*Ultra*Duct™ GOLD*

Applicable Standards:

- Model Building Codes:
  - (BOCA, ICBO, ICC, SBCCI, WA State IAQ Standard)
- Material Standards: (UL 181)
  - Class 1 Rigid Air Duct
- Fire Safety Standards:

– (NFPA 90A, NFPA 90B)

Fire Resistance:

- Surface Burning Characteristics: (UL 723 and ASTM E 84)
  - Max. Flame Spread Index; 25
  - Max Smoke Developed Index; 50
- Limited Combustible:
  - (NFPA 259) < 3,500 Btu/lb

Physical/Chemical Properties:

- Thermal Performance: See Table
- Acoustical Performance: See Table
- Operating Limits:
  - Temperature: (ASTM C 411) Max. 250°F (121°C)
  - Air Velocity: (UL 181) Max. 5,000 fpm (25.4 m/s)
  - Pressure ± 2" wc (498 Pa)
  - Ambient Temperature 150°F (66°C)
- Water Vapor Sorption:
  - (ASTM C 1104) < 2% by weight
- Water Vapor Transmission (Facing):
  - (ASTM E 96, Desicant Method) Max. 0.02 perms (1.15 x 10 -9 g/Pa-s-m2)
- Air Leakage Class: (SMACNA)
  - Class 6
- Corrosiveness: (ASTM C 665)
  - Pass
- Bacteria Resistance: (ASTM G 22)
  - No Growth
- Fungi Resistance:
  - (ASTM C 138 & ASTM G 21) Pass; No Growth

THERMAL PERFORMANCE

Product			K-Value		C-Value		R-Value	
EI	Thickness in.	Thickness mm	Btu•in / h•ft.²•°F	W / m•°C	Btu / h•ft.²•°F	W / m2•°C	Btu / h•ft.²•°F	W / m²•°C
475	1	25	0.23	0.033	0.23	1.31	4.3	0.76
800	1	25			0.23	1.31	4.3	0.76
	1½	38			0.15	0.87	6.5	1.15
	2	51			0.12	0.65	8.7	1.53

Thermal conductance (C) and resistance (R) values are derived from the material thermal conductivity (k) value. Tested in accordance with ASTM C 518 and/or ASTM C 177 at 75°F (24°C) mean temperature.

ACOUSTICAL PERFORMANCE

Product Type			Absorption Coefficients @ Octave Band Frequencies (Hz)						NRC
EI	Thickness in.	Thickness mm	125	250	500	1000	2000	4000	
475	1	25	0.04	0.19	0.69	0.94	0.99	0.98	0.70
800	1	25	0.07	0.22	0.77	1.00	1.03	1.05	0.75
	1½	38	0.12	0.33	0.92	0.92	1.03	1.02	0.85
	2	51	0.14	0.72	1.05	1.02	0.95	0.96	0.95

Sound absorption tested in accordance with ASTM C 423 using Type A mounting per ASTM E 795.