TPI Foam
Spray Foam Insulation

- หนังสือรับรองการทดสอบค่าการนำความร้อน
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Our ref : ISTRS/51996

September 29, 2008

Subject : Report of testing the physical properties of the specimens, "FOAMDEE, P.U.FOAM", one samples.

Dear sir ;

The Institute for Scientific and Technological Research and Services, King Mongkut's University of Technology Thonburi has finished testing the thermal conductivity (K-Value) of the specimen, "FOAMDEE, P.U.FOAM". The standard methods used are the ASTM. C-177. Results are as the following:-

Items	Description	Unit	Results
1.	Thermal Conductivity (K-Value)	W/m.K.	0.018
2.	Thickness at measurement	mm.	24.60
3.	Weight of Specimen	gm.	38.28
4.	Bulk Density	$Kg./m^3$	36.56
5.	Room Temperature	°C	29.50
6.	Temperature of Cold Plate	°C	10.00
7.	Temperature of Hot Plate	°C	37.70

Very truly yours,

(Miss. La-eid Pengsopar)
Lecturer responsible for testing / Laboratory Manager.

(Assoc.Prof.Dr. Vanida Bhavakul)
Acting for Director
Institute for Scientific and Technological Research and Services

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Raycore 4914 H1

Provisional Datasheet

Raycore A 4914 H1 is a formulated polyol, containing fire retardant and HCFC-141b, specifically designed for use in the production of rigid polyurethane insulation foam by the spray application method. The system based on Raycore 4914 H1 results in foams with an excellent k-factor and fire retardant properties.

APPLICATIONS

Rigid polyurethane foams for spray applications for use with an airless medium/high pressure foaming equipment. Main applications are thermal insulation of industrial roofing, farms, houses, external walls, tanks, spheres, pipelines, etc.

TYPICAL PROPERTIES

Density (@ 25° C)	g/ml	1.18
Viscosity (@ 25° C)	cps	100
Shelf life (@ 25° C)	months	3

MIXING RATIO BY WEIGHT

Raycore 4914 H1	138
Raynate B 9001 (c-MDI)	146

Note : A mix ratio of 1:1 by volume can also be employed.

FOAMING CHARACTERISTICS (hand mix @ 22° C,)

Cream time	secs.	3-5
Gel Time	secs.	7-10
Tack free time	secs.	9-12
Free rise density	kg/m3	28-32

STORAGE AND HANDLING

The components are sensitive to moisture and should therefore, at all times, be kept in sealed drums. Storage temperatures should be in the range 20-25°C to ensure a shelf life of 3 months.

TPI POLYOL CO.,LTD.
บริษัท ทีพีไอ โพลีออล จำกัด

Raycore 4914 H1 (continued)

TYPICAL FOAM PHYSICAL PROPERTIES
(blowing agent - HCFC-141b)

Tested on hand mix foam.

PROPERTY	TEST METHOD	UNITS	TYPICAL VALUE
Free Rise Density	-	Kg/m^3	≃ 30
Flammability	DIN 4102		B2
	ASTM 1692 (w)	mm	< 125 (S.E.)
Thermal Conductivity	ASTM-C-177	W/m° K	0.0197
Dimensional Stability (24 hrs)	ISO 2796		
- @ - 25° C		% volume change	< 1%
- @ + 70° C		% volume change	< 1%

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