



P.O. Box 2400  
Cookeville, Tennessee 38502-2400  
Phone: 931-372-8871  
Fax: 931-525-3896

## Compressive Strength Test Report

Test Number: RD063113CS

Date of Test: August 15, 2006

Specimen: 1337060810-15

Date of Manufacture: 2006

Report prepared for: cfiFOAM, Inc. / Richard Porter

Description of Material Tested: Low-density white tank foam insulation.

### Test Method:

ASTM D 1621-00 - "Standard Test Method for Compressive Properties of Rigid Cellular Plastics", Procedure A

ASTM D 1621 results in data for the decrease in thickness of a test specimen expressed as a fraction of initial thickness. Test specimens are subjected to a downward compressive force to produce a relationship between applied force and specimen thickness. These data are used to determine the stress (force per unit area) required to reduce the specimen thickness by 10% of its initial value. Material is conditioned in the laboratory at 70 +/- 4 F and 50 +/- 5% RH prior to testing. An Instron Model 4400R Universal Testing Machine is used for this test to compress up to 13% of the initial thickness.

### Test:

Number of specimens tested:	7
Initial thickness of specimens:	1.0 inches
Area of specimens perpendicular to applied force	9 sq. in.
Cross-head speed:	0.1 in./min.

Specimen	Maximum Applied Force (lb <sub>f</sub> )	Compression at Max. Force (in.)	Applied Force @ 10% Compression	Stress @ 10% Compression lb <sub>f</sub> /in <sup>2</sup>
1	50.52	0.089	49.52	5.50
2	36.83	0.108	36.46	4.05
3	60.08	0.128	59.30	6.59
4	32.99	0.049	30.39	3.38
5	21.88	0.089	21.56	2.40
6	34.07	0.143	33.13	3.68
7	47.01	0.074	43.96	4.89
Average			39.19	4.35
Standard Deviation			12.69	1.41
Coefficient of Variation			32.4%	32.4%

The average value observed for the stress at 10% compression was 4.4 lb<sub>f</sub>/in<sup>2</sup>. A figure showing typical results for this material is attached. Additional observation: The uncertainty in the result for stress at 10% compression is 65% at the 95% confidence level.

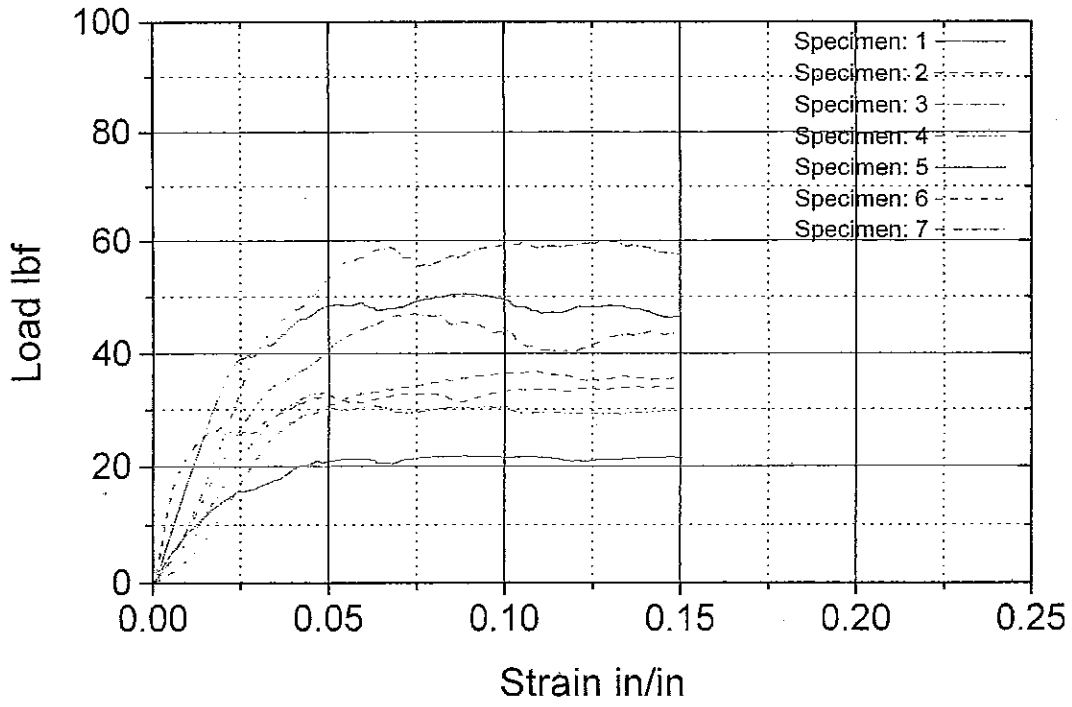
Reviewed By David W. Galloway

Date Aug 17, 2006

---

The results in this report apply only to the specimens tested.

Sample ID: core foam 8 06



**R & D Services**  
 102 Mill Drive  
 Cookeville, TN

Operator name: DWY  
 Sample Identification: core foam 8 06  
 Test Method Number: 0

Company Core Foam  
 Specimen Comments white foam cut from large block

General Compression Test - US Customary Units

Test Date: Wednesday, August 16, 2006  
 Interface Type: 4200/4300/4400  
 Crosshead Speed: 0.1000 in/min  
 Second Speed: 0.0000 in/min  
 Third Speed: 0.0000 in/min  
 Sample Rate (pts/secs): 20.0000  
 Temperature: 73 F  
 Humidity (%): 50  
 Dimension 4: 0.0000  
 Specimen G. L.: 1.0000 in

	Load at Max.Load (lbf)	Displcment at Max.Load (in)	Load @ Pre-set Point 1 (lbf)	Stress @ Pre-set Point 1 (psi)	Displcment @ Pre-set Point 1 (in)
1	50.520	0.089	49.517	5.502	0.100
2	36.830	0.108	36.456	4.051	0.100
3	60.080	0.128	59.302	6.589	0.100
4	32.990	0.049	30.389	3.377	0.100
5	21.880	0.089	21.560	2.396	0.100
6	34.070	0.143	33.127	3.681	0.100
7	47.010	0.074	43.961	4.885	0.100
Mean	40.483	0.097	39.188	4.354	0.100
S.D.	12.807	0.032	12.691	1.410	0.000