SKANDIA

PRODUCTS & SERVICES CATALOG

Skandia, Inc is pleased to offer the following Products & Services:

DAX Foam & Upholstery Supplies

Soundproofing Solutions

Flammability Testing & Certification

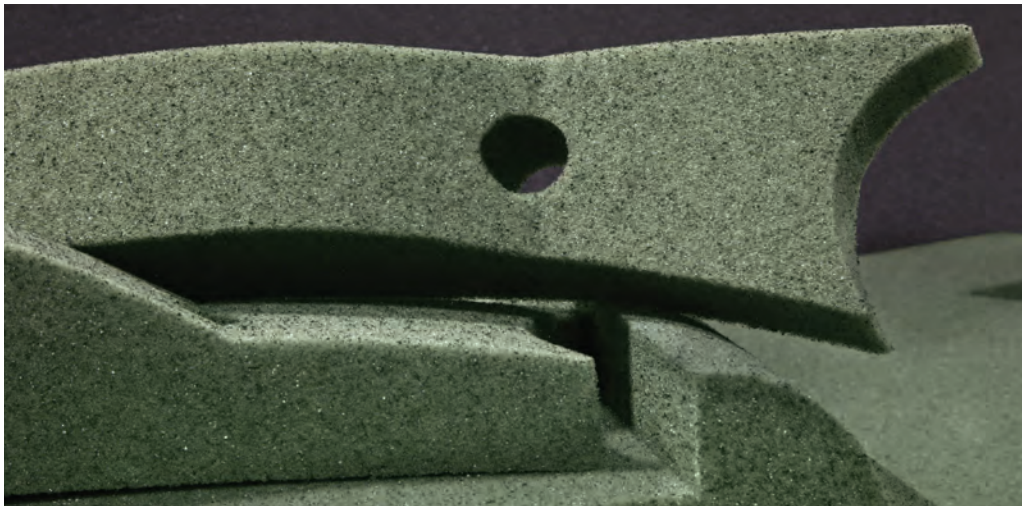
Foam Fabrication Programs

5000 North Highway 251, Davis Junction, IL 61020 | 800 945 7135 | www.skandiainc.com

SKANDIA

DAX FOAM AND UPHOLSTERY SUPPLIES





All divisions are supported by an in-house team of DERs and DARs that efficiently respond to our diverse customer base including major OEMs, completion and modification centers, as well as corporate and private aircraft owners/operators.

Place Your Order Today — It Ships Today!

INTERIOR + UPHOLSTERY SUPPLIES ARE IN STOCK AND READY TO SHIP
THE SAME DAY YOU PLACE YOUR ORDER

Skandia offers a wide variety of aviation-grade seating foams including DAX firehard foams, HR Poly and Confor. One of our best selling items for headliner and trim panel applications is Aerolite. Aerolite provides superior resistance to compression set while providing acoustic absorption to create a quieter cabin environment.

In addition, Skandia also supplies name brand upholstery supplies. From specialty hardware to tools to batting, we make it convenient and cost-effective to purchase everything you need to refurbish or complete your aircraft.

Contact a Product Sales Representative toll-free at

800-945-7135

or shop online at **SkaniaInc.com**

5000 North Highway 251, Davis Junction, IL 61020 | 800 945 7135 | www.skandiainc.com

DAX
Firehard Foams



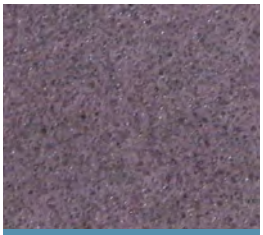
DAX20



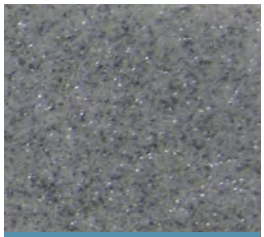
DAX47



DAX90



DAX26



DAX55

DAX Firehard Foam

Comfortable Firehard foams in Five Densities.

Demonstration of Compliance with Material Flammability Requirements per 14 CFR 25.853(a) Amendment 25-116 Appendix F Part I(a)(1)(ii).

Temperature Operational Range: No specified low temperature limit. Upper limit is 300 degrees Fahrenheit; at which sustained exposure can lead to material degradation.

BENEFITS

- In Stock, Can Ship Same Day!
- Custom Sizes and Fabrication Available
- Superior Firehard Properties
- Color-coded for Ease of Identification

SHEET STOCK TOLERANCE SPECIFICATIONS

Width (all) ± 0.30″	**Thickness**	
Length	0.125″ ± 0.0625″	0.75″ ± 0.0625″
≤ 24″ ± 0.30″	0.25″ ± 0.0625″	1.00″< 2.00″ ± 0.10″
> 24″ ± 0.50″	0.50″ ± 0.0625″	≥ 2.00″ ± 0.20″

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TECHNICAL DATA SHEET

DAX

Firehard Foams

	DAX20	DAX26	DAX47	DAX55	DAX90
DENSITY (pcf)	3.20 ± 0.20	3.10 ± 0.30	3.20 ± 0.20	3.20 ± 0.20	5.0 ± 0.50
***ILD** (lbs.) (Indentation Load Deflection on 4" (Thickness) Test Method ASTM D3574 - 25% Support Factor 65/25 Test Method ASTM D1056	 15-25 2.4 min 1.19-1.99	 20-30 2.4 min 1.59-2.39	 40-50 2.4 min 3.18-3.98	 50-60 2.4 min 3.98-4.77	 80-100 2.4 min 6.37-7.96
****RESILIENCE** (% Rebound)	36-60	57-63	54-62	54-62	35-45
TEAR RESISTANCE (lb/in)	1.0-2.0	1.0-2.0	1.0-2.0	1.0-2.0	1.0-2.0
****STATIC FATIGUE** Test Method ASTM D3574-81 Procedure A (75% Deflection, 22 hrs.) % Loss in 25% ILD % Loss in Thickness	 <25 <5	 <25 <5	 <25 <5	 <25 <5	 <25 <5
DYNAMIC FATIGUE BY CONSTANT FORCE POUNDING ASTM D3574 (80,000 cycles - final measurement 24 hours after test completed) % Lost at 40% ILD	 <15	 <15	 <15	 <15	 <15
FLAMMABILITY California Technical Bulletin 117	PASS	PASS	PASS	PASS	PASS
14 CFR 25.853(a) Amendment 25-116 Appendix F Part I(a)(1)(ii) 12 Second Vertical	PASS	PASS	PASS	PASS	PASS
***14 CFR 25.853(c) Apendix F Part II Oil Burn Test	PASS	PASS	PASS	PASS	PASS
SMOKE AND TOXICITY Airbus Industrie AITM 3.0005	PASS	PASS	PASS	PASS	PASS

***TESTED USING ASTM D1056 & SCALED TO LBF**
****DOES NOT APPLY TO DAX SP FOAMS**
*****WHEN CONSTRUCTED USING APPROVED COVERING MATERIALS**

TECHNICAL DATA SHEET

DAX SP

Firehard Foams

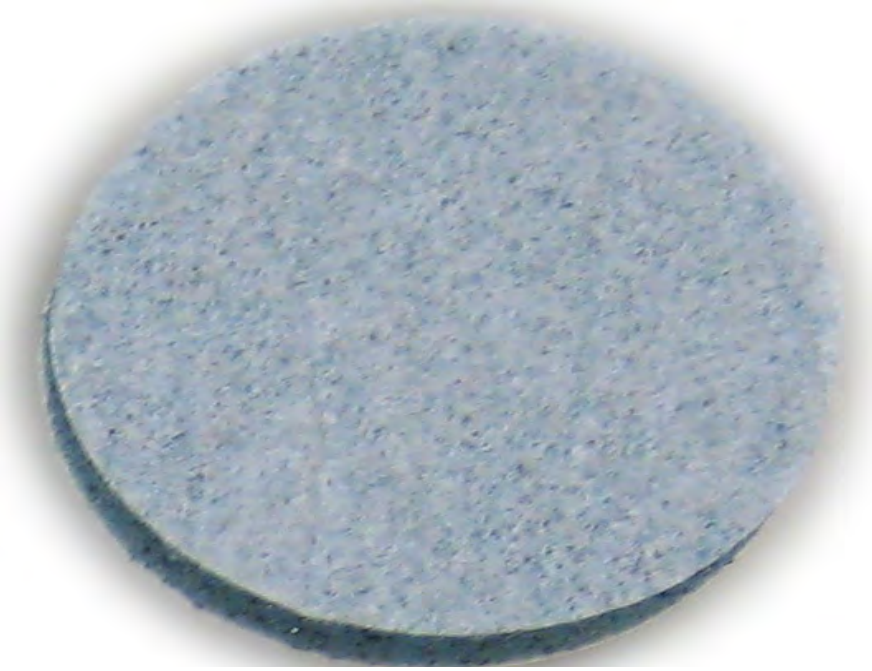
	DAX20 W/SP	DAX26 W/SP	DAX47 W/SP	DAX55 W/SP	DAX90 W/SP	DAX90 W/SP
DENSITY (pcf)	4.2 ± 1.0	4.2 ± 1.0	4.2 ± 1.0	4.2 ± 1.0	8.3 ± 1.6	8.3 ± 1.6
THICKNESS	.25″	.25″	.25″	.25″	.125″	.25″
ILD (Indentation Load Deflection on 4″Thickness) 25% Support Factor 65/25	15-30 4.0 min	20-35 2.7 min	40-55 2.5 min	50-65 2.6 min	80-120 3.7 min	80-120 3.7 min
TEAR RESISTANCE* (lb/in)	3.0-4.0	3.0-4.0	3.0-4.0	3.0-4.0	3.0-4.0	3.0-4.0
FLAMMABILITY California Technical Bulletin 117 14 CFR 25.853(a) 12-Second Vert. 14 CFR 25.853(c) Oil Burn Test***	 PASS PASS PASS	 PASS PASS PASS	 PASS PASS PASS	 PASS PASS PASS	 PASS PASS PASS	 PASS PASS PASS
SMOKE AND TOXICITY 14 CFR PART 25.853(d) AITM 2.0007 AITM 3.0005 BSS-7238 BSS-7239	 PASS PASS PASS PASS PASS	 PASS PASS PASS PASS PASS	 PASS PASS PASS PASS PASS	 PASS PASS PASS PASS PASS	 PASS PASS PASS PASS PASS	 PASS PASS PASS PASS PASS

***TESTED USING ASTM D1056 & SCALED TO LBF**

*****WHEN CONSTRUCTED USING APPROVED COVERING MATERIALS**

DAX W/Scrim

Firehard Foams



DAX Firehard Foam W/Scrim

Comfortable Firehard foams in Five Densities.

Looks smoother under dress cover materials.

Retains comfort and durability characteristics.

Enables usage of lightweight foams in combination with DAX to reduce overall cushion weight.

Eco-friendly alterrnative to DECA.

