



DRAGON JACKET TECHNICAL SPECIFICATIONS PIPE, FITTING, AND TANK INSULATION

S-1 DRY PROPERTIES*

Tensile Strength	ASTM D 638	> 4,000 psi (27.80 mpa)
Elongation	ASTM D 638	> 300%
Hardness (Shore D)		57
100% Modulus	ASTM D 412	± 1,700 (11.82 mpa)
200% Modulus	ASTM D 412	± 2,800 psi (19.46 mpa)
Tear Resistance	ASTM D 624	> 400 PLI
Service Temperature		-60°F to +250°F (-50°C to +121°C)
Abrasion Resistance		CS-17 wheel 1.0 mg lost

S-2 DRY PROPERTIES*

Tensile Strength	ASTM D638	± 3,150 psi (22 mpa)
Elongation	ASTM D638	± 630%
Hardness (Shore A)	ASTM D2240-81	80 ± 5
Hardness (Shore D)	ASTM D2240-81	33 ± 5
100% Modulus	ASTM D412	572 psi (4 mpa) ± 10
300% Modulus	ASTM D412	1,071 psi (7 mpa) ± 10
Tear Resistance	ASTM D624	314 PLi (55.00 KN/m) ± 50
Service Temperature		-109°F to +200°F (-78°C to +93°C)
Abrasion Resistance	ASTM D4060	
1,000 g -1,000 cycles		H-18 wheel 110 mg loss
Mandrel Bend Test	ASTM D522-13	1/4" at -60°F Passed

S-3 DRY PROPERTIES*

Tensile Strength	ASTM D638	± 5,200 psi (36 mpa)
Elongation	ASTM D638	± 300%
Hardness (Shore A)	ASTM D2240	100 ± 5
Hardness (Shore D)	ASTM D2240-81	65 ± 5
Service Temperature		-40°F to +350°F (-45°C to +176°C)
Abrasion Resistance	ASTM D4060	H-18 wheel 33 mg loss
1,000 g -10,000 cycles		CS-17 wheel 0.06 mg loss
Mandrel Bend Test	ASTM D522-93a	Passed Mandrel Size 1" Test Temp -60°F (-51°C)

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)	2.0

†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.

S-4 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)
Mandrel Bend Test	ASTM D 522-93a	Passed Mandrel Size 1" Test Temp -40°F (-40°C)

COLORS

Dragon Jacket is available in high pigment black and silver. Custom colors will be quoted upon request.

*It should be noted that Dragon Jacket 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.

*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 48 hours or aged for more than three weeks.