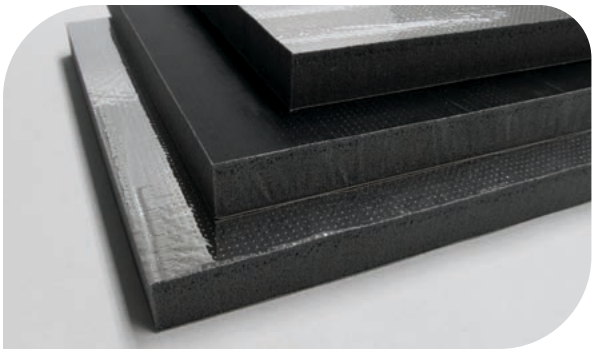
RAISING THE BAR TO KEEP THE NOISE DOWN

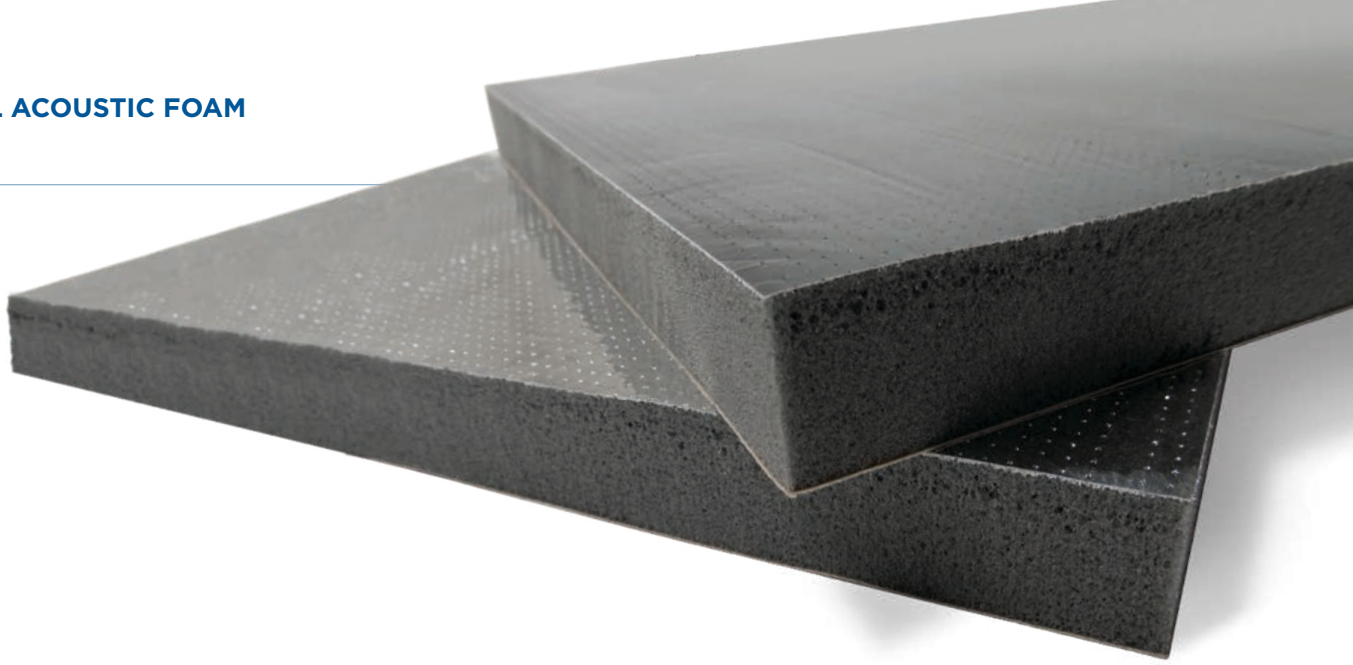
High NRC TUFCOTE™ XL Acoustic Foam

New

TUFCOTE™ XL Acoustic Foam is the latest innovation in the E-A-R™ branded portfolio of acoustic products. TUFCOTE™ XL acoustic foam is manufactured with an optimized cellular construction to create a new material capable of achieving a Noise Reduction Coefficient (NRC) of 0.8 at 1-inch thickness. Available with an aluminized or black surface, this material can also protect fragile components from heat sources within the equipment.