BENEFITS

- In Stock, Can Ship Same Day!
- Superior Firehard Properties
- Color-coded for Ease of Identification

SKANDIA

TECHNICAL DATA SHEET

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DAX W/Scrim

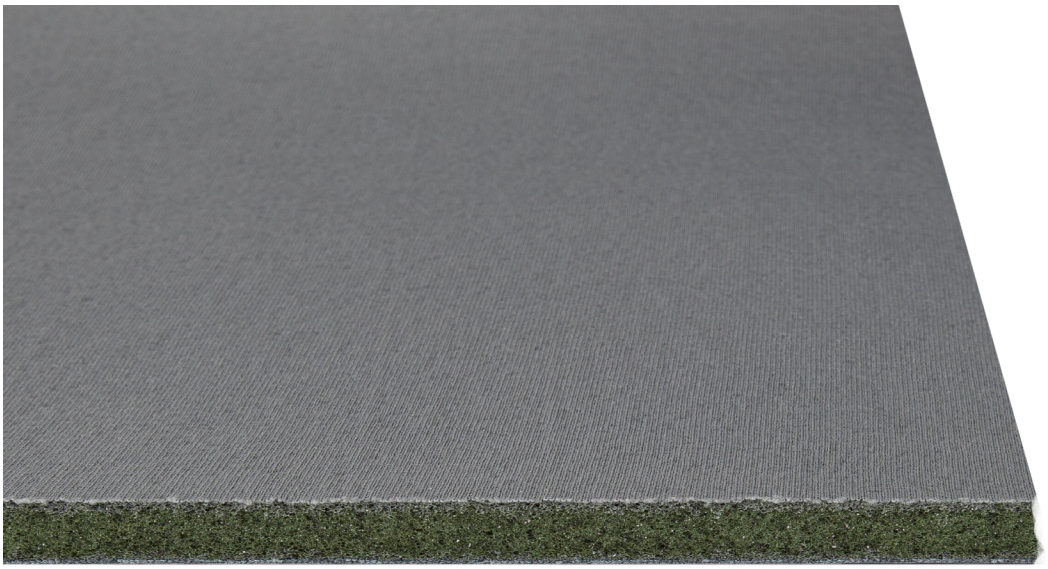
Firehard Foams

	DAX20 SCRIM	DAX20 SCRIM	DAX26 SCRIM	DAX26 SCRIM	DAX47 SCRIM	DAX47 SCRIM	DAX55 SCRIM	DAX90 SCRIM
THICKNESS	.25"	.50"	.25"	.50"	.25"	.50"	.50"	.50"
DENSITY (pcf)	5.1 ± .3	5.2 ± .3	3.9 ± .3	4.2 ± .3	4.6 ± .3	4.7 ± .3	4.0 ± .3	
ILD (Indentation Load Deflection on 4" Thickness) 25% Support Factor 65/25	15-30 4.0 min	15-30 4.0 min	20-35 2.7 min	20-35 2.7 min	40-55 2.5 min	40-55 2.5 min	50-65 2.6 min	80-105 3.9 min
TEAR RESISTANCE* (lb/in)	**	**	**	**	**	**	**	**
FLAMMABILITY								
California Technical Bulletin 117	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
14 CFR 25.853(a) 12-Second Vert.	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
14 CFR 25.853(c) Oil Burn Test***	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS

***TESTED AT 1" THICKNESS PER ASTM D3574-95**
****THE TENSILE OF SCRIM EXCEEDS THAT OF THE FOAM WHICH IT IS ADHERED TO AND THUS NEGATES TESTING OF FOAM WITH SCRIM**
*****WHEN CONSTRUCTED USING APPROVED COVERING MATERIALS**

SKANDIA

DAX SP with Jersey Scrim



DAX SP W/Jersey Scrim

When sewn into the dress cover, seats appear smooth and wrinkle-free.

Decorative quilting and other techniques are especially user-friendly due to its ability to stretch.

BENEFITS

- Enables easy dress cover application
- Has shown to improve flammability performance
- Superior Firehard properties
- Retains comfort and durability characteristics

SKANDIA

TECHNICAL DATA SHEET

SKANDIA

DAX SP with Jersey Scrim

	DAX20 SP W/ JERSEY SCRIM	DAX20 SP W/ JERSEY SCRIM	DAX26 SP W/ JERSEY SCRIM	DAX26 SP W/ JERSEY SCRIM	DAX47 SP W/ JERSEY SCRIM	DAX47 SP W/ JERSEY SCRIM	DAX55 SP W/ JERSEY SCRIM	DAX55 SP W/ JERSEY SCRIM
WEIGHT (oz/yd²)	18.3	30.5	17.8	25.5	19.0	29.8	18.2	32.5
THICKNESS	.25"	.50"	.25"	.50"	.25"	.50"	.25"	.50"
ILD (Indentation Load Deflection on 4"Thickness) 25% Support Factor 65/25	15-25 4.0 min	15-25 4.0 min	20-30 2.7 min	20-30 2.7 min	40-50 2.5 min	40-50 2.5 min	50-60 2.6 min	80-100 3.9 min
FLAMMABILITY								
California Technical Bulletin 117	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
14 CFR 25.853(a) 12-Second Vert.	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
14 CFR 25.853(c) Oil Burn Test*	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
FMVSS302	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS

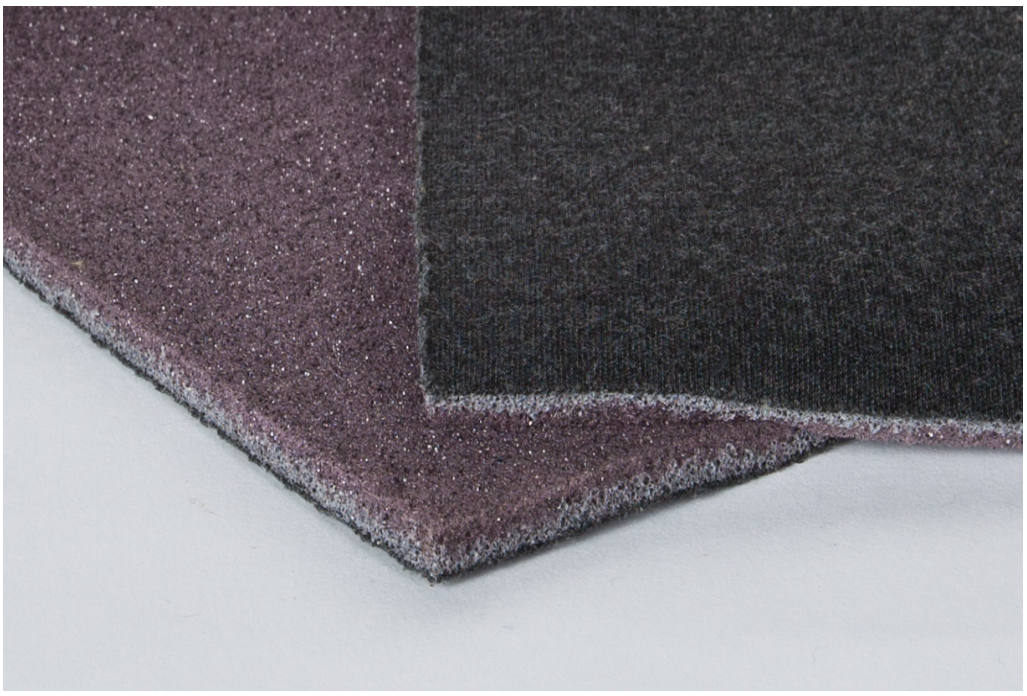
JERSEY SCRIM

YARN COMPOSITION	Polyester
FABRIC WEIGHT	9.83 oly/5.28 osy/178.9 gsm
THICKNESS	0.024"
RESISTANCE	120,000 dry rubs

***WHEN CONSTRUCTED USING APPROVED COVERING MATERIALS**

SKANDIA

DAX SP Foam with FireGuard Scrim



DAX SP Foam with FireGuard Scrim

DAX Foam with FireGuard Scrim gives passengers all the quality and comfort they expect from Skandia but now with VASTLY SUPERIOR fire protection.

When sewn into the dress cover, seats appear smooth and wrinkle-free

Decorative quilting and other techniques are especially user-friendly due to its ability to stretch.

BENEFITS

- Vastly superior fire resistance and comfort
- Four-way stretch fire protective fabric
- Laminated materials means reduced material processing
- Maximum Durability

SKANDIA

TECHNICAL DATA SHEET

DAX SP Foam with FireGuard Scrim

	DAX 20 SP W/ Fireguard Scrim	DAX 20 SP W/ Fireguard Scrim	DAX 26 SP W/ Fireguard Scrim	DAX 26 SP W/ Fireguard Scrim	DAX 47 SP W/ Fireguard Scrim	DAX 47 SP W/ Fireguard Scrim	DAX 55 SP W/ Fireguard Scrim
Thickness	.25"	.50"	.25"	.50"	.25"	.50"	.25"
Weight (oz/yd^2)	17.9	30.0	17.4	25.0	18.6	29.4	17.8
ILD (Indention Load Deflection on 4" Thickness) 25% Support Factor 65/25	15-25 4.0 min	15-25 4.0 min	20-30 2.7 min	20-30 2.7 min	40-50 2.5min	40-50 2.5min	50-60 2.6 min
FLAMMABILITY							
California Technical Bulletin 117	PASS	PASS	PASS	PASS	PASS	PASS	PASS
14 CFR 25.853(a) 12-Second Vert.	PASS	PASS	PASS	PASS	PASS	PASS	PASS
14 CFR25.853(c) Oil Burn Test*	PASS	PASS	PASS	PASS	PASS	PASS	PASS
FMVSS302	PASS	PASS	PASS	PASS	PASS	PASS	PASS

FireGuard

YARN COMPOSITION	Proprietary blend of high-performance fibers
FABRIC WEIGHT	6.04 oz/sq yd
THICKNESS	0.054"

***WHEN CONSTRUCTED USING APPROVED COVERING MATERIALS**

HR Polyfoam



HR2444



HR70



HR30



HR55

HR Polyfoam

Comfortable HR Foams in four levels of firmness.

Demonstration of Compliance with Material Flammability Requirements per 14 CFR 25.853(a) Amendment 25-116 Appendix F Part I(a)(1)(ii).

BENEFITS

- In Stock, Can Ship Same Day!
- Wide Variety of Densities
- Custom Sizes and Fabrication Available

SKANDIA

TECHNICAL DATA SHEET

HR Poly Foam

	HR30	HR2444	HR55	HR70
DENSITY (pcf)	2.60 ±0.10	2.40 ±0.10	2.80 ±0.10	3.20 ±0.20
***ILD** (lbs.) (Indentation Load Deflection on 4" (Thickness)				
25%	32-38	40-48	51-59	69-79
65%	65-86	105-120	120-156	165-190
SUPPORT FACTOR	2.6	2.6	2.4	2.4
****RESILIENCE** (% Rebound)	59-66	57-66	57-63	50-60
TEAR RESISTANCE (lb/in)	1.0-2.0	1.0-2.0	1.0-2.0	1.0-2.0
FLAMMABILITY				
California Technical Bulletin 117	PASS	PASS	PASS	PASS
14 CFR 25.853(a) 12 Second Vertical	PASS	PASS	PASS	PASS

AeroLite

Resistant to Compression Set

Excellent Absorption



AeroLite Foams AL 70 • AL 73 • AL 76

AeroLite cellular foams are excellent for headliner and trim panel applications and also provide acoustic absorption. They combine superior compression set resistance at a variety of firmness while creating a quieter cabin environment.

Available in 0.125" and 0.25" thickness

BENEFITS

- Highly Resistant to Compression Set
- Excellent Acoustical Performance
- Color-coded to identify firmness
- Soft, Medium, and Firm Grades
- Sandable

SKANDIA

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TECHNICAL DATA SHEET

AeroLite

Headliners • Sidewalls

Bulkheads • Seat Shrouds • Carpet Pad

AL 70 • AL 73 • AL 76

Typical Physical Properties	AL70	AL73	AL76
Roll Sizes	54" x 25'	54" x 25'	54" x 25'
	54" x 50'	54" x 50'	54" x 50'
Thickness	.125", 0.25"	.125", 0.25"	.125", 0.25"
Color	Charcoal	Beige	Light Grey
Feel/touch	Soft	Medium	Firm
25% Compression Deflection Force (psi) ASTM D1056 (TYP)	5.9	7.5	13.8
50% Compression Set (%) ASTM D1056	4.9	9.3	15.1
Density (pcf) ASTM D1056	8.8 -1.0/+2.0	9.5 -1.0/+2.0	9.4 -1.0/+2.0
Tensile (psi) ASTM D3574	59.1	70.1	98.0
Elongation (%) ASTM D3574	105	95	70
Flammability 14 CFR 25.853(a) 12-Sec Vert	Passes	Passes	Passes
Service Temperature	-40 to 250 degrees F		

PLEASE READ PRIOR TO INSTALLATION

AeroLite

Excellent Acoustic Absorption at High Frequency

Good Sandable Qualities

Excellent Resistance to Compression Set

The open cell structure of AeroLite provides

EXCELLENT RESISTANCE TO COMPRESSION SET

Please use care when installing as AeroLite

IS MORE SUSCEPTIBLE TO TEARING THAN ENSOLITES.

