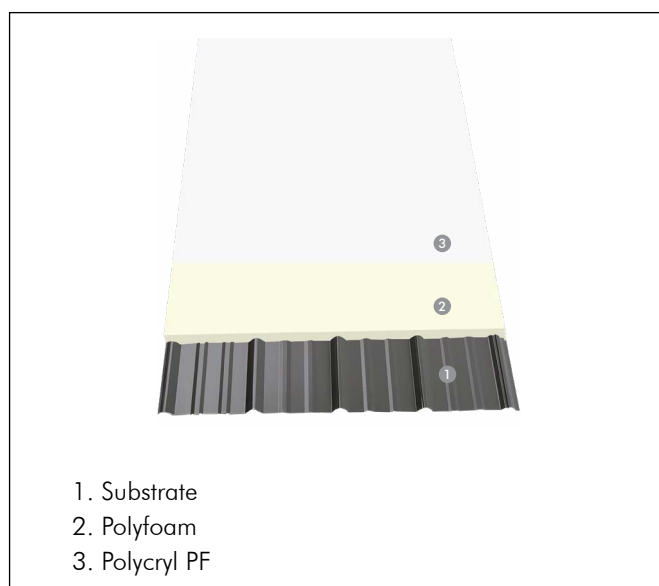
#### Component Properties

MDI component is a dark brown colored, undistilled grade of polymeric diphenyl methane di-isocyanate (crude M.D.I).

- viscosity @ 20°C. : 150 - 200 cps
- specific gravity @ 20°C 1.24
- NCO content, % wt. 30-31

Polyol Component is a low viscosity blend of polyols, blowing agent, catalysts and surfactant

- viscosity @ 20°C approx.450 cps.
- specific gravity @ 20°C : 1.16



1. Substrate
2. Polyfoam
3. Polycryl PF

#### Mix ratio

1:1 by volume.

Typical reaction rate and density (laboratory, cup mix) (both components at 20°C)

- cream time: 6 - 8 sec.
- tack free time: 15 - 25 sec.
- free rise density : 32 - 36kg/m<sup>3</sup>

Reactivity and density may vary depend on ambient temperature and grade.

The service pipes and support protruding from the roof slab shall be dressed around with sprayed PU from up to 250mm height at 25mm average thickness. The applied polyurethane foam shall form a continuous seamless thermal insulation and waterproofing layer.

**Protective coating:** Apply Polycryl PF with a brush, roller or airless spray. Allow the coating to dry completely before applying the subsequent coats. 2 coats should always be applied; the second coat at 90° to the first. Allow the final coating to cure fully (72 hours) after which it can be put in service. For roof applications, the coating shall be applied @0.85 L/m<sup>2</sup>/coat for a DFT of 1.0mm in 2 coats.

### COVERAGE

Polyfoam : Average consumption of 1.7kg/m<sup>2</sup> with 3cm thickness

Polycryl PF :1.5 m<sup>2</sup>/L at 400 microns Dry Film Thickness

## CLEANING

Clean all the tools with water after use. Hardened materials can be removed mechanically only. Partially used materials in pails can be re-used; all cured and partially cured material should be removed before re-using the material

## STORAGE & SHELF LIFE

Store Polyfoam at room temperature in sealed drums. Moisture will react with this component to produce a surface skin of polymerized material. Protect from moisture and moisture vapour. Close all drums after use. Maximum permissible storage time is 6 months. The ideal storage temperature is between +20°C and +25°C. MDI may undergo partial crystallization at temperature below 0°C. The product can, however, be brought back into the liquid state by placing the container in a heating cabinet and carefully warming the entire contents for a short time to a maximum of 70°C. Safety goggles, impermeable protective gloves and coveralls should always be worn when handling this product. Contaminated clothing should be removed immediately to prevent further skin contact. Store at room temperature (below 25°C.) in sealed drums. Close all drums after use to prevent loss of blowing agent and absorption of moisture.

Store Polycryl PF under cover, out of direct sunlight and protect from extreme temperatures. In tropical climate the product must be stored in air - conditioned environment (<25°C). The shelf life is up to 12 months in unopened conditions if stored as per the recommendations.

## HEALTH & SAFETY

As with all construction chemicals products caution should always be exercised. Protective clothing such as gloves and goggles shall be worn. Treat any splashes to the skin or eyes with fresh water immediately. Should any of the products be accidentally swallowed, do not induce vomiting, but call for medical assistance immediately.

## SUPPLY

	Packing	Unit
Polyfoam SS 45 A		
Part A	Drum	220Kg
Part B (MDI)	Drum	250Kg
Polycryl PF	Pail	25kg

## TECHNICAL SPECIFICATION - POLYFOAM

PROPERTIES	VALUES	TEST STANDARD
Mix ratio, [volume : volume]	1:1	
Final density, [kg/m <sup>3</sup> ]	43 to 48	ASTM D 1622
Application thickness, [cm]	Min. 3 to Max.10	
Compressive strength, [kpa] With rise	220 to 320	ASTM D 1621
Compressive strength, [kpa] Against rise	172 to 207	ASTM D 1621
Thermal conductivity @ 25°C, W/(mK)	Initial value: 0.023 Aged value: 0.026	ASTM C 518/19
Closed cell content, apparent vol, [%]	92 to 93	ASTM D 2856
Water vapor transmission, perm-inch All cut surfaces	2	
With skin retained	1	ASTM C 518/91
Water absorption, per cm <sup>2</sup> (gm/cc)		
Without protective coating	0.0087	
With protective coating	0.0019	ASTM C 272

All values given are subject to 5-20% variation

## TECHNICAL SPECIFICATION - TOP COAT

PROPERTIES	VALUES	TEST STANDARD
Color	White	-
Density, [g/cc]	1.35 ±0.05	ASTM D 1475
Solid content, [%]	60 ±2	ASTM D 2969
VOC, [g/L]	<10	ASTM D 3960
Tensile strength, [N/mm <sup>2</sup> ]	≥2	ASTM D412
Elongation, [%]	≥100	ASTM D412
Tensile strength retention after UV ageing, [%]	>90	ASTM D412
Elongation retention after UV ageing, [%]	>90	ASTM D 412
Adhesion to polyurethane foam [N/mm <sup>2</sup> ]	≥0.5	ASTM D 4541
Adhesion to concrete [N/mm <sup>2</sup> ]	≥1.5	ASTM D 4541
Water flood test	Pass	-
UV resistance @ 1000 Hrs	No deterioration	ASTM G 154

All values given are subject to 5-20% variation

Apart from the information given here it is also important to observe the relevant guidelines and regulations of various organisations and trade associations as well as the respective standards. The aforementioned characteristics are based on practical experience and applied testing. Warranted properties and possible uses which go beyond those warranted in this information sheet require our written confirmation. All data given was obtained at an ambient and material temperature of +23°C and 50 % relative air humidity at laboratory conditions unless specified otherwise. Please note that under other climatic conditions hardening can be accelerated or delayed.

The information contained herein, particularly recommendations for the handling and use of our products, is based on our professional experience. As materials and conditions may vary with each intended application, and thus are beyond our sphere of influence, we strongly recommend that in each case sufficient tests are conducted to check the suitability of our products for their intended use. Legal liability cannot be accepted on the basis of the contents of this data sheet or any verbal advice given, unless there is a case of wilful misconduct or gross negligence on our part. This technical data sheet supersedes all previous editions relevant to this product.