



HITHERM®

HOT OR COLD WE GOT YOU COVERED

TECHNICAL DATA SHEET
FOR
HT-300

HT-300 is rigid closed cell polyisocyanurate foam. Its increased insulating efficiency compared to competitive insulations, offers better process controls and yields and therefore, substantially better upgrades in strength, durability, moisture resistance and a lower installed cost when compared to other insulation materials.

HT-300 provides exceptional values at continuous service temperatures of -297° F (-183° C) to $+300^{\circ}$ F ($+149^{\circ}$ C) and $+350^{\circ}$ F ($+172^{\circ}$ C) intermittent. HT-300 is also available as a liquid system for pour-in-place or “in situ” applications and for the manufacture of pre-insulated pipes. HT-300 is available in bun stock form in limited sizes. The physical and chemical properties of HT-300 are shown below.

PHYSICAL PROPERTIES *

<u>Property</u>	<u>ASTM Test Method</u>	<u>Result</u>	
Density , pcf (kg/m ³)	D-1622	2.0(32.0)	3.0(50.0)
Compressive Strength , psi (kPa)	D-1621		
Parallel to Rise		30 (207)	55 (379)
Perpendicular to Rise		20 (138)	45 (302)
Compressive Modulus , psi (kPa)	D-1621		
Parallel to Rise		720 (5000)	1190 (8180)
Perpendicular to Rise		345 (2380)	520 (3580)
Compressive Strength after exposure to 300⁰ F, for 7 days , psi (kPa)			
Parallel to Rise		26 (180)	52 (359)
Perpendicular to Rise		21 (145)	44 (304)

Compressive Strength after exposure to 350⁰ F for 7 days, psi (kPa)			
Parallel to Rise		22 (152)	47 (325)
Perpendicular to Rise		18 (122)	40 (276)
Tensile Strength, psi (kPa)	D-1623		
Parallel to Rise		50 (345)	75 (518)
Perpendicular to Rise		30 (207)	52 (359)
Tensile Modulus, psi (kPa)	D-1623		
Parallel to Rise		2040 (14,080)	3060 (21,080)
Perpendicular to Rise		727 (5020)	2275 (15,700)
k-Factor, BTU-in/hr-ft²-⁰F (W/mK)	C-518-91		
Initial		0.121(0.017)	0.127 (0.0183)
Aged 180 days @ 75 ⁰ F (24 ⁰ C)		0.165 (0.0238)	0.172 (0.0248)
Closed Cell Content, %	D-2856	90	92
Water Absorption, psf (g/cm²)	D-2842	0.05 (0.027)	0.075 (0.04)
Water Vapor Permeability, Perm-in (ng/Pa-S-M)	E-96	4.0 (6.8)	
Dimensional Stability, % Change	D-2126		
Dry Cold, -20⁰ F (-30⁰ C), 7 Days			
Length		0.1	0.1
Volume		1.3	0.9
Dry Heat, 212⁰ F (100⁰ C), 7 Days			
Length		1.0	1.2
Volume		2.3	2.0
Dry Heat, 300⁰ F (149⁰ C), 7, 14 & 28 Days			
Length		4.0, 4.5 & 4.6	2, 3.1 & 3.4
Volume		4.1, 4.1 & 3.2	1.7, 2.9 & 4.1
Dry Heat, 350⁰ F (172⁰ C), 7 Days			
Length		0.9	1.2
Volume		4.8	2.8
Humid Age, 158⁰ F (70⁰ C), 100% R.H., 7 Days			
Length		2.3	1.85
Volume		3.8	3.4

Surface Burning Characteristics¹**E-84**

	2.0 pcf		3.0 pcf
Thickness, inches	1.5	2.5	1.5
Flame Spread	20	20	25
Smoke Density	40	50	200

Service Temperature, ° F (° C)

Continuous
Intermittent

-297⁰ F (-183⁰ C) to + 300⁰ F (+149⁰ C)
To + 350⁰ F (+172⁰ C)

CHEMICAL PROPERTIES**Component B****Component A**

Ratio , Parts by weight	67	33
Viscosity , cps @ 77 ⁰ F (25 ⁰ C)	600-800	250-550
Specific Gravity , @ 77 ⁰ F (25 ⁰ C)	1.24	1.24
Reaction Profile , @ 77 ⁰ F (25 ⁰ C)	200 gram Lab. Hand mix, 3000 rpm mixer	
Start of Rise	20-45 secs.	
String Gel.	75-150 secs.	
Rise Time	100-240 secs.	
Free Rise Density	1.8 to 3.2 pcf (29 to 51 kg/m ³)	

* The physical properties of the HT-300 were determined by processing the chemicals through a low pressure, high shear mix machine and a continuous bun line conveyor. Chemical temperatures were maintained at 90⁰ F (32⁰ C) for the A component and 80⁰ F (26.5⁰ C) for the B component. Foam blocks measuring 20" x 48" x 72" were cut from the continuous pour. The resulting foam was cured at room temperature (approximately 70⁰ F or 20⁰ C) for thirty days. Testing was done on core samples cut from the foam blocks.

¹ This numerical flame spread rating is not intended to reflect hazards presented by this or any other material under actual fire conditions.