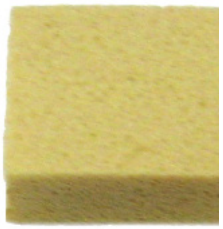
Please contact Skandia if you have any questions and we will be happy to assist you.

Skandia, Inc. • 800.945.7135 • 815.393.4600 • Info@SkandiaInc.com

SKANDIA

Ensolite

Closed Cell Foams



ALC



SKIV1



SKAHC



SKIV3



SK-F6231

R-310V REPLACEMENT



MC



MLC



LD45FR

DOES NOT PASS:

ALC.06
SKIV1.06
SKIV3.125
SKAHC.06
SKAHC.125
SKAHC.25
SKF6231.125

Ensolite

CLOSED CELL FOAMS

- Typical Uses Include:
  Headliner, Sidewall, Carpet Pad, Armrest
- Stock Sizes include: 1/8" • 1/4" • 1/2"
- Additional Sizes Upon Request

SKANDIA

SKANDIA

TECHNICAL DATA SHEET

Ensolite

Closed Cell Foams

STYLE	ALC	MC	SKIV1	SKIV3	MLC	SKAHC	SK-F6231	LD45FR
Roll Size	56" x 75'	56" x 25'	54" x 25'	54" x 25'	56" x 10'	56" x 48'	42" x 54"	40" x 80"
Thicknesses	.06" *	.125"	.06" *	.06"	.125"	.06" *	.06" *	.125"
	.125"	.25"	.125"	.125"	.25" *	.125" *	.125" *	.25"
	.25"	.50"	.25"	.25"	.40"	.25" *	.25" *	.50"
	.50"		.375"	.375"		1.00"	.50"	1.00
			.50"	.50"			.75"	
			1.00"	.75"			1.00"	
				1.00				
Color	Beige	Beige	Black	Black	Black	Light Grey	Beige	Charcoal
25% Compression Deflection Force (psi) ASTM D1056	4.0–6.0	1.5-3.0	2.0-5.0	9.0-13.0	2.0-3.5	7.0-9.0	4.0-8.0	2.0-5.0
†50% Compression Set (%) ASTM D1056	**25**	**30**	**40**	**40**	**30**	**30**	**25**	**11**
Density (pcf)	6.0–8.5	3.5-5.0	3.0-5.5	7.0-9.5	3.5-5.0	6.5-8.5	5.0-9.0	2.8
Tensile (psi)	90	30	50	100	30	90	80	82
Elongation (%)	125	125	100	100	150	100	200	150
FLAMMABILITY								
14 CFR 25.853(a) 12-Second Vertical	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
MVSS302	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass

* DOES NOT PASS FLAMMABIILITY REQUIREMENTS. ** PASSES 14 CFR 23.853(a) HORIZONTAL ONLY.

† NOTE: THE LOWER THE NUMBER, THE HIGHER THE RESISTANCE TO COMPRESSION SET. FOR BETTER PERFORMANCE, COMPARE TO SKANDIA'S AEROLITE PRODUCT LINE.

SK-OSU

Closed Cell Heat Release Foam



SK-OSU Closed Cell Foam

Typical Physical Properties		
Roll Size		54" x 20'
Thicknesses		.125", .25"
Color		Black
Water Absorption (%)	ASTM D1056	10
25% Compression Deflection Force (psi)	ASTM D1056	2.0—5.0
Density (pcf)	ASTM D1056	3.0—6.0
Tensile (psi)	ASTM D412	40
Elongation (%)	ASTM D412	100

Flammability	
12 Second Vertical 14 CFR 25.853(a)	Pass
Smoke density 14 CFR 25.853(d)	Pass
Heat Release 14 CFR 25.853(d)	Pass
FMVSS-302	Pass
UL94 HF-1	Listed
UL94 V0, 5VA	Listed

SKANDIA



AeroCell Foam

High Performance Absorption and Insulation, Radiant Panel Certified

AeroCell Foam SK-13000 • SK-13200 • SK-13200PSA

AeroCell is a very lightweight, open cell melamine foam which has exceptional sound absorption properties. AeroCell exhibits very good thermal properties and contains no fibers.

AeroCell is provided in sheets in a variety of thicknesses. This foam can also be custom cut to suit specific acoustical or thermal requirements.

BENEFITS

- Radiant Panel Certified
- Excellent High Frequency Sound Absorption
- Lightweight
- Excellent Thermal Insulation Properties
- OSU Certified
- Water-Repellent (SK-13200 series only)
- Can be Used to Reduce Weight in Seats

SKANDIA

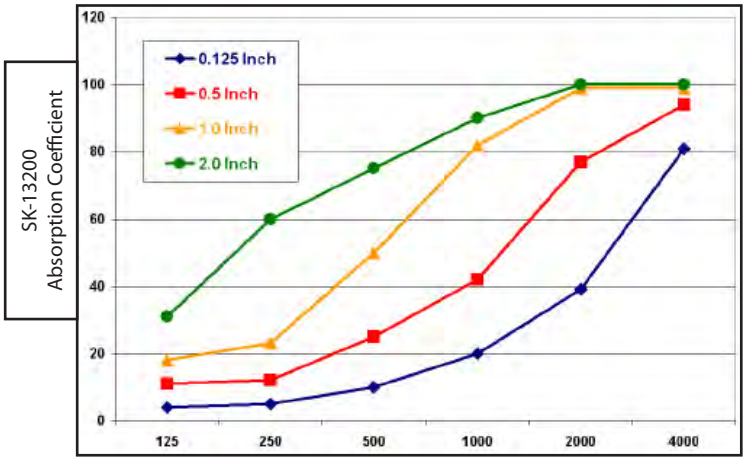
TECHNICAL DATA SHEET

AeroCell Foam

High Performance Absorption and Insulation, Radiant Panel Certified

SK-13000 • SK-13200 • SK-13200PSA Open Cell Foam

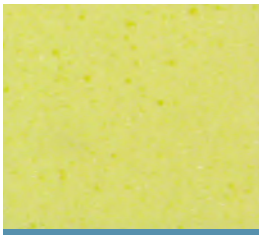
Typical Physical Properties	SK-13000	SK-13200	SK-13200PSA*
Density ASTM D3574	0.62 pcf	0.63 pcf	0.63 pcf
Sheet Size	24" x 48"	23" x 46"	23" x 46"
Thickness	0.25"	0.125", 0.25"	0.125"
	0.50"	0.50"	0.25"
	1.00"	1.00"	0.50"
	2.00"	2.00"	
Color	Grey	Grey	Grey
Flammability			
14 CFR 25.853(a) 12-Second Vertical	Passes	Passes	Passes
14 CFR 25.853(a) 60-Second Vertical	Passes	Passes	Passes
14 CFR 25.853(d) OSU	Passes	----------	----------
14 CFR 25.856(a) Radiant Panel	Passes	Passes	Passes
Thermal Conductivity ASTM C518	.30 BTU in/hr/ft²/°F@77°F	.23 BTU in/hr/ft²/°F@50°F	.26 BTU in/hr/ft²/°F@75°F
Tensile Strength ASTM D3574	8 psi	15 psi	15 psi
Elongation ASTM D3574	8%	39% nominal	39% nominal
Water Repellency	----------	35% average weight gain, max	35% average weight gain, max
Additional Tests			
Boeing BSS 7239, Toxic Gas Generation		Passes	Passes
UL181, Microbial Growth	Passes	Passes	Passes
ASTM G21, Fungus Resistance	Passes	Passes	Passes



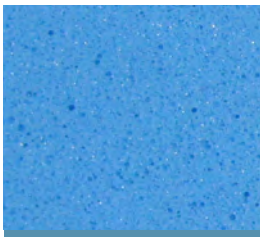
*AeroCell Foam with PSA must be tested in composite to meet flammability certification requirements.

Confor Foam

Comfort/Inpact Foams



CF40AC



CF45AC



CF42AC



CF47AC

SHEET STOCK
TOLERANCE SPECIFICATIONS

Width
(all) ± 0.30″
Length
≤ 24″ ± 0.30″
> 24″ ± 0.50″
Thickness
0.50″ ± 0.0625″
1.00″ ± 0.10″
2.00″ ± 0.20″

Confor Foam

With excellent energy absorption characteristics, Confor foams offer a range of impact protection and isolation for dynamic loads while maintaining consistent static load performance.

Confor foams unique combination of slow recovery and high energy absorption allows the material to offer effective damping and vibrations isolation. This means less fatigue for occupational seating and increased comfort.

BENEFITS

- In Stock, Can Ship Same Day!
- Excellent Engergy Absorption
- Superior Comfort
- Color-coded for Ease of Identification

SKANDIA

SKANDIA

TECHNICAL DATA SHEET

Confor Foam

Comfort/Impact Foams

	CF40AC	CF42AC	CF45AC	CF47AC
DENSITY (lb/ft^3) ASTM D3574	96 (6.0)	96 (6.0)	96 (6.0)	96 (6.0)
FLAMMABILITY FMVSS 302 14 CFR 25.853(a) 12 Second Vertical UL94 RATING @ (min 0.25 in) California Flame 117	 PASS PASS Listed HBF	 PASS PASS Listed HBF	 PASS PASS Listed HBF	 PASS PASS Listed HBF
BALL REBOUND (%) ASTM D3574	1	1.3	1.9	2.2
THERMAL CONDUCTIVITY - K VALUE ASTM C177 W/m*K (BTU-in/hr-ft^2 F)	0.040 (0.28)	0.040 (0.28)	0.040 (0.28)	0.040 (0.28)
INDENTATION FORCE DEFLECTION N(lbf) ASTM D3574 Test B1 Modified 25% Deflection for 12"x12"x2", 22C (72F) @ 50% relative humidity	97 (22)	155 (35)	213 (48)	280 (63)
COMPRESSION LOAD DEFLECTION (psi) ASTM D3574C *Modified *12.7mm thick specimen compressed at a rate of 5.1 mm/min Force @ 10% Compression kPa Force @ 20% Compression kPa Force @ 30% Compression kPa Force @ 40% Compression kPa Force @ 50% Compression kPa Force @ 60% Compression kPa Force @ 70% Compression kPa Force @ 80% Compression kPa	 1.5 (0.21) 2.0 (0.28) 2.3 (0.33) 2.6 (0.38) 3.2 (0.47) 4.4 (0.63) 7.5 (1.1) 20 (2.9)	 2.2 (0.31) 2.9 (0.42) 3.2 (0.47) 3.7 (0.54) 4.4 (0.64) 5.9 (0.85) 9.8 (1.4) 25 (3.6)	 3.9 (0.57) 5.0 (0.72) 5.3 (0.76) 5.9 (0.85) 7.0 (1.0) 9.1 (1.3) 15 (2.1) 36 (5.3)	 4.8 (0.69) 6.9 (1.0) 7.2 (1.0) 7.9 (1.1) 9.3 (1.3) 12 (1.7) 20 (2.8) 49 (7.1)
TENSILE STRENGTH kPa (psi) ASTM D3574 @ 20 in/min 72F	51 (7.4)	83 (12)	145 (21)	193 (28)
TEAR STRENGTH kN/m (psi) ASTM D3574, 51 cm/min (20 in/min) @ 22C(72F)	0.29 (1.7)	0.45 (2.6)	0.73 (4.2)	098 (5.6)
COMPRESSION SET (%) Compressed 50% 22 hr at 22C (72F)	<1	<1	<1	<1
RoHS Compliant	YES	YES	YES	YES

TECHNICAL DATA SHEET

EthaFoam

PolyEthylene Foam

ETHAFOAM PolyEthylene Foam

Highly Buoyant; Used in Flotation Cushions

Lightweight, Strong, Resilient, and Durable

Ideally Suited as Component Material

Typical Physical Properties	ETHA41012.0
Density ASTM D3575	2.2 pcf
Sheet Size	2" x 24" x 36"
Compression Set ASTM D3575	<20%
Compression Deflection ASTM D3575	
@10%	8 psi
@25%	10 psi
@50%	20 psi
Tensile Strength ASTM D3575	35 psi
Tensile Elongation ASTM D3575	60%
Tear Strength ASTM D3575	10 lbs/in
Thermal Stability ASTM D3575	<1%
Thermal Conductivity ASTM D3575	BTU•in/hr•ft^2•°F
@75%°F	0.42
@23%°F	0.37
Water Absorption ASTM D3575	0.3 lbs/ft^2
Buoyancy ASTM D3575	58 pcf
Flammability	
14 CFR 25.853(a) 12-Second Vertical	Passes
ABD 031	Passes

SKANDIA

TECHNICAL DATA SHEET

Hook & Loop

Radiant Panel Certified*

PRPBGE1.00H + PRPBGE1.00L + PRPBGE2.00H + PRPBGE2.00L

Pressure Sensitive Adhesive Hook & Loop Fastener

Benefits The Pressure Sensitive Adhesive Hook & Loop fastener can be used for quick attach/detach applications that require compliance with the Radiant Panel Certification test for thermal/acoustic insulation. Its improved fire-retardancy helps to reduce the risk of failure in oil burn test results for Part 25 seat cushions.

