- HT-300
- HT-450
- HT-100-90A

HT-450

Technical Data Sheet

HT-450 is a rigid, closed cell polyisocyanurate foam that provides exceptional insulating value at continuous operating temperatures of +400° F (202° C), with intermittent service to +450° F (230° C).

HT-450 offers operators improved energy conservation due to increased insulating efficiency, better process controls and yields, while providing upgrades in strength, durability, stability, moisture resistance and a low installed cost. It is also available as a liquid system for use in pre-insulated pipes and "in situ" applications. HT-450 can also be made available as bun stock in limited sizes. The physical and chemical properties of HT-50 are shown below.

PHYSICAL PROPERTIES*

Property	ASTM Test Method	Result
Density, pcf (kg/m^3)	**D-1622**	2.45 (38.5)
Compressive Strength, psi (kPa) @ 10% Deflection	**D-1621**	
Parallel to Rise		30 (207)
Perpendicular to Rise		27 (186)
Compressive Strength after 28 day exposure to 400° F (202° C), psi (kPa)		
Parallel to Rise		17.5 (120)
Perpendicular to Rise		16.0 (110)
Closed Cell Content, %	**D-2856**	87
k-Factor, BTU-in/hr. ft^2 °F (W/mK)	C-518	
Initial		0.13 (0.018)
Aged 180 Days @ 75° F (25° C)		0.165 (0.022)
Aged 90 Days @ 140° F (60° C)		0.18 (0.026)
Water Absorption, psf (g/cm^2)	**D-2842**	0.035 (0.017)

% by Volume		< 2
DIMENSIONAL STABILITY, % Change	**D-2126**	
Dry Heat, 400° F (202° C)	**Length**	**Volume**
1 Day	+1.3	+0.1
7 Days	+2.3	-2.3
28 Days	+1.6	-4.4
Dry Heat, 450° F (230° C)		
1 Day	+10.3	+14.6
7 Days	+7.1	+1.5
28 Days	+1.9	-11.9
Dry Cold, -30° F (-34° C)		
1 Day	0	0
7 Days	0	0
Humid Age, 158° F (70° C), 95% Relative Humidity		
1 Day	+1.0	+0.84
7 Days	+1.52	+1.85
28 Days	+2.02	+1.85

Service Temperature

Continuous	-100° F(-73° C) to +400° F (202° C)
Intermittent	To +450° F (230° C)

Surface Burning Characteristics[1]

Flame Spread, 1"	40
Smoke Developed	80

[1] The numerical flame spread and smoke developed data shown above is not intended to reflect fire hazards presented under actual fire conditions.

- The physical properties shown above were obtained by processing the chemicals through a conventional low pressure high shear mixing machine. Chemical temperatures were maintained at 90° F (32° C) for the isocyanate component and 80° F (27° C) for the polyol. Box pours measuring 24" x 24" x 24" (61cm x 61 cm x 61 cm) were made and the resulting foam was cured for 30 days at room temperature, approximately 77° F (25° C). Testing was done on core samples cut from the box pour.

CHEMICAL PROPERTIES-HT-450

Property	**Component A**	**Component B**	**Component C**

Viscosity, cps @ 77° F (25° C)	600-800	750-1000	275-450
Specific Gravity, @77° F (25° C)	1.24	1.24	1.24
Ratio, Parts by weight	67	16.5	16.5

Reaction Profile: 200 gm Lab Hand mix with 3000 rpm mixer

Start of Rise:	15-45 secs.
String Gel:	60-150 secs.
Rise time:	90-240 secs.
Free Rise Density:	2.1-2.3 pcf (33.7-37 kg/m^3)

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