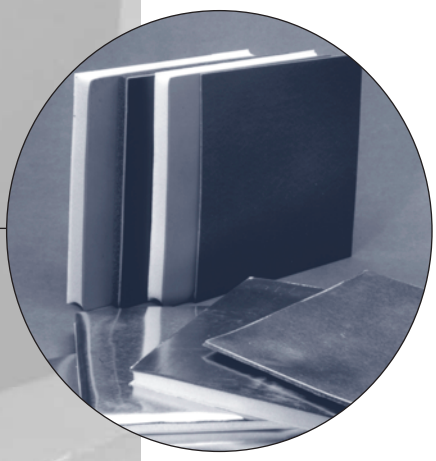
Damping Composites

Materials Summary Sheet

5



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

- **Heavy trucks**
- **Aircraft**
- **Boats**
- **Buses and RVs**
- **Electromechanical equipment**

E-A-R™

Aearo Technologies • a 3M company

Damping Composites

E-A-R damping composites combine the advantages of lightweight extensional damping foams and sheets with high performance acoustical foams, non-lead loaded barriers and aluminum constraining layers to provide both structureborne and airborne noise control in one convenient package. They can be die-cut and easily applied with PSAs.

NV Composites

- Combine ISOLOSS® NV damping sheet with TUFCOTE® acoustical foam materials for maximum noise control
- Flexible, easy to cut and install
- Aluminized facing reflects light, deflects heat, repels soil and moisture

Damping Absorber Composites

- Combine extensional damping sheets with acoustical absorbing foams
- Flexible, weight-efficient
- Ideal for electromechanical equipment such as printers, disk drives and other computer peripherals, medical and office equipment, and appliances

Damped Decoupled Barriers

- Combine ISODAMP C-3000 Series foams with ISODAMP barriers
- Control both airborne noise and structureborne vibration
- Feature a variety of facings for added properties such as durability and appearance
- Applications include engine firewalls, floors and equipment enclosures in trucks, off-road vehicles and boats

ISODAMP® C-3000 Series Foams

- Feature proprietary semi-closed-cell thermoplastic alloy foams
- Highly efficient damping performance for weight-sensitive applications on light-gauge metal and plastics
- Feature controlled recovery for energy absorbing and damping applications

Typical Properties

Property	*NV-7520-100SM*	*C-2206PSA-50SF*	*E-2D50-10-0*	*C-3002-25ALPSA*
Description				
Foam Layer	2.54 cm (1.0 in) Urethane Foam w/Alum. Polyester	1.27 cm (0.5 in) Urethane Foam	1.27cm (0.5 in) Damping Foam	.64 cm (0.25 in) Damping Foam
Solid Layer	0.190 cm (0.075 in) Urethane Damping Material	0.076 cm (0.030 in) Vinyl Damping Material	5 kg/m² (1lb/ft²) Vinyl Barrier	0.013 cm (0.005 in) Aluminum
Weight Nominal kg/m² (lb/ft²)	4.75 (0.97)	2.25 (0.46)	5.86 (1.2)	1.37 (0.28)
Flammability				
UL 94, solid layer	Listed V-0	Listed HB	Listed V-0	Meets V-0
UL 94, foam layer	Listed HBF	Meets HF-1	Meets HBF	Listed HBF
FMVSS-302	Meets	Meets	Meets	Meets
FAR 25.853(a) Appendix F Part I (a) (1) (ii) (12 sec)				Meets
Tensile Strength kPa (psi)				
Solid layer, ASTM D638	6440 (934)	9632 (1397)	3723 (540)	82000 (11893)
Composite, ASTM D638			703 (102)	
Tear Strength kN/m (lbf/in)				
Solid layer, ASTM D1004	42 (241)	58 (332)	17 (100)	263 (1504)
Elongation (%)				
Solid layer, ASTM D638	60	31	160	10.5
Composite, ASTM D638			188	
Temperature Range C (F)				
Peak Performance	-10C to 60C (14F to 140F)	-18C to 71C (0F to 160F)	-18C to 55C (0F to 131F)	5C to 55C (41F to 131F)
Recommended Max. Intermittent	125C (257F)	107C (225F)	71C (160F)	71C (160F)
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.

E-A-R™
Aearo Technologies • a 3M company
www.earsc.com solutions@earsc.com
Toll-free hotline (877) EAR-IDEA (327-4332)
7911 Zionsville Road Indianapolis, IN 46268 Phone (317) 692-1111 Fax (317) 692-3111
650 Dawson Drive Newark, DE 19713 Phone (302) 738-6800 Fax (302) 738-6811

3M