Typical Physical Properties		
Roll Sizes	1" x 50 yards, 2" x 50 yards	
Color	Beige	
Flammability		
14 CFR 25.853(a) 12-Second Vertical	Passes	
14 CFR 25.856(a) Radiant Panel	Passes*	
BMS 8-372 Type 1	Passes	
FMVSS-302	Passes	
Typical Shear Value	**Initial**	**After 100 Cycles**
In pounds per square inch	10.6	8.1
Typical Peel Value	**Initial**	**After 100 Cycles**
In pounds per inch width	1.1	0.8
Typical Tension Strength	**Initial**	**After 100 Cycles**
In pounds per square inch	7.3	4.6
PSA Properties		
Temperature Range	–30° to 200°F (–34° to 93°C)	
Shelf Life	One year from manufacturing date, when stored in original packaging at 70°F(21°C), 50% relative humidity.	

*When tested with other Radiant Panel compliant materials per FAA Advisory Circular AC-25.856-1 paragraph 5C.

SKANDIA

SKANDIA

TECHNICAL DATA SHEET

Hook & Loop

Radiant Panel Certified*

SRPBGE1.00H + SRPBGE1.00L + SRPBGE2.00H + SRPBGE2.00L

Sew-On Hook & Loop Fastener

Benefits The sew-on Hook & Loop fastener can be used for quick attach/detach applications that require compliance with the Radiant Panel Certification test for thermal/acoustic insulation. Its improved fire-retardancy helps to reduce the risk of failure in oil burn test results for Part 25 seat cushions.

Typical Physical Properties	
Roll Sizes	1" x 50 yards, 2" x 50 yards
Color	Beige
Flammability	
14 CFR 25.853(a) 12-Second Vertical	Passes
14 CFR 25.856(a) Radiant Panel	Passes*
BMS 8-372 Type 2	Passes
FMVSS-302	Passes

Typical Shear Value	Initial	After 100 Cycles
In pounds per square inch	10.6	8.1

Typical Peel Value	Initial	After 100 Cycles
In pounds per inch width	1.1	0.8

Typical Tension Strength	Initial	After 100 Cycles
In pounds per square inch	7.3	4.6

*When tested with other Radiant Panel compliant materials per FAA Advisory Circular AC-25.856-1 paragraph 5C.

SKANDIA



HOOK & LOOP

Hook & Loop Fasteners

SHEAR STRENGTH (PSI)	HOOK	LOOP	MUSHROOM
Initial	17.5 PSI	12.0 PSI	45 PSI
After Cycles	15.3 PSI (10,000)	10.0 PSI (5,000)	12 PSI (100)
TENSION STRENGTH (PSI)	**HOOK**	**LOOP**	**MUSHROOM**
Initial	6.3 PSI	6.2 PSI	7.5 PSI
After Cycles	5.8 PSI (10,000)	4.3 PSI (5,000)	2.0 PSI (100)
PEEL STRENGTH (PIW)	**HOOK**	**LOOP**	**MUSHROOM**
Initial	1.4 lbs.	2.4 lbs.	3.2 lbs.
After Cycles	1.3 lbs.(10,000)	1.1 lbs.(5,000)	1.2 lbs.(100)

CERTIFICATIONS

All prices include demonstration of compliance with material flammability requirements:

14 CFR 25.853(a)	Pass	Pass	Pass
MIL-Spec AA55126B	Pass	Pass	
FMVSS 302	Pass	Pass	

SKANDIA

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TECHNICAL DATA SHEET

HOOK & LOOP

HOOK & LOOP FASTENERS

SEW-ON HOOK & LOOP
Beige or Black, 50 Yard Rolls, Tested to alternate burn method of 12 sec per FAA PS-ANM-25.853-01, at 60-Second

BEIGE: HOOK / LOOP ITEM #	BLACK: HOOK / LOOP ITEM #	SIZE
SABGE1.00H / SABGE1.00L	SABLK1.00H / SABLK1.00L	1″
SABGE2.00H / SABGE2.00L	SABLK2.00H / SABLK2.00L	2″

	Weight oz/yd^2	Density lbs/ft^3		Weight oz/yd^2	Density lbs/ft^3
1" HOOK	7.99	7.901	1" LOOP	9.47	7.216
2" HOOK	8.96	9.028	2" LOOP	9.88	7.672

PSA HOOK & LOOP
Beige or Black, 25 Yard Rolls, PSA materials are applied to 0.025" aluminum when tested to show compliance to 25.853(a), 12-Second

BEIGE: HOOK / LOOP ITEM #	BLACK: HOOK / LOOP ITEM #	SIZE
PBGE1.00H / PBGE2.00L	PBLK1.00H / PBLK1.00L	1″
PBGE2.00H / PBGE2.00L	PBLK2.00H / PBLK2.00L	2″

MUSHROOM HEAD HOOK
Black, 50 Yard Rolls, Sew Only with Scrim Backing (self-adhesive not available), Fastens to any other Skandia Loop, Passes 14 CFR 25.853(a) 12-Second Vertical

ITEM #	TYPE	SIZE	OVERALL WIDTH
BLK1.0 MUSHRM	SEW	1"	2"
BLK1.5 MUSHRM	SEW	1.50"	3"

HOOK & LOOP XTRA WITH SCRIM BACK FASTENER
XTRA Wide, XTRA Surface Area, XTRA Secure Bond, Works with Contact Adhesive, works where PSA does not, Beige, 50 Yard Rolls, Sew Only

ITEM #	TYPE	SIZE	OVERALL WIDTH
BGE1.00HS	HOOK	1"	2"
BGE1.00LS	LOOP	1"	2"
BGE2.00HS	HOOK	2"	3"
BGE2.00LS	LOOP	2"	3"

SKANDIA



Guardian

Upholstery Batting

Guardian Batting

Skandia's unique manufacturing process means that fibers are interlocked to provide flawless, consistent performance

Improved fire-retardancy in Oil Burn Testing

So advanced it can be certified to 14 CFR 25.856(a) Radiant Panel

PHYSICAL SPECIFICATIONS

WIDTH	40"
LENGTH	20 yards
WEIGHT	8 oz/yd^2
THICKNESS	.375" loft
COLOR	Charcoal

BENEFITS

- In Stock, Can Ship Same Day!
- Unequaled fireblock performance
- Enhanced seating comfort

SKANDIA

SKANDIA



Making Aircraft Quieter, Safer,
and More Comfortable

FIREBLOCKING FABRICS

TEX TECH 4759R

6.9 oz. PBI, Basofil, Aramid with Scrim Item # TT-4759R

- Aircraft industry standard fireblocking fabric for full encapsulation of polyfoam cushions to meet 14 CFR 25.853 fireblocking requirements
- Basofil - 38%, Aramid - 52%, PBI - 10%
- Weight = 6.4—7.4 oz./sq. yd.
- Thickness = 0.048—0.068"
- Width = 60"
- Supported Construction
- Passes 14 CFR 25.853(a) 12-Second Vertical
- Scrim—100% Nomex fiber content
- 50 Yard Rolls

FLAMESTOP*

Nomex Fabric
Item # FS-5646-2200

- FlameStop is a flexible flame barrier used underneath marginally performing dress cover materials. Its unique knitted construction with two-way stretch allows it to be glued directly to the foam without compromising cushion comfort.
- 100% Nomex
- Weight = 6.0 oz./sq. yd.
- Width = 60"
  NOTE: this material stretches and can extend up to 8% in length, 20% in width
- Passes 14 CFR 25.853(a) 12-Second Vertical
- Sold by the yard

FIREGUARD

Fire Protection Fabric
Item # FG-101

- Fireguard is a proprietary blend of high-performance fibers that provide an extraordinary level of protection against direct flame and extreme heat.
- 58" width x linear yard
- Lightweight, flexible, and odor resistant
- Passes 14 CFR 25.853(a) 12-Second Vertical
- Weight = 6.04 oz/sq yd.
- Thickness = .054 in

MUSLIN

Item # MUS

- 3.3 oz. Fire-Resistant Muslin
- 40" width x linear yard
- Lightweight, durable 100% cotton fabric
- Manufactured to meet CAL 117 and 14 CFR 25.853(a) 12-second Vertical

*FlameStop is not recommended for full encapsulation of polyfoam cushions to meet aircraft fireblocking requirements.

CANVAS

Item # Canvas/Natural

- 7 oz. Fire-Resistant Canvas
- 68" width x yard
- Aircraft Grade
- Self-Extinguishing
- Excellent as a bottom cushion close-out in fire blocking applications
- Passes 14 CFR 25.853(a) 12-Second Vertical

PACK CLOTH

Item # SK-400D/1

- 5.1 oz./sq. yd.
- 60" width x yard
- 100% nylon, 400 denier
- Passes 14 CFR 25.853(a) 12-second Vertical
- Color: Beige

ETHAFOAM®, DOW 4101

Item # ETHA41012.0

- Highly buoyant; used in flotation cushions
- Lightweight, Strong, Resilient, and Durable
- Ideally Suited as Component Material
- Passes 14 CFR 25.853(a) 12-Second Vertical
- Sheet Size: 2" x 24" x 36"

Great for reshaping arms and backrests

WEBBING

Item # BR-8962*

- Great for cargo straps, backpacks, luggage, and unlimited Applications for restraining and reinforcements
- COML-SPEC-MIL-W-4088K Type II Class 1
- Nylon
- Passes 14 CFR 25.853(a) Horizontal*
- 1" wide x 100 Yard Roll



ELASTIC

Item # ELASTIC 1"

- 1" wide
- Passes 14 CFR 23.853(a) Horizontal



POLYKEN TAPES

DOUBLE-SIDED

- Conformability - Accommodates Irregular Surfaces
- Tearability - Ease of Installation
- High Quick Stick - Immediate Carpet Bond
- High Adhesion - Retains Bond Integrity
- Passes 14 CFR 25.853(a) 12-Second Vertical Burn†



P-108-2-N

ITEM #	DESCRIPTION	SIZE
P-108-2-N†	Fire-Retardant Tape	2" x 25 yard roll

SEAMING

- Flame retardant polyethylene coated waterproof tape
- Exceptionally aggressive adhesive to a variety of substrates
- Exhibits outstanding handling characteristics and conforms well to duct systems
- Passes 14 CFR 25.853(a) 12-Second Vertical Burn



P-225-3 FR

ITEM #	DESCRIPTION	SIZE
P-225-3 FR	Fire-Retardant Tape	3" x 60 yard roll



FireGuard

Fire Protection Fabric

WHY CHOOSE FIRE GUARD?