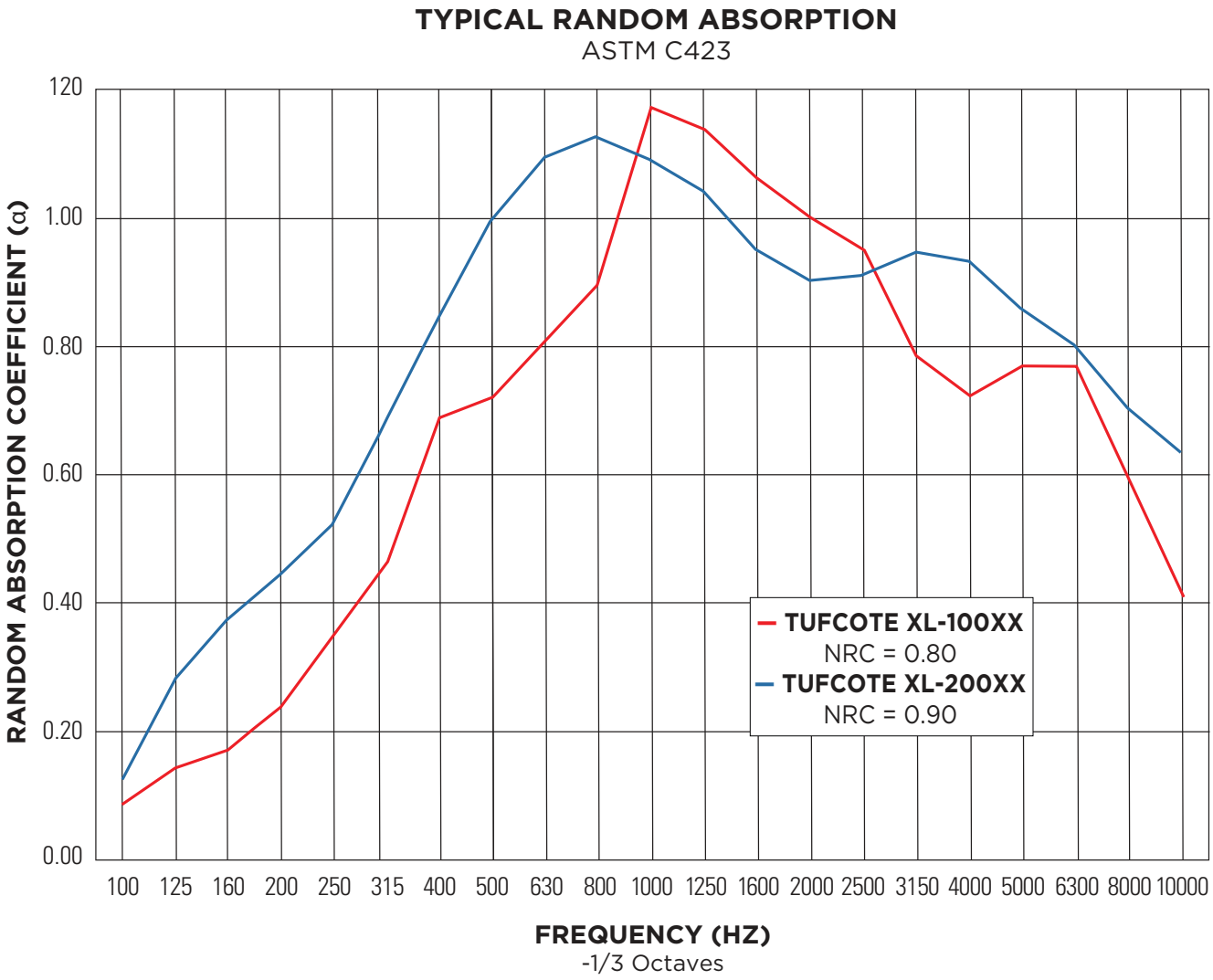
0.8 Noise Reduction Coefficient (NRC) to help you meet your system requirements



