

Barrier Composites

3

TUFCOTE® barrier and barrier absorber composites incorporate the sound absorption properties of TUFCOTE acoustical foams with the sound barrier properties of TUFCOTE barrier materials to provide highly effective noise control and installation efficiency in a wide range of applications.

Easy and economical to install, barrier absorber composites are ideal for lining vehicle and boat engine com-

partments, generator covers, engine firewalls, and machinery and equipment enclosures, where the durable facings provide protection from dirt, oil and grease.

Available with pressure-sensitive adhesive (PSA), they also can be edge-sealed to resist moisture, oil and other contaminants, and are easily die-cut.

• Combine tough, flexible E-A-R barriers with acoustical foams for

high transmission loss performance

- E Series composites include WB Series vinyl barriers
- R Series composites include R Series urethane barriers
- Ideal for application to engine firewalls, vehicle floor mats, existing cabinets and machinery housings
- Data presented for four products of the many standard and custom composites available

Typical Properties

Property	E-0-10-25	E-2D25-10-0	R803-25-10-100SM	R813-25-10-100RM
Description	2-layer	2-layer	3-layer	3-layer
Decoupler	0.64cm (0.25 in) Polyether Urethane Foam	.635cm (0.25in) Vinyl Damping Foam	0.64cm (0.25 in) Polyether Urethane Foam	0.64cm (0.25 in) Polyether Urethane Foam
Barrier	5 kg/m ² (1 lb/ft ²) Vinyl	5 kg/m ² (1 lb/ft ²) Vinyl	5 kg/m ² (1 lb/ft ²) Urethane	5 kg/m ² (1 lb/ft ²) Urethane
Absorber	N/A	N/A	2.54 cm (1 in) Polyether Urethane Foam Faced with Reinforced Alum. Polyester	2.54 cm (1 in) Polyether Urethane Foam Faced with Reinforced Alum. Polyester
Thickness cm (in)	.76 (0.30)	.765 (.32)	3.6 (1.35)	3.6 (1.35)
Weight Nominal kg/m² (lb/ft²)	5.01 (1.02)	5.86 (1.20)	5.40 (1.10)	5.40 (1.10)
Flammability				
UL 94	Composite listed V-0 & 5VA	Barrier listed V-0	Faced foam listed HBF	Faced foam listed HBF
FMVSS-302	Meets	Meets	Meets	Meets
Tensile Strength kPa (psi)				
Barrier, ASTM D638	3723 (540)	3723 (540)	6370 (924)	6370 (924)
Composite, ASTM D638		938 (136)		
Tear Strength kN/m (lbf/in)				
Barrier, ASTM D1004	17 (100)	17 (100)	20 (120)	20 (120)
Elongation (%)				
Barrier, ASTM D638	160	160	40	40
Composite ASTM D638		182		
Sound Transmission Loss (dB)				
ASTM E90-90 and ASTM E413-87	Mounted to 16ga Composite steel panel	Mounted to 1/8 in aluminum panel	Mounted to 16ga Composite steel panel	Mounted to 16ga steel panel
@ 125 Hz	21 15	24	23 15	23
@ 250 Hz	29 17	24	26 17	26
@ 500 Hz	32 19	27	26 19	26
@ 1000 Hz	30 26	31	31 26	31
@ 2000 Hz	46 37	48	50 37	50
@ 4000 Hz	60 50	47	62 50	62
STC	34 24	32	32 24	32
Temperature Range C (F)				
Peak Performance	-30C to 82C (-22F to 180F)	-30C to 82C (-22F to 180F)	-34C to 93C (-29F to 199F)	-34C to 93C (-29F to 199F)
RoHS Compliant	Yes	Yes	Yes	Yes

The data listed in this materials summary are typical or average values based on tests conducted by independent laboratories or by the manufacturer. They are indicative only of the results obtained in such tests and should not be considered as guaranteed maximums or minimums. Materials must be tested under actual service to determine their suitability for a particular purpose.