TECHNICON ACOUSTICS
SOUND SCIENCE

PRODUCT: TECH SHIELD

TECH SHIELD™ TS-040 REV071023NT

PRODUCT DESCRIPTION: Nominal 0.125" thick proprietary blend of inorganic fiber with reinforced aluminum face and permanent 3-mil acrylic adhesive with easy peel release liner.

TYPICAL APPLICATIONS: Shield components from radiant heat sources

Physical Property	Description - Value	Test Standard
Material	Inorganic Fiber w/ Reinforced Aluminum Face	N/A
Color	Black	N/A
Basis Weight	0.00072 lb/in^2 (5.0 N/m^2) +/- 10%	Fiber, Facing, PSA
Chemical Resistance	Resistant to most alkalines, solvents, acids, UV light and will not support mold or mildew growth	N/A
Temperature Range	-40 to 425 °F (-40 to 218 °C)	
	Can be placed 1 inch (2.54 cm) away from a 1000 °F (538 °C) continuous heat source.	1800 °F (982 °C) intermittent
Thermal Conductivity	0.019 BTU/hr·ft·°F @ 77 · °F (0.033 W/mK @ 25 °C) 0.025 BTU/hr·ft·°F @ 212 · °F (0.043 W/mK @ 100 °C)	+/- 10%
Heat Soak Resistance	138 °F cold side, 1" from 1000 °F heat source	8 hr heat soak

FACING

Physical Property	Description - Value	Test Method
Material	Aluminum foil with Bi-directional fiberglass reinforcement	
Total Thickness	7.8 mil (0.198 mm) +/- 10%	Micrometer
Mullen Burst	45 lb/in^2 (0.31 N/mm^2)	ASTM D774
Low Temperature Resistance	Remains Flexible with No Delamination @ -40 °F (-40 °C)	ASTM C1263
High Temperature Resistance	Remains Flexible with No Delamination	10 min @ 401 °F (205 °C)
Water Immersion	No Delamination	48 hours @ 73 °F (23 °C)
Emissivity (Foil Side)	</= 0.05	ASTM E408
Flammability	Self-Extinguishing	FMVSS 302-98

Physical Properties based upon statistical averages.

4412 REPUBLIC COURT, CONCORD, NC 28027 OFFICE 704.788.1131 FAX 704.788.7772 www.techniconacoustics.com

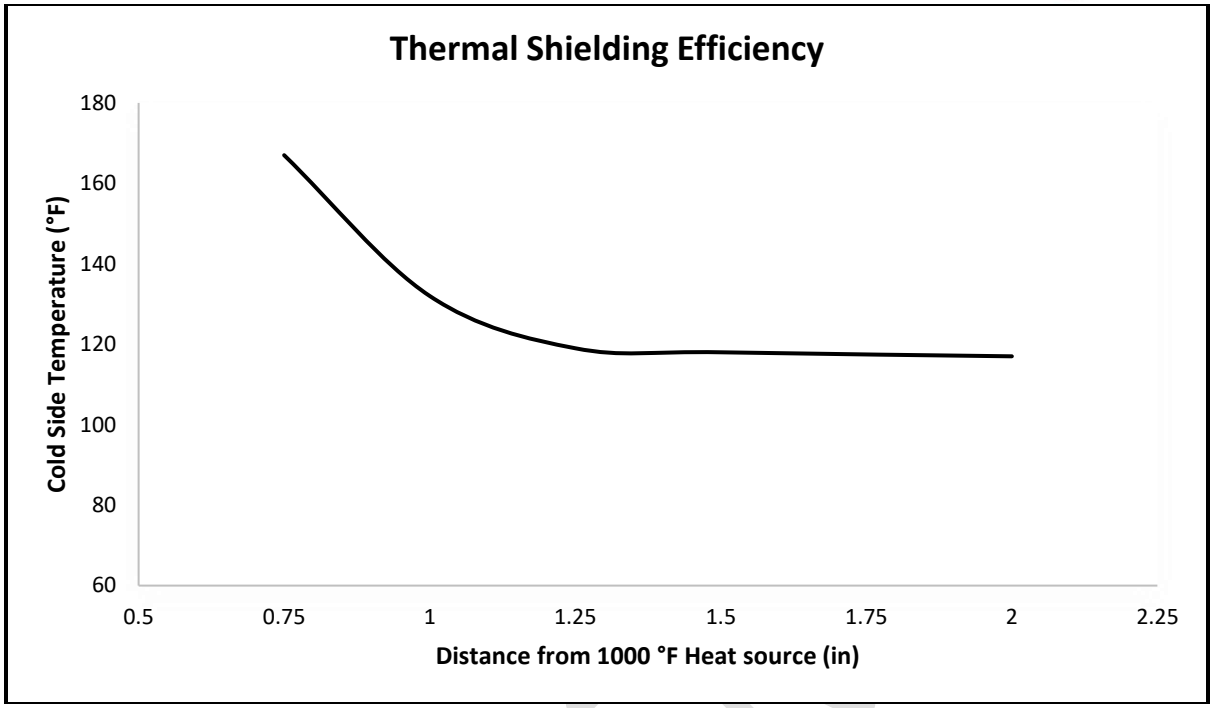
PSA

Physical Property	Description - Value
Material	Acrylic
Type	Polyester Scrim
Liner Type	Silicone-coated paper, yellow
Thickness	3 mil (0.08 mm)
Recommended Application Temperature	50 to 86 °F (10 to 30 °C)
Temperature Resistance	-22 to 248 °F (-30 to 120 °C)

Peel Adhesion Tests: 23 µm PET

Dwell	Material	Results
1 min	Powder-coated Aluminum	0.14 lb/in (400 N/mm)
	Glass	0.15 lb/in (425 N/mm)
	Polypropylene	0.14 lb/in (400 N/mm)
	Steel	0.22 lb/in (625 N/mm)
10 min	Glass	0.15 lb/in (425 N/mm)
	Steel	0.23 lb/in (650 N/mm)
24 hours	Glass	0.19 lb/in (525 N/mm)
	Steel	0.25 lb/in (700 N/mm)

Test	Requirements	Results
Static Shear Adhesion	23 µm PET, 625 mm^2 area, @73 °F, 1 hr. dwell	28.0 lb/in (4.9 N/mm)
Shear Adhesion Failure Temperature (SAFT)	23 µm PET, 1 hr. dwell, 625 mm^2 area, 40 g/m^2 adhesive coating weight, 1.8 °F/min ramp rate	270 °F (132 °C)



Temperature taken after 1 hour at each distance

Compliance Features:

- UL2200 Listed
- Meets the Requirements of RoHS through June 2013 Revision of SVHC (Restriction of Hazardous Substances European Union Directive – 2002/95/EC)
- Compliant with European Union REACH (Registration, Evaluation and Authorization of Chemical Substances - EC1907/2006)

THE VALUES PRESENTED ARE TYPICAL AND ARE NOT INTENDED FOR SPECIFICATION PURPOSES. This information is provided without warranty, representation, inducement or license of any kind. INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANABILITY AND FITNESS FOR A PARTICULAR USE OR PURPOSE, except that it is accurate to the best of Technicon Industries' knowledge or obtained from sources believed by Technicon Industries to be accurate, and Technicon Industries does not assume any legal responsibility for the use or reliance upon same. Customers are encouraged to conduct their own tests for suitability and conformance of the material to distances away from a heat source as 1 inch from a 1000 °F source is the recommended limit.