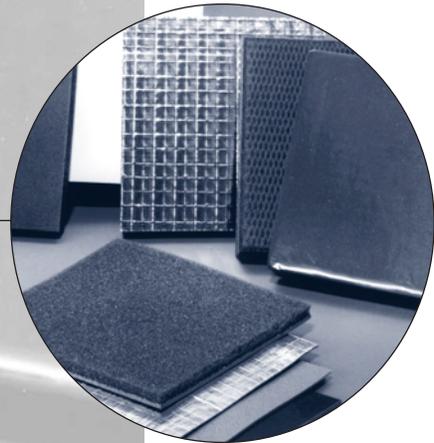


Barrier Composites

Materials Summary Sheet

3



Offering solutions for a wide range of applications such as...

Utility vans



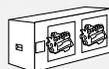
Heavy trucks



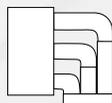
Machinery enclosures



Generators



HVAC systems



E·A·R[™]

Aero Technologies • a 3M company

Barrier Composites

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

compartments, 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 Aluminized 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/m ² (lb/ft ²)	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	24	23	15	23	
@ 250 Hz	29	17	24	24	26	17	26	
@ 500 Hz	32	19	27	27	26	19	26	
@ 1000 Hz	30	26	31	31	31	26	31	
@ 2000 Hz	46	37	48	48	50	37	50	
@ 4000 Hz	60	50	47	47	62	50	62	
STC	34	24	32	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.

