

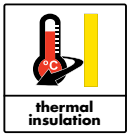
Polyfoam PIR-50 BA

Two component, polyisocyanurate block system

Polyfoam PIR-50BA is an HCFC-blown & CFC free, polymeric M.D.I based system to produce rigid PIR foam.

CHARACTERISTICS

- ▶ Injection/pouring grade
- ▶ CFC free
- ▶ 50kg density PIR



DESCRIPTION

Polyfoam PIR-50 BA is a two-component, Injection/pouring grade polyisocyanurate foam system developed for rigid PIR blocks, which has greatly increased resistance to burning and spread of flame. The composition of Polyfoam PIR-50BA, when subjected to fire, the outer surface forms a strong carbonaceous layer which retards further flame spread and is able to withstand temperature up to 140°C. Polyfoam PIR-50BA is an HCFC-blown & CFC free, polymeric M.D.I based system for producing rigid urethane foam with a nominal core density of 45 - 50 kg/m³ by injection/pouring process. Grades, adjusted in reactivity, are available for both cold and hot condition.

FIELDS OF APPLICATION

- PIR block manufacturing
- insulation of pipes, joints, tank and vessel

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, 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



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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. Polyol might 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. 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.

MIX RATIO

1 polyol : 1.3 MDI by weight.
 Typical reaction rate and density (laboratory, cup mix) (both components at 20°C & 100gm/mix)

- cream time: 85 - 90 sec
- gel time: 200 - 210 sec.
- free rise density : 43 - 52kg/m³

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

SUPPLY

Polyfoam PIR 50BA	220kg drum
Polyfoam MDI	250kg drum

TECHNICAL DETAILS

PROPERTIES	VALUES	STANDARDS
Mix ratio, [PBW]	1:1.3	-
Final density, [kg/m ³]	43 to 52	ASTM D 1622
Core density, [kg/m ³]	45 to 50	ASTM D 1622
Application thickness, [cm]		
Min	300	
Max	500	-
Compressive strength, kpa		
With rise	280 to 320	
Against rise	240 to 280	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 95	ASTM D 2856
Water vapor transmission, perm-inch		
All cut surfaces	1.5	
With skin retained	1	ASTM C 518/91
Water absorption, per cm ² (gm/cc)		
Without protection	0.0087	
With protection	0.0019	ASTM C 272
Dimensional stability, % linear change		
7 days @ - 15 °C	< 1.0	
7 days @ 100 °C	< 1.5	
7 days @ 70 °C [100% RH]	< 2.0	ASTM D 2126
Fire resistance	Class B2	DIN 4102
Service temperature	-40°C to 150°C	-

All values given are subject to 5-10% tolerance

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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.



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