Introducing TUFCOTE™ XL Acoustic Foams

The new TUFCOTE XL acoustic foams reach 0.8 NRC values at 1-inch thickness. The acoustic absorber features a unique PET facing on a polyurethane foam to accentuate absorption for very high NRC value. The XL foam meets HF-1 flame rating and the requirements of UL2200.

TYPICAL PROPERTIES	TUFCOTE XL-100XX	TUFCOTE XL-200XX
Description		
Top Surface	Modified 1.0 mil Aluminized Polyester (AP) or Modified 1.0 mil Black Polyester (BP)	Modified 1.0 mil Aluminized Polyester (AP) or Modified 1.0 mil Black Polyester (BP)
Foam Thickness mm (in) Nominal	25.4 (1)	50.8 (2)
Density Nominal kg/m³ (lb/ft³)		
ASTM D3574	28.8 (1.8)	28.8 (1.8)
Flammability (Foam Only)		
UL2200	Meets	Meets
UL94 HF-1	Listed	Listed
FMVSS302	Meets	Meets
Tensile Strength, Foam, kPa (psi)		
ASTM D3574		
@ 23°C (73°F), Ambient Humidity	101 (14.7)	101 (14.7)
@ 70°C (158°F), 100% Humidity x 2 weeks	117 (16)	117 (16)
Elongation, Foam (%)		
ASTM D3574 @ Room Temperature, Ambient Humidity	109	109
Tear Strength kN/m (lbf/in.)		
Foam, ASTM D3574	0.46 (2.6)	0.46 (2.6)
Facing, ASTM D882 kPa (psi)	73 (420)	73 (420)
Thermal Conductivity – "k" Value		
ASTM C177 W/m•K (BTU in./hr ft² F)	0.038 (0.264)	0.038 (0.264)
Random Incidence Absorption Coefficient		
ASTM C423		
@ 125 Hz	0.14	0.28
@ 250 Hz	0.23	0.52
@ 500 Hz	0.72	1.09
@ 1000 Hz	1.17	1.11
@ 2000 Hz	1.0	0.90
@ 4000 Hz	0.72	0.93
NRC	**0.80**	**0.90**
Temperature Range °C (°F)		
Recommended Service Temperature	-40 to 107 (-40 to 225)	-40 to 107 (-40 to 225)
RoHS Compliant	Yes	Yes



World-Class Manufacturing Process - Failure Is Not an Option

Aearo Technologies LLC's proprietary manufacturing process for TUFCOTE™ XL acoustic foams creates a superiorly constructed product designed specifically for power generation enclosures. Our thin sheet casting process chemically bonds the input materials (PSA/foam/surface). Unlike other urethane foams that are laminated (glued), TUFCOTE foam does not delaminate or separate. This is particularly important in high air flow areas of the enclosure or when installed over head of a heat source such as an engine.

The thin sheet casting process additionally allows Aearo Technologies LLC to manufacture TUFCOTE XL foams efficiently and economically. Together with integrated parts fabrication, maximized shipping programs and the highest ISO quality standards, it is no surprise that Aearo is a leading supplier to power generation OEMs.

Industry-leading performance, superior construction, highest possible value ➡ TUFCOTE XL Acoustic Foams

Advantages of Aluminized Facing over a Black-Faced Foam in High-Temperature Applications

TUFCOTE XL-AP acoustic foam utilizes an aluminized polyester surface to protect the foam while increasing both the thermal and acoustic performance.

