

Physical Properties of ORFF Foam

Our foam is made with “Green” bio-renewable additives such as castor, sunflower, soy, and corn oils.

ORFF 0.5# Water-Blown Foam

Property	Data	Test #
R-Value	3.7 @ 1”	ASTM C 518
Core Density	0.5lb/Cubic Foot	ASTM D 1622
Open Cell Content	>97%	ASTM D 6226
Sound Transmission Coefficient	42	ASTM E 90
Water Vapor Transmission – Permeance	21 Perms at 1”	ASTM E 96
Air Leakage Rate	< 0.02 (L/s-m ²)	ASTM E 283
Noise Reduction Coefficient	0.10	ASTM C 423
Tensile Strength (PSI)	5.19	ASTM D 1623
Dimensional Stability	< 5%	ASTM D 2126
Flame Spread	Class 1 <20	ASTM E 84
Smoke Development	Class 1 <400	ASTM E 84

ORFF 1# Water-Blown Foam

Property	Data	Test #
R-Value	5.5/inch	ASTM C 518
Core Density	1.0lb/Cubic Foot	ASTM D 1622
Water Vapor Transmission	3.5 Perms at 1”	ASTM E 96
Compressive Strength (PSI)	16	ASTM D 1621
Flame Spread	<25	ASTM E 84
Smoke Development	<450	ASTM E 84
Fungus Growth	Pass (0 growth rating)	ASTM C 1338

ORFF 2# Water-Blown Foam

Property	Data	Test #
R-Value	6.5 inch	ASTM C 518
Core Density	1.8-2.1lb/Cubic Foot	ASTM D 1622
Closed Cell Content	>90%	ASTM D 2856
Water Vapor Transmission	.95 per inch	ASTM E 96
Compressive Strength (PSI)	40	ASTM D 1621
Tensile Strength (PSI)	42-50	ASTM D 1623
Flame Spread	<20	ASTM E 84
Smoke Development	<450	ASTM E 84
Fungus Growth	Pass (O growth rating)	ASTM C 1338

ORFF 2# Gas-Blown Foam

Property	Data	Test #
R-Value	7.0 @ 1"	ASTM C 518
Core Density	2lb/Cubic Foot	ASTM D 1622
Closed Cell Content	>96%	ASTM D 6226
Sound Transmission Coefficient	38	ASTM E 90-85/E 413
Water Vapor Transmission – Permeance	11.49 Perms at 1" 0.92 Perms at 2"	ASTM E 96
Air Impermeable	< 0.005 (L/s-m ²)	ASTM E 2178
Noise Reduction Coefficient	0.10	ASTM C 423
Tensile Strength (PSI)	58 psi	ASTM D 1623
Dimensional Stability	< .27%	ASTM D 2126
Compressive Strength (PSI)	41 psi	ASTM D 1621
Flame Spread	Class 1 <10	ASTM E 84
Smoke Development	Class 1 <195	ASTM E 84

ORFF 2# Slow Rise Foam

Property	Data	Test #
R-Value	6.7 @ 1"	ASTM C- 518
Core Density	2.0lb/cubic ft	ASTM D-1622
Compressive Strength (PSI)	28	ASTM D-1621
Volume Change (Heat Aging)	Pass	ASTM D-2126
Volume Change (Humidity Aging)	Pass	ASTM D-2126
Compression Set (%)	2.9	MIL-P-21929 C
Water Absorbtion (PSF)	.05	ASTM D-2842
Unicellularity	12	ASTM D-2856 Proc. C
Oil Resistance	Pass	MIL-P-21929 C
UL 94 Flame Class	Pass	HF-1

ORFF 2# HL

Property	Data	Test #
R-Value	7.0 @ 1"	ASTM C 518
Core Density	2lb/Cubic Foot	ASTM D 1622
Closed Cell Content	>96%	ASTM D 6226
Sound Transmission Coefficient	38	ASTM E 90-85/E 413
Water Vapor Transmission – Permeance	11.49 Perms at 1" 0.92 Perms at 2"	ASTM E 96
Air Impermeable	< 0.005 (L/s-m ²)	ASTM E 2178
Noise Reduction Coefficient	0.10	ASTM C 423
Tensile Strength (PSI)	58 psi	ASTM D 1623
Dimensional Stability	< .27%	ASTM D 2126
Compressive Strength (PSI)	41 psi	ASTM D 1621
Flame Spread	Class 1 <10	ASTM E 84
Smoke Development	Class 1 <195	ASTM E 84

ORFF 3# Gas-Blown Foam

Property	Data	Test #
R-Value	6.3/Inch	ASTM C 518
Core Density	2.8lb/Cubic Foot	ASTM D 1622
Closed Cell Content	>90%	ASTM D 6226
Water Absorption	0.6%	ASTM C 2842
Wind Uplift	200lb/ft ²	ASTM E 96
Compressive Strength (PSI)	50-60	ASTM D 1621
Tensile Strength (PSI)	65-75	ASTM D 1623 Type C
Dimensional Stability	< 4%	ASTM D 2126
Flame Spread	40	ASTM E 84

	.5# Foam	1# Foam	2# Foam	2# Foam HL	2.5# Foam	3# Foam
Board foot yield	16,000-18,000	6,000-8,000	4000-4300	5000-5300	3300-3800	3200-3600
Primary Heat (A)	110-120°	110-120°	120-130°	125°	115-130°	120-130°
Primary Heat (B)	110-120°	110-120°	120-130°	125°	115-130°	120-130°
Hose Heat	110-120°	110-120°	120-130°	125°	115-130°	120-130°
Machine pressure	1000-1200 psi	1000-1200 psi	1000-1200 psi	1000-1200 psi	1000-1500 psi	1000-1200 psi

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