

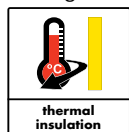
Polyfoam PIR-200

Three component, polyisocyanurate block system

Polyfoam PIR 200 is CFC and HCFC free, polymeric MDI based system to produce rigid PIR foam. However, quantity of HCFC is added by the customer during process to get the required densities.

CHARACTERISTICS

- ▶ Injection/pouring grade
- ▶ Blowing Agent Free (CFC & HCFC Free)
- ▶ High density PIR



DESCRIPTION

Polyfoam PIR-200 is a three-component, Injection/pouring grade polyisocyanurate foam system developed for rigid PIR blocks which has increased resistance to burning and spread of flame. The composition of Polyfoam PIR-200, when subjected to fire, the outer surface forms a strong carbonaceous layer which retards further flame spread and can withstand temperature up to 150°C. Polyfoam PIR-200 with HCFC and polymeric MDI produces rigid urethane foam with a nominal core density of 80 – 120 Kg/m³ by Injection/Pouring process. However, to achieve the density mentioned customer will adjust the quantity of HCFC blowing agent during process.

FIELDS OF APPLICATION

- PIR block manufacturing
- Pre insulated pipes

COMPONENTS 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 (Expiry – 6 months from production date)

Polyol Component is a blend of polyols, catalysts, and surfactant

- Viscosity @ 20°C is approx. 3200 cps.
- Specific gravity @ 20°C: 1.23 (Expiry - 6 months from production date)

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



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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. Polyol might store at room temperature (below 25°C.) in sealed drums. Close all drums after use to prevent 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

Typical reaction rate and density (laboratory, cup mix)
Polyol: 30 grams; HCFC: 5 grams; MDI: 42 grams (The ratio is approximately 1:1.2). Three components are mixed at 20°C @3000 RPM.

- Cream Time: 90 - 105 sec.
- Gel Time: 225 - 240 sec.
- Free Rise Density: 42 – 46 kg/m³

Reactivity and density may vary depending upon ambient temperature.

SUPPLY

Polyfoam PIR 200	220Kg drum
Polyfoam MDI	250Kg drum

Quality for Professionals

TECHNICAL DETAILS

PROPERTIES	VALUES	STANDARDS
Mix ratio, [PBW]	1:1.3	-
Final density, [kg/m ³]	80 to 120	ASTM D 1622
Core density, [kg/m ³]	75 to 115	ASTM D 1622
Application thickness, [cm]		
Min	300	
Max	400	-
Compressive strength, kpa		
With rise	420 to 450	
Against rise	380 to 420	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, [%]	95 to 98	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
Asbestos content	Nil	

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.



Henkel Polybit Industries Ltd.; PO Box: 293, Umm Al Quwain, UAE
 Tel: +971(6)76 70 777; Fax: +971(6)76 70 197; henkelpolybit@henkel.com
Henkel Polybit Industries Ltd.; PO Box: 5911, Dammam-31432, KSA
 Tel: +96613808 4061 / 62, Fax: +966 13 812 1164; polybitdammam@henkel.com
www.henkelpolybit.com

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