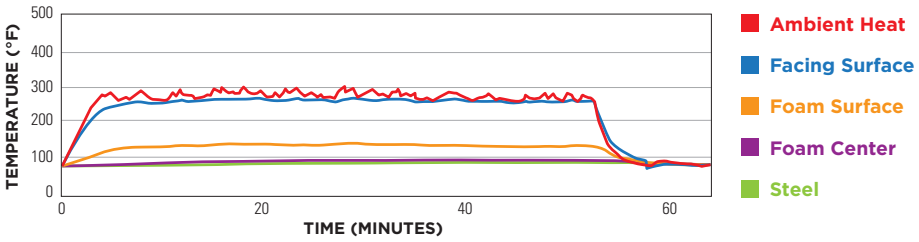
Where to Use:

TUFCOTE XL -AP foam is ideally used inside the enclosure and around radiated heat sources. The reflective surface deflects radiant heat, lowering both foam and substrate (enclosure surface) temperatures. This allows the enclosure design to be more efficient and reduces touchpoint temperatures.

A black urethane surface and an aluminized polyester surface were tested near a radiant heat source at a distance of 3". The black urethane surface continued to absorb heat until the test was terminated. At conclusion, there was over a 75°F delta in substrate temperatures between the black urethane (150°F) and the aluminized polyester surface (75°F).

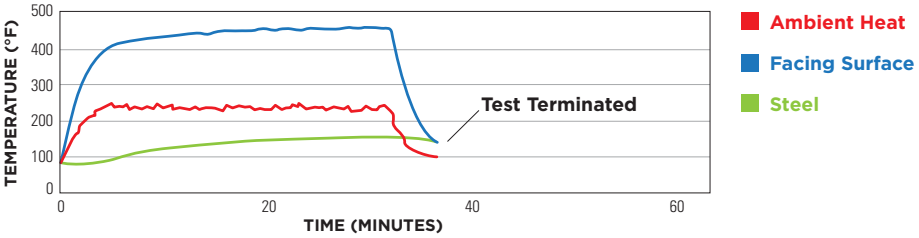
In addition to improved efficiency, the aluminized polyester surface reflects interior lighting. This allows OEMs to reduce the amount of lighting and create a bright and clean enclosure.

TUFCOTE ALUMINIZED POLYESTER FACED FOAM RADIANT HEAT TEST

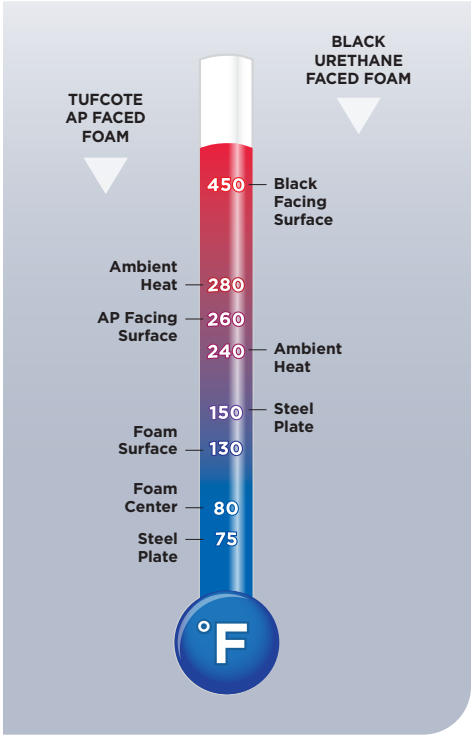


The TUFCOTE aluminized polyester faced foam deflected heat throughout the test. Its surface temperature remained steady at just over 250°F, while the temperatures of the foam surface, foam center and steel backing plate remained significantly cooler.

BLACK URETHANE-FACED FOAM RADIANT HEAT TEST



Absorbing heat throughout the test, the black urethane faced foam reached a temperature of nearly 450°F, while the ambient air reached only 240°F. The temperature of the steel backing plate reached 150°F and was still rising when the test was terminated.



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