

Polyfoam SS 45

Spray polyurethane foam (SPF) system

Polyfoam SS 45 is a two-component, spray-applied polyurethane foam that creates a seamless, monolithic barrier against water vapor and air. Polyfoam SS 45 is an HFC-blown & CFC free, polymeric M.D.I based system for producing rigid urethane foam with a nominal core density of 45 kg/m³ 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.

Uses

- Roof spraying applications.
- Flooring and wall insulation.
- Storage tank insulation.

Component Properties

ISO 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, hydro fluorocarbon blowing agent, catalysts and surfactant

- Viscosity @ 20°C Approx.450 cps.
- Specific Gravity @ 20°C : 1.16

Storage and Handling

Store 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 overalls 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.

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 : 30 - 35kg/m³

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

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Technical Details

Properties	Values	Test Method
Mix Ratio (volume:volume)	1:1	
Core density, kg/m ³	43 - 48	ASTM D - 1622
Application Thickness (cm)	Min 3 cm Max 5 cm	
Compressive strength, kpa	With rise 220 - 320 Against rise 172 - 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 - 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 ² (gm/cc)	Without protective coating 0.0087 With protective coating 0.0019	ASTM C - 272
Dimensional Stability, % linear change	7 days @ - 15 °C < 1.0 7 days @ 100 °C 2 7 days @ 70 °C(100% RH) 2.5	ASTM D - 2126
Fire resistance	Conforming to Class B3	Din 4102

All values given are subject to 5-10% tolerance

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 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.

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