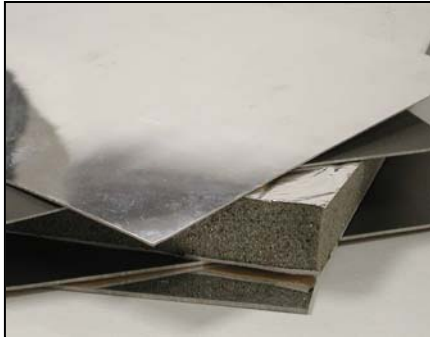


ISOLOSS[®] NV Damping Materials and Composites



Product Applications

Medical and lab equipment

Commercial and consumer appliances

Engine enclosures

Office equipment

Automobiles

Boats and watercraft

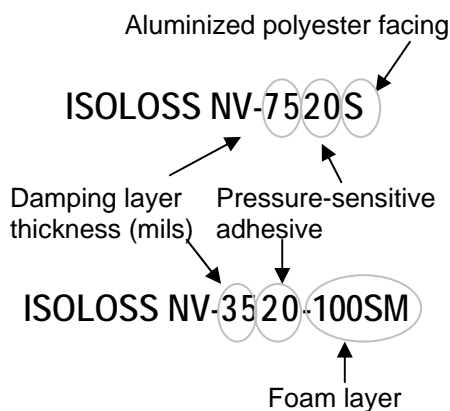
Trucks, buses and RVs

- Excellent physical properties
- Aluminized facing reflects light, deflects heat, repels soil and moisture
- Can be incorporated into extensional, composite and constrained-layer damping systems for versatile solutions
- Environmentally friendly — RoHS Compliant
- Flexible, easy to cut and install
- Feature pressure-sensitive adhesive backing, for ease of installation
- Custom constructions available—thicknesses, facings, composite layers, sheet sizes

E-A-R's new line of ISOLOSS NV urethane damping materials and composites offers effective, cost-efficient damping of structural vibration and impact noise. The multi-layer composites, which combine NV damping materials with acoustical absorbing foams, offer multi-functional energy control with the installation ease of a single product.

The new family of materials features an aluminized facing, which reflects heat and light. The durable polyester also protects the foam composites from dirt and fluids. All of the new materials come standard with a pressure-sensitive adhesive (PSA). They are easily die-, web- or kiss-cut. Standard sheet size is 54-inches by 48-inches. Custom sizes and constructions also are available.

Part Nomenclature



Availability

Part Number	Description
Damping Sheets	
NV-3520S	2 mil aluminized polyester, 35 mil urethane damping sheet, PSA20*
NV-3534S	2 mil aluminized polyester, 35 mil urethane damping sheet, PSA 34*
NV-7520S	2 mil aluminized polyester, 75 mil urethane damping sheet, PSA 20*
Damping Composites with Acoustical Foam	
NV-3520-100SM	1 mil aluminized polyester, 1 in. acoustical foam, 35 mil urethane damping sheet, PSA 20*
NV-7520-100SM	1 mil aluminized polyester, 1 in. acoustical foam, 75 mil urethane damping sheet, PSA 20*

*See pressure-sensitive adhesive data on back.

Damping Sheet

Property	NV-3520S	NV-7520S
Description		
Facing	2 mil aluminized polyester	2 mil aluminized polyester
Damping Layer	35 mil urethane	75 mil urethane
Density Nominal kg/m³ (lb/ft³)		
ASTM D792	2002 (125)	1922 (120)
Flammability		
UL94	Listed V-2	Listed V-0
MVSS 302	Meets	Meets
Tensile Strength kPa (psi)		
ASTM D638	17237 (2500)	8966 (1300)
Tear Strength kN/m (lbf/in)		
ASTM D1004-93, ASTM D3574	57 (322)	37 (211)
Elongation (%)		
ASTM D638	30	25
Temperature Range C (F)		
Peak Performance	-10 to 60 (14 to 140)	-10 to 60 (14 to 140)
Recommended Max. Intermittent	125 (250))	125 (250)

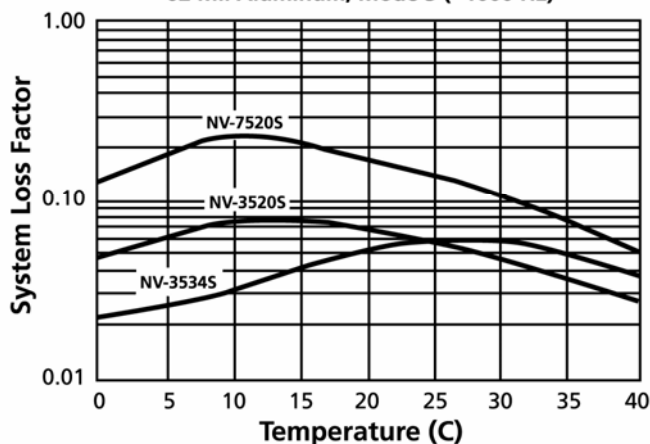
Damping Composites — Foam Layer

Property	M-100SM
Description	1 mil aluminized polyester facing on 2.54 cm (1 in) urethane foam
Flammability	
MVSS 302	Meets
Thermal Conductivity—K Value	
ASTM C177 W/m • K (BTU in/hr ft ² F)	.038 (0.26)
Tensile Strength kPa (psi)	
Foam, ASTM D3574	
at 23C (73F), ambient humidity	88(13)
at 70C (158F), 100% humidity x 2 wk	98 (14)
Facing, ASTM D882	4134 (28,500)
Tear Strength kN/m (lbf/in)	
Foam, ASTM D35744	.55 (3.1)
Elongation (%)	
Foam, ASTM D3574	
at 23C (73F), ambient humidity	113
at 70C (158F), 100% humidity x 2 wk	136

Adhesive Layer

Property	PSA 34	PSA 20
Chemical Type	SBR	Acrylic
Vehicle	Solvent	Solvent
Thickness cm (in)		
Adhesive	0.006 (.0025)	0.006 (.0025)
Adhesive Carrier (PET)	0.0013 (0.0005)	0.0013 (0.0005)
Peel Strength N/m (oz/in) PSTC-1		
at 10 min	1533 (140)	985 (90)
at 24 hr	2190 (200)	1259 (115)
Relative Tack (Initial) PSTC-5	High	Moderate
Shear Strength PSTC-7		
2.5 cm x 2.5 cm at .5 kg	200 hr	
2.5 cm x 2.5 cm at 1 kg		60 hr
Resistance		
Oxidation and UV	Fair	Very Good
Water and Humidity	Fair	Good
Plasticizer and Oil	Poor	Fair
Temperature Range C (F)		
Peak Performance	-40 to 71 (-40 to 160)	-40 to 93 (-40 to 200)
Recommended Max. Intermittent	93 (200)	107 (225)
Release Liner	Natural Kraft 80 lb ream silicone-coated polyethylene	Natural Kraft 80 lb ream silicone-coated polyethylene

ISOLOSS NV Damping Performance
62 Mil Aluminum, Mode 3 (~1000 Hz)



Damping Performance	NV-3520S	NV-3534S	NV-7520S
System Loss Factor at 1000 HZ on 62 mil Alum.			
Thickness cm (in)	.09 (.035)	.09 (.035)	.19 (.075)
ASTM E756-93			
@ 0C (32F)	.047	.022	.127
@ 10C (50F)	.075	.031	.235
@ 20C (68F)	.072	.054	.174
@ 30C (86F)	.049	.061	.110
@ 40C (104F)	.029	.040	.054

The data listed in this data sheet are typical or average values or engineering estimates 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.