- LIGHTWEIGHT
- BETTER PERFORMANCE
- LOWER PRICE

FireGuard

FireGuard is a proprietary blend of high-performance fibers that provide an extraordinary level of protection against direct flame and extreme heat.

PHYSICAL SPECIFICATIONS	
WIDTH	58"
THICKNESS	.054"
WEIGHT	6.04 oz/yd^2
ELONGATION ASTM D5034-1995 (%)	
Length	73.2%
Width	230.7%
COLOR	Charcoal

BENEFITS

- Lightweight, flexible, and odor resistant
- Unequaled stretch, comfort, hand and workability
- In Stock, Can Ship Same Day!

SKANDIA

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Making Aircraft Quieter, Safer and More Comfortable

Acoustic Solutions Make a Sound Decision

Soundproofing







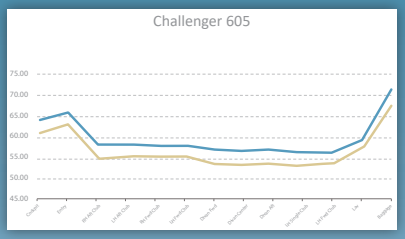
A Trusted Partner to the OEM, VIP, VVIP and Refurbishment Market

The Science of Acoustic Engineering and Materials

- Engineered for Performance
- Soundproofing kits for over 80 aircraft models
- Unmatched reduction in cabin noise & vibration
- Manufacturing thermal/acoustic materials that meet global Flammability standards

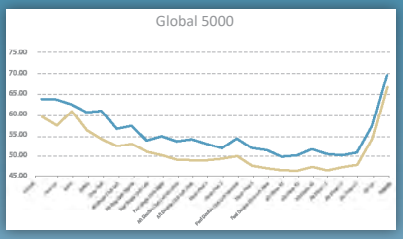
Custom Acoustic Solutions Tailored to Your Needs

- In-flight acoustical analysis of your cabin at all phases of flight
- Partner with global OEM and refurbishment leaders



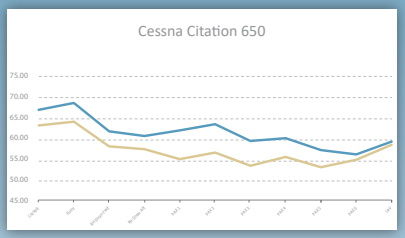
Pre dB(SIL) Post dB(SIL)

Average dB(SIL) Reduction: **3.1**



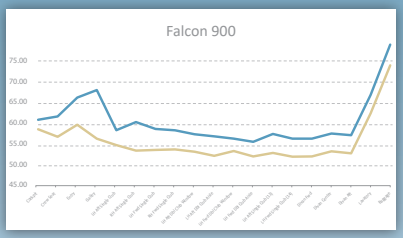
Pre dB(SIL) Post dB(SIL)

Average dB(SIL) Reduction: **3.48**



Pre dB(SIL) Post dB(SIL)

Average dB(SIL) Reduction: **4.59**



Pre dB(SIL) Post dB(SIL)

Average dB(SIL) Reduction: **4.40**

SKANDIA

5000 North Highway 251, Davis Junction, IL 61020 | 815 393 4600 | www.skandiainc.com

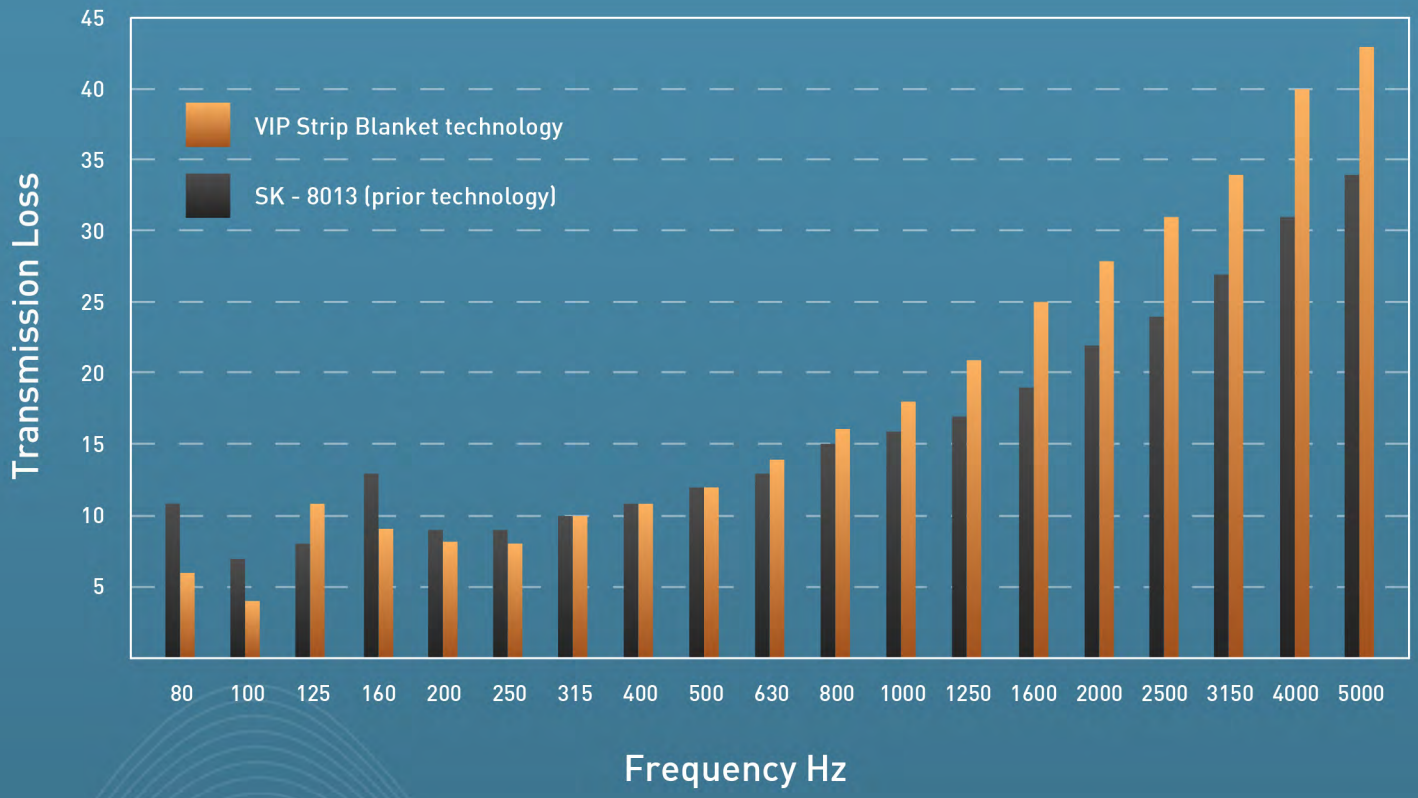
Connect with us!

SKANDIA

Making Aircraft Quieter, Safer and More Comfortable

VIP Strip Blankets

Innovative technology from Skandia



- Acoustically superior in reducing noise in weight sensitive aircraft
- Thermal
- Meets CFR 25.856(a)
- Acoustic attenuation of mid to high frequencies
- Custom fabrication available in a variety of weights and thicknesses to meet customer specific requirements





AeroTherm

Thermal Acoustic Insulation

Radiant Panel Certified

AeroTherm SK-7000

Skandia's Radiant Panel AeroTherm provides thermal/acoustic insulation. Products can be provided to specified widths, lengths, and thicknesses.

Our reinforced film resists abrasion, moisture, and contaminants.

The fiberglass thermal/acoustic insulation material is lightweight, water-repellent and fire-retardant.

EASE Thermal Insulation Systems provide superior thermal insulation and acoustic attenuation of high frequencies in the important dBSIL range (Speech Interference Level).

Repair/sealing tape available.

BENEFITS

- Radiant Panel Certified
- In Stock, Can Ship Same Day!
- Lightweight
- Meets 25.856 (a)
- High Frequency Attenuation
- Custom Fabrication is available to meet specialized applications
- Skandia's AeroTherm Strip Blankets reduce cost by allowing interior/airframe technicians to fabricate and install blankets at the point of use (utilizing SK-T series of insulation sealing tape).

SKANDIA

TECHNICAL DATA SHEET

AeroTherm

Thermal Acoustic Insulation
Radiant-Panel Certified

SK-7000

Typical Physical Properties

Thickness	1, 2, 3 in
Width	7, 9, 10, 11, 12, 15, 16, 20, 22 in
Length	1" thick x 50' roll
	2" thick x 50' roll
	3" thick x 25' roll
Weight	1 in thick: 0.07 lb/ft^2
	2 in thick: 0.12 lb/ft^2
	3 in thick: 0.17 lb/ft^2
Color	Dull Grey
Flammability	
14 CFR 25.853(a) 12-Second Vertical	Passes
14 CFR 25.853(a) 60-Second Vertical	Passes
14 CFR 25.856(a) Radiant Panel	Passes
Fiberglass Density	0.6 pcf
Vapor Barrier Film Thickness	0.5 mil
Thermal Conductivity, ASTM C518	0.242 BTU in/F/ft • h/@75°F
Transmission Loss, ASTM E90 @ 1 in thick:	
1000 Hz	11 dB
2000 Hz	19 dB
4000 Hz	29 dB
Additional Specifications/Compliance	
BMS 8-48, ASTM C8000-94, STM 26701, DMS 1967E	

SK-7001-I Insulation Material	
Corrosion	Boeing BMS 8-48 W - Type 3, Class 2, Grade B
SK-7000-F2 Barrier Film	Boeing BMS 8-377, Type II, Class 1

SKANDIA

TECHNICAL DATA SHEET

SKANDIA

AeroTherm

Thermal Acoustic Insulation .6 pcf
Radiant Panel Certified

SK-7001 Lightweight, Water-Repellent Insulation Material

Typical Physical Properties

Thickness	1.00 + .025 in
Width	34.0 ± 0.5 in
Weight	0.050 + 0.005 - 0.004 lb/ft²
Density	0.60 lbs./ft³
Color	Green
Binder Content	Phenolic
Water Repellent	
Wicking	
Temperature Limit	450°F
Corrosion resistant	
Transverse Airflow	

FLAMMABILITY

Radiant Panel	14 CFR 25.856(a)	Passes
Vertical Test		
60-Second and 12-Second	14 CFR 25.853(a)	Passes
Vertical 45-Degree Angle	14 CFR 25.855(d)	Passes
Punking Test	Boeing BSS 7230	No Punking

ACOUSTICAL PROPERTIES

Transmission Loss (using three 1" layers of .6 PCF insulation)	ASTM E90	1000 Hz Oct. Band: 14.1 dB, min 2000 Hz Oct. Band: 20.1 dB, min 4000 Hz Oct. Band: 27.2 dB, min

THERMAL CONDUCTIVITY (ASTM C-518 (BTU-in/°F•h•ft²)

DENSITY lb/ft³	THICKNESS	MEAN TEMP °F (BETWEEN HOT AND COLD SURFACE)					
0.60	1"	50	75	100	200	300	400
		0.24	0.25	0.27	0.35	0.42	0.55

Compliance with OEM and Industry specifications per:

- Boeing BMS 8-48 Type 3, Class 2, Grade B
- Douglas DMS 1967
- ASTM C800-94

TECHNICAL DATA SHEET

AeroTherm

Thermal Acoustic Insulation
Vapor Barrier Film
Radiant Panel Certified

SK-7000-F2 Lightweight, High-Strength Vapor Barrier Film

Typical Physical Properties

Weight	1.0 oz./yd^2
Thickness	0.0005"
Thread Adhesion	3.5 (lbs./1.5")
Heat Seal (T-peel)	
Warp	4.0 (lbs./in)
Fill	3.7 (lbs./in)
Heat Sealing Instructions	Heat-sealing of SK-7000F2 can be done by hand iron, impulse, and ultrasonic methods. Heat-sealing is done with yarn-side to yarn-side. Use a heat setting between 375° to 400°F. Always keep a hand iron in motion to prevent shrinkage of the film.
Flammability	
FAR 25.853(a) 12-Second Vertical Test	Passes
FAR 25.853(a) 60-Second Vertical Test	Passes
FAR 25.856(a) Radiant Panel	Passes
Moisture Permeance	0.88 grains/ft^2/24 hrs/in of Hg
Reinforcement	20 x 10 Leno Scrim
Burst Strength	64 psi
Color	Dull Grey
Fabrication Methods	May be sealed with heat, tape, stitching, or ultrasonically
Taping	For sealing, repairs, and local reinforcements of SK-7001, SK-T3 or SK-T4 tapes are recommended. These tapes are lightweight, reinforced, and pressure sensitive.
Packaging	
Roll Length	Up to 350 yards
Width	52" ± 1"
Custom Cuts	Available upon request
Storage and Shelf Life	SK-7000-F2 has a shelf life of one year from the date of shipment when stored in the original container at 75% relative humidity and between 50°F and 90°F. Max operating temp 120-130C (250-265F) Compliant with BMS 8-377, Type II, Class 1

AeroTherm

Thermal Acoustic Insulation

Quilted Blanket



AeroTherm SK-QB3

Skandia's Quilted-Blanket provides a durable utility liner for military, cargo aircraft, helicopters; as well as nose-lockers.

