



DRAGON JACKET S-4

PIPE, FITTING, AND TANK INSULATION

DRY PROPERTIES*		
Tensile Strength	ASTM D638	± 3,000 psi (21 mpa)
Elongation	ASTM D638	± 100%
Hardness (Shore D)	ASTM D2240-81	65 ± 5
Permeance	ASTM D96-80	Perms-inch 0.007
Service Temperature		-40°F to +200°F (-45°C to +93°C)
TEST INFORMATION		
Mandrel Bend Test ASTM D 522-93a		Passed Mandrel Size 1" Test Temp -40°F (-40°C)

COLORS
Dragon Jacket S-1 is available in high pigment black and silver. Custom colors will be quoted upon request.
*It should be noted that Dragon Jacket S-1 is an aromatic polyurea; therefore, as with all aromatics, color change and superficial oxidation will occur.
TEST METHOD: 3,000 hour QUV Test with 0 degradation. Longer term testing is ongoing, and results will be available upon request.

TEST METHOD

ASTM C518-10, Standard Test Method for Steady-State Thermal Transmission Properties by Means of the Heat Flow Meter Apparatus.

HEAT FLOW METER THERMAL TRANSMISSION (R-VALUE)	
Test Specimine ID	1
Test Duration (Minutes)	50
Average Heat Flux (Btu/hr·ft ²)	3.99
Average Thermal Conductance - C (Btu/hr·ft ² ·°F)	0.080
Average Thermal Resistance -R (hr·ft ² ·°F/Btu)	12.53
Average Thermal Resistance -R _{si} (m ² ·K/W)	2.21
Average Thermal Resistivity -r (hr·ft ² ·°F/Btu-in)	5.74
Apparent Thermal Conductivity -k (Btu-in/hr·ft ² ·°F)	0.174
Specimine Average Thickness (inches)	2.183
†Specimine Average Density (lbs/ft ³)	5.7

IMMERSION*	
CHEMICAL	WEIGHT GAIN %
Acetic 50%	9.75% 11 months
Diesel	0.1% 3 years
Gasoline (Unleaded)	4.75% 17 months
Sulphuric Acid 14%	-0.86% 2 years
Phosphoric Acid 30%	
Jet Fuel JP-1,2,3	1.4% 5 years
Methanol	9.12% 19 months
Skydrol	16.5% 1 year
Sulphuric Acid (50%)	6.15% 1 year

*All cured film properties are approximate since processing parameters, admixture types, and quantities change physical properties of the cured elastomer. All samples for above tests were force cured or aged for more than three weeks.

†The density of the sample was determined by dividing the average weight of the sample by its volume. The weight was measured using a calibrated scale and the volume was determined by measuring the length, width, and height of a sample.

*Immersion samples were 'free films' (6 sides exposed). In service, containment liners have only one side of liner exposed to reagents. To calculate approximate chemical absorption, divide the weight gain percentage indicated on the chart by two. All tests performed at SPI location at room temperature. Certified free film samples are available for immersion evaluation.