Edge-binding is available. SK-QBT1

BENEFITS

- Meets 14 CFR 25.853(a) 12 and 60 Second Vertical, MIL-C-22787 and BMS8-48
- Lightweight
- High-Frequency Attenuation

* Color may vary from photo shown above

TECHNICAL DATA SHEET

AeroTherm

Thermal Acoustic Insulation
Quilted-Blanket

SK-QB3

Typical Physical Properties	SK-QB3
Thickness	1" nominal
Width	48"
Length	Up to 50' roll
Weight	0.30 lb/sq ft
Quilt Pattern	3"x"3" diamond
Color	Grey
Flammability	
14 CFR 25.853(a) 12-Second Vertical	Passes
14 CFR 25.853(a) 60-Second Vertical	Passes
14 CFR 25.856(a) Radiant Panel	----------
Fiberglass Density	.6 pcf
Recommended Edge-Binding Tape	SK-QBT1

SK-QB3 grey facing meets MIL-C-22787
Fiberglass meets BMS8-48
SK-QBT1 meets MIL-C-22787

AeroFasteners

For Installation of
Blankets & Barrier



SK-IS-1.5*



SK-ISR-2

AeroFasteners

A variety of fasteners are available for installation of AeroBlankets, AeroBarriers, etc.
Please contact Skandia's Acoustics department for additional fastener recommendations by e-mailing Info@SkandiaInc.com or calling 815-393-4600.

ITEM #	DESCRIPTION
SK-IS-1.5*	Insulation Stud
SK-ISR-2	Insulation Stud Retainer

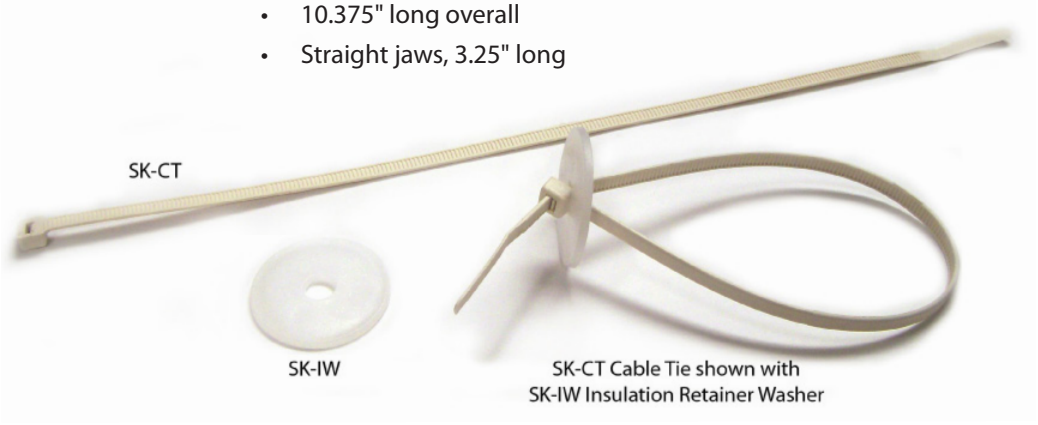
*Use with SK-ISR-2

AeroFasteners
For Installation of Blankets & Barrier

Sharp tip allows for quick and easy installation of
SK-CT fasteners into overframe blankets and barrier



- Hemostat pliers with cushion grip for intricate installation work in tight spaces
- Ratchet lock in the handle allows you to vary gripping pressure
- Jaws are serrated and hold firmly without cutting
- Stainless steel for corrosion resistance
- 10.375" long overall
- Straight jaws, 3.25" long



- Nylon Cable Tie used for securing blankets and barriers to the frame, quickly and simply!
- Fire-Retardant; handles temperatures from -40° to +203°F
- Meet UL94V-0 flammability requirements
- Tensile strength: 50 lbs.
- Sold in 100 ct. pack
- Sold separately: SK-IW: Insulation Retainer Washer

- 2310025 (stainless steel) are used to temporarily (removable) hold overframe blankets in position while SK-CT fasteners are installed

- 2310025 can be used to attach overframe blankets when other means are not possible



2310025

ITEM #	DESCRIPTION
Hemostat	Installation Tool
SK-CT**	F/R Nylon Cable Tie, 11.50"
SK-IW	Insulation Retainer Washer
2310025	Spring Clip Insulation Clamp

**Use with SK-IW



AeroTapes

Insulation and Utility Tape w/PSA

Radiant Panel Certified

Now Available
Black Insulation and Utility Tape

AeroTape SK-T3 • SK-T4 • SK-T3BLK

Radiant Panel Certified tapes for aircraft, suitable for a wide variety of applications, including insulation sealing, closing out window/avionic spaces, or attaching adjacent materials.

Note: Meets 14 CFR 25.856(a) Radiant Panel by itself. Must be tested in composite form if using any other materials

BENEFITS

- Radiant Panel Certified
- Widths from 3" – 4"
- High Tack and Peel Strength
- Reinforced FR Scrim
- Will Not Support Corrosion

SKANDIA

TECHNICAL DATA SHEET

AeroTape
Radiant-Panel Certified

SK-T3 • SK-T4 • SK-T3BLK

Typical Physical Properties	SK-T3	SK-T4	SK-T3BLK
Size	3" x 60 yard roll	4" x 60 yard roll	3" x 60 yard roll
Weight	3.0 oz/sq yard	3.0 oz/sq yard	3.0 oz/sq yard
Color	Dull Grey	Dull Grey	Black
Construction	Metallized PVF F/R acrylic PSA	Metallized PVF F/R acrylic PSA	Black PVF F/R acrylic PSA
Flammability			
14 CFR 25.853(a) 12-Second Vertical	Passes	Passes	Passes
14 CFR 25.853(a) 60-Second Vertical	Passes	Passes	Passes
14 CFR 25.856(a) Radiant Panel	Passes	Passes	Passes
BMS 5-157 Type I, Grade A, Form 1	Passes	Passes	
Tensile Strength, PSTC-31	10.3 lbs/avg. inch width	10.3 lbs/avg. inch width	23.6 lbs/avg. inch width
Peel Strength, PSTC-1 (Room Temp)	3.2 lbs./1" width	3.2 lbs./1" width	3.8 lbs./1" width
Shelf Life	Minimum of 18 months in cool, dry storage		

UTILITY TAPES • DO NOT PASS RADIANT PANEL

Typical Physical Properties	P-225-3FR
Size	3" x 60 yard roll
Weight	10.5 oz/yard^2
Color	White
Construction	PE Coated cloth, F/R acrylic PSA
Total Thickness	20 mil
Flammability	
14 CFR 25.853(a) 12-Second Vertical	Passes
Tensile Strength, PSTC-31	28 lbs/avg. inch width
Peel Strength, PSTC-1	> 120/in. avg; 3 day
Shelf Life	Maximum of 12 months in cool, dry storage

SKANDIA

SKANDIA

Flame Barrier

Polymer Coated, Woven
Fiberglass Fabric
Radiant Panel Certified

Flame Barrier SK-15004

Flame Barrier is a lightweight, polymer-coated fiberglass fabric with which is certified to 14 CFR 25.856(a) Radiant Panel. Flame Barrier utilizes woven fiberglass as the reinforcement for the flexible polymer coated flame barrier. The fiberglass makes the material extremely flame resistant, with high tensile strength to weight, and superior dimensional stability.

Flame Barrier is used in aerospace applications such as a pipe, hose or ducting wrap.

Available in 4.0 oz. per square yard weight, Flame Barrier is provided in 50" wide rolls at custom lengths.

BENEFITS

- Radiant Panel Certified
- Excellent Strength-To-Weight Ratio
- Suitable for many applications

TECHNICAL DATA SHEET

Flame Barrier

Polymer Coated, Woven
Fiberglass Fabric
Radiant Panel Certified

SK-15004 • Utility Fabric

Can be used in a wide variety of covering and/or facing applications, including edge binding for quilted insulation blanket, SK-QB2RP

Typical Physical Properties	
Roll Size	50" x linear yard
Weight	4.0 oz/sq yd
Thickness	.01"
Color	Dark Grey
Flammability	
14 CFR 25.853(a) 12-Second Vertical	Passes
14 CFR 25.853(a) 60-Second Vertical	Passes
14 CFR 25.856(a) Radiant Panel	Passes
NBS Smoke	$D_s < 50$
Breaking Strength, FTM 5100	> 110 lbs/in
Tear Strength, ASTM D1117	> 12 lbs.
FED-STD-191	Tensile (grab) Warp/Fill 145/119 lb



AeroBarrier

60 oz. Barrier

AeroBarriers 60 oz. Barrier

AeroBarrier is a flexible sheet material used for noise control applications in aircraft.

Meets 14 CFR 25.853(a) 12-Second Vertical requirements and delivers excellent acoustic performance at any desired weight level.

Sold by the linear yard.

BENEFITS

- In Stock, Can Ship Same Day!
- Excellent transmission loss, at high frequencies

SKANDIA

TECHNICAL DATA SHEET

AeroBarrier

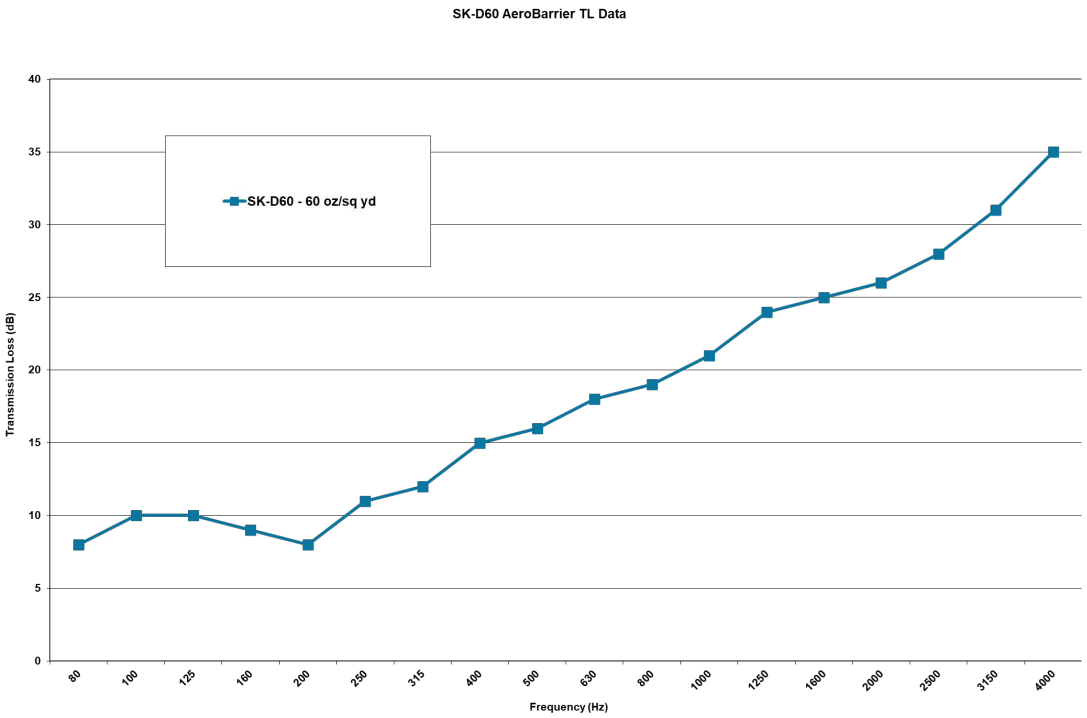
Flexible Barrier

TYPICAL PHYSICAL PROPERTIES

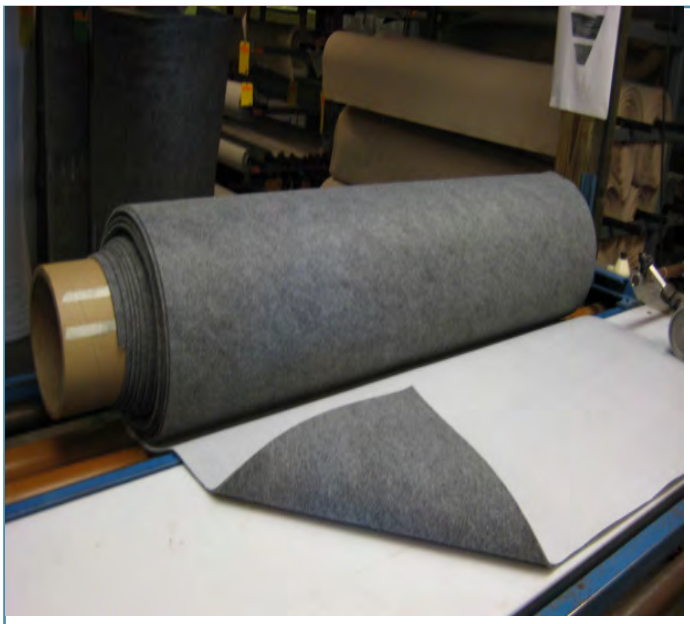
SIZE	50" x linear yard
WEIGHT, FTM 5041	60 oz/sq yard
THICKNESS, FTM 5030	0.03"
COLOR	Black/White

FLAMMABILITY

14 CFR 25.853(a) 12-Second Vertical Passes



SKANDIA



AeroBlanket

Acoustic Insulation
Radiant Panel Certified

AeroBlanket SK-8013 & SK-8014

AeroBlanket consists of one layer of AeroBarrier bonded to one layer of Radiant Panel Certified, water repellent Nomex fiber. The barrier is available in various weights, providing increasing levels of sound transmission loss.

AeroBlanket is an "overframe" blanket, which is used to closeout the insulation and prevent a direct path for sound and cold into the aircraft cabin. The AeroBarrier component of the blanket is highly effective in reducing sound levels and the fiber is very effective at reducing high frequency sound levels.

AeroBlanket is also available with barrier sandwiched between two layers of fiber. All AeroBlankets are provided 48" wide, at custom lengths on a roll.

BENEFITS

- Radiant Panel Certified
- Excellent Transmission Loss Performance
- Inherently Water Repellent

SKANDIA

TECHNICAL DATA SHEET

AeroBlanket

High Performance Barrier w/Light-weight, Low Density Fiber Blanket Radiant Panel Certified

SK-8013 • SK-8014 Water Repellent Overframe Blanket

Typical Physical Properties	SK-8013	SK-8014
Size	48" x linear yard	48" x linear yard
Weight	40 oz/sq yard	50 oz/sq yard
Thickness	0.13"	0.16"
Color	Dark Grey/White	Dark Grey/White
Flammability		
14 CFR 25.853(a) 60-Second Vertical	Passes	Passes
14 CFR 25.856(a) Radiant Panel	Passes	Passes
Barrier	Cast Polymer	Cast Polymer
Weight	30 oz/sq yard	40 oz sq/yard
Thickness	0.016"	0.04"
Fiber	One Layer of 0.125" thick Radiant Panel Nomex	One Layer of 0.125" thick Radiant Panel Nomex
Weight	10 oz/sq yard	10 oz/sq yard
Thermal Range	-55°F to 450°F	-55°F to 450°F
Water Repellent	Meets BMS 8-42W	Meets BMS 8-42W



AeroBlanket

Acoustic Insulation
Radiant Panel Certified

AeroBlanket SK-8160

AeroBlanket consists of one layer of AeroBarrier bonded between two layers of Radiant Panel Certified, water repellent Nomex fiber.

AeroBlanket is an overframe blanket, which is used to close-out the insulation and prevent a direct path for sound and cold into the aircraft cabin. The AeroBarrier component of the blanket is highly effective in reducing sound levels and the fiber is very effective at reducing high frequency sound levels.

All AeroBlankets are provided 48" wide, at custom lengths on a roll. Custom fabrication is also available to suit specialized applications.

BENEFITS

- Radiant Panel Certified
- Excellent Transmission Loss Performance
- Inherently Water Repellent

SKANDIA

TECHNICAL DATA SHEET

AeroBlanket

High Performance Barrier w/Light-weight, Low Density Fiber Blanket
Radiant Panel Certified

SK-8160 79 oz. Overframe Blanket

Typical Physical Properties	
Size	48" x linear yard
Weight	79 oz/sq yard
Thickness	0.3"
Color	Dark Grey
Flammability	
14 CFR 25.853(a) 60-Second Vertical	Passes
14 CFR 25.856(a) Radiant Panel	Passes
Barrier	Vinyl Barrier
Weight	60 oz/sq yard
Thickness	0.06"
Fiber	Two Layers of 0.125" thick Radiant Panel Nomex
Weight	9.5 oz/sq yard (per layer)
Thermal Range	-55°F to 450°F
Thermal Conductivity DIN EN 12664	0.291 BTU in/ft² • hr • °F @73.4°F

TECHNICAL DATA SHEET

AeroFelt

9.5 Oz Carpet Pad

SK-8118-2WR

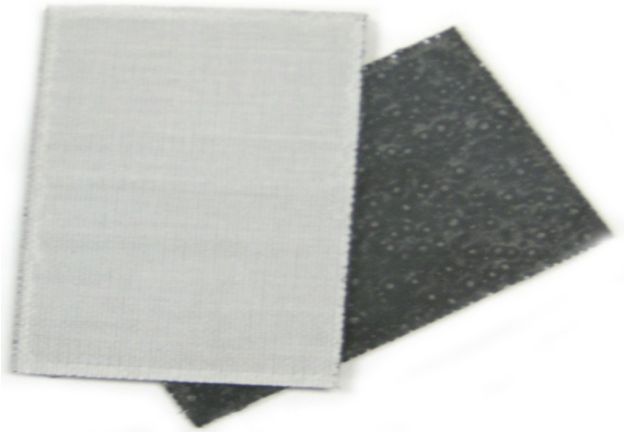
Acoustical fiber felt pad, versatile thermal and acoustic insulation

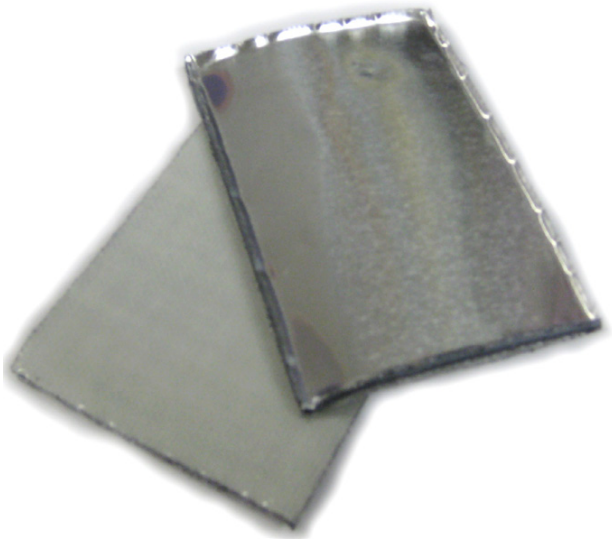
TYPICAL PHYSICAL PROPERTIES

SIZE	50" x linear yard
WEIGHT, FTM 5041	9.5 oz/sq yard
THICKNESS, FTM 5030	0.125"
COLOR	Dark Grey
FLAMMABILITY	
14 CFR 25.853(a) 60-second Vertical	Passes
14 CFR 25.856(a) Radiant Panel	Passes
THERMAL RANGE	-55°F to 450°F
THERMAL CONDUCTIVITY	K= .24 BTU/in/hr/°F/ft^2

AeroDamp Advanced

High Performance Damping
Radiant Panel Certified





New Improved Damping

AeroDamp SK-8240PSA -ADV • SK-8240FPSA-ADV

SK-8240PSA-ADV - Panel and cabinetry damping.
SK-8240FPSA-ADV - Cabin floor damping and Bulkhead damping.

This improved product offers the triple advantage: less weight, higher performance and lower cost, when compared to the competition.

Results are: 6-20% lower weight; 25% lower cost; and improved damping results in side by side testing at an independent testing lab.

AERODAMP is a constrained layer damping sheet with a self-adhesive backing: just cut to fit, peel and stick.

BENEFITS

- Radiant Panel Certified
- Improved damping properties!
- In stock, ships same day!

SKANDIA

SKANDIA

TECHNICAL DATA SHEET

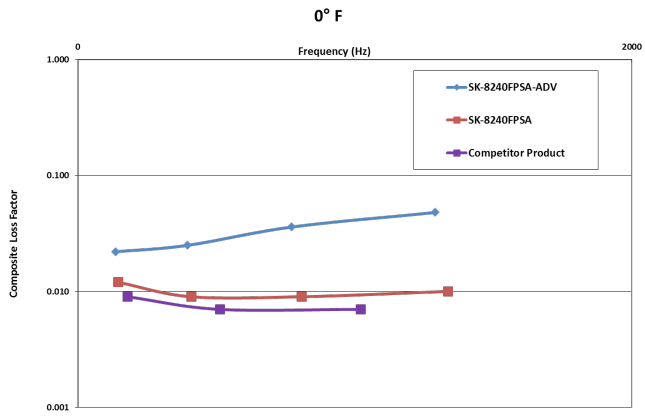
AeroDamp Advanced

High Performance Damping
Radiant Panel Certified

SK-8240PSA-ADV • SK-8240FPSA-ADV

Typical Physical Properties	SK-8240PSA-ADV	SK-8240FPSA-ADV
Size	24" x 48"	24" x 48"
Weight (oz/sq ft)	5.0	7.0
Thickness	0.035"	0.045"
Color	White	Silver
Flammability		
14 CFR 25.853(a) 12-Second Vertical	Passes	Passes
14 CFR 25.853(a) 60-Second Vertical	Passes	Passes
14 CFR 25.856(a) Radiant Panel	Passes	Passes
14 CFR 25.853(d) Smoke Density	Passes	Passes
14 CFR 25.853(d) Heat Release	Passes	
Operating Temperature		
Min Application Temp	50°F	50°F
Max Continuous Operating Temp	200°F	200°F
Max Intermittent Operating Temp	200°F	200°F

Shelf Life One year when stored at 70°F/50% R.H. out of direct sunlight.



SKANDIA

E-A-R

ADC Specialty Composites



ADC-005



ADC-006



ADC-122



ADC-124



ADC-126

ADC Specialty Composites

Temperature and Frequency Sensitive Materials for Pressurized and Non-Pressurized Aircraft

Demonstration of Compliance with Material Flammability Requirements per 14 CFR 25.853(a)12-Second Vertical and 60-Second Vertical and 14 CFR 25.856(a) Radiant Panel.

All products meet 12-Second Vertical/60-Second Vertical/Radiant Panel with the exception of ADC-122 and ADC-152 which only meets 12-Second Vertical and Radiant Panel.

BENEFITS

- Controls both Airborne Noise and Structural Vibrations.
- In Stock, Can Ship Same Day!

TECHNICAL DATA SHEET

E-A-R
ADC Specialty Composites

ADC Specialty Composites

Skandia stocks E-A-R Damping, Absorption, and Barrier materials to reduce cabin noise levels. When the right combination of these materials is installed in the specified location in an aircraft, both airborne acoustic energy and structural-borne vibration energy are reduced.

COMPOSITE	DESCRIPTION	WEIGHT		DIMENSIONS
ADC-005	Structural Damping	.41 lbs/ft^2	3.69 lbs.	27" x 48", 9 sq. ft.
	.04" Thick	2.00 kg.	1.67 kg.	69 cm x 122 cm, .836 sq. m.
ADC-006	Structural Damping	.50 lbs/ft^2	4.50 lbs.	27" x 48", 9 sq. ft.
	.05" Thick	2.44 kg.	2.04 kg.	69 cm x 122 cm, .836 sq. m.
ADC-122	Acoustical Barrier/Absorber	.60 lbs/ft^2	5.40 lbs.	27" x 48", 9 sq. ft.
	.310" Thick	2.93 kg.	2.45 kg.	69 cm x 122 cm, .836 sq. m.
ADC-124	Low Temperature Damping	.26 lbs/ft^2	2.34 lbs.	27" x 48", 9 sq. ft.
	.255" Thick	1.27 kg.	1.06 kg.	69 cm x 122 cm, .836 sq. m.
ADC-126	Low Temperature	.60 lbs/ft^2	5.40 lbs.	27" x 48", 9 sq. ft.
	Damping .300" Thick	2.93 kg.	2.45 kg.	69 cm x 122 cm, .836 sq. m.



AeroLite Carpet Pad

Acoustical Carpet Pad
Dimensionally Stable

AeroLite Carpet Pad SK-7328 • SK-7338 • SK-7348 • SK-7348-80W

AeroLite Carpet Pad is a synergistic family of foam and felt composite used for a durable pad and it provides both thermal and acoustic floor level insulation. The padding is available in various thicknesses, providing increasing levels of acoustic absorption, sound transmission loss, thermal insulation and cushioning effect.

The composite pad delivers the advantages of both foam and felt paddings while eliminating their disadvantages when used alone, e.g. will not wrinkle, improved resistance to compression set, excellent durability. Additionally, it has very low electrostatic discharge potential.

AeroLite Carpet Pad is a versatile material, which can be manufactured as a carpet pad and in combination with AeroBarrier as an effective floor level acoustical barrier.

AeroLite Carpet Pad is available in 1/4", 3/8" and 1/2" thicknesses x 52" wide by the linear yard; also available 1/2" thick x 80" wide x linear yard. Additionally, custom fabrication is available to meet specialized applications.

BENEFITS

- Provides a Plush Feel Underfoot
- More Durable than a Fiber Pad
- Low Thermal Conductivity Value
- Excellent Acoustic Absorption
- Low Static Propensity
- 80" width accommodates wide body biz jets without seaming (1/2" thickness only)

SKANDIA

TECHNICAL DATA SHEET

AeroLite Carpet Pad

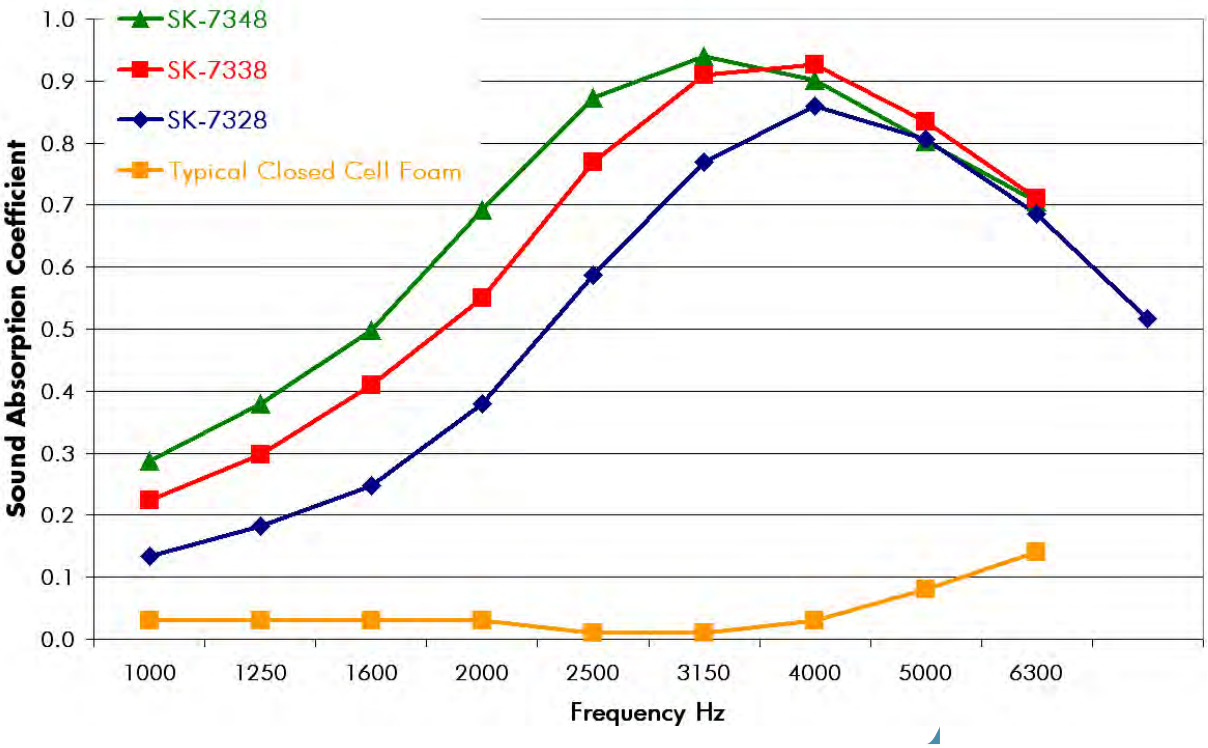
Acoustical Carpet Pad

Dimensionally Stable

SK-7328 • SK-7338 • SK-7348 • SK-7348-80W

Typical Physical Properties

Size	52" ± .25" x linear yard;
	80" ± .50" x linear yard, 0.50" thickness only
Thickness	0.25", 0.375", 0.50"
Weight	24, 39, 42 oz/sq yard
Color	Dark Grey and Beige
Flammability	
14 CFR 25.853 12-Second Vertical	Passes
Thermal Conductivity	≤.254 BTU-IN/Hr -°F/sq ft @ 0.50 in



SKANDIA



AeroLite Carpet Pad

Acoustical Carpet Pad
w/Sound and Moisture Barrier

AeroLite Carpet Pad w/Barrier SK-7348-D32 • SK-7348-D60

AeroLite Carpet Pad with Sound Barrier provides acoustic absorption, sound transmission loss, thermal insulation and a comfortable cushioning effect.

The composite pad delivers the advantages of both foam and felt padding while eliminating disadvantages when used alone. For instance, it will not wrinkle, provides improved resistance to compression set, excellent durability and has very low electrostatic discharge potential.

The addition of the integral sound and moisture barrier layer reduces under floor noise entering the cabin and prevents liquid spills from passing through the pad and into the airframe.

BENEFITS

- Provides a Plush Feel Underfoot
- Blocks Under Floor Noise
- Protects Airframe from Spilled Liquids and Rain
- More Durable than a Fiber Pad
- Low Thermal Conductivity Value
- Excellent Acoustic Absorption
- Low Static Discharge Propensity
- Dimensionally Stable

SKANDIA

TECHNICAL DATA SHEET

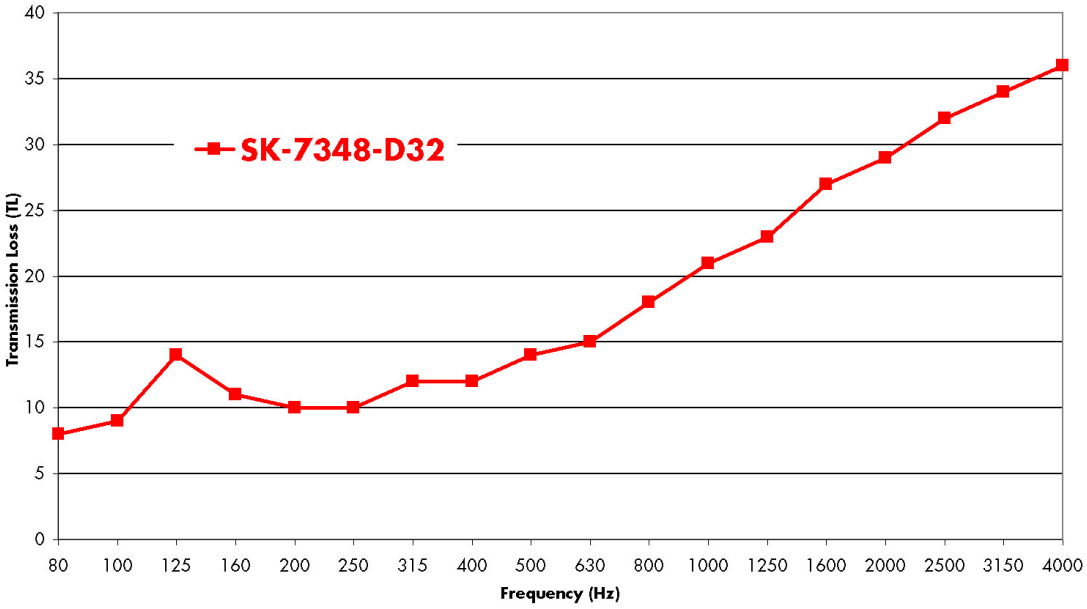
AeroLite Carpet Pad

Acoustical Carpet Pad
w/Sound and Moisture Barrier

SK-7348-D32 • SK-7348-D60

INSTALLATION: Install with the barrier side up and the Nomex fibers down. It can be secured using Skandia's Double-Sided Tape: P-108-2-N or Hook velcro (attaches directly to fiber; Loop not required).

Typical Physical Properties	SK-7348-D32	SK-7348-D60
Size	Min 48" - Max 52" x linear yard	Min 48" - Max 52" x linear yard
Weight	72 oz/sq yard	102 oz/sq yard
Thickness	0.50"	0.50"
Color	Dark Grey	Dark Grey
Flammability		
14 CFR 25.853(a) 12-Second Vertical	Passes	Passes
Thermal Conductivity	---------- ≤.279 BTU-IN/Hr -°F/sq ft @ 0.50 in ----------	

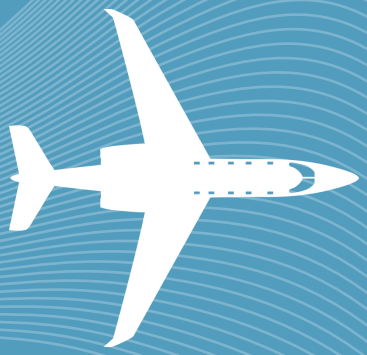


SKANDIA

SKANDIA

Making Aircraft Quieter, Safer and More Comfortable

Skandia Soundproofing Solutions



Data Dictates Design

By combining engineering analysis with the most effective material available, Skandia delivers significant, qualified soundproofing results.

800/945-7135 • 815-393-4600 • Info@SkandiaInc.com

Aircraft Soundproofing Solutions

A Quiet Aircraft Means a Quiet Journey

The fastest way to judge the quality of an interior completion is by how quiet it is. For over 30 years, Skandia has been listening to what our customers want and then creating acoustics solutions that keep noise and vibration to a whisper. In fact, our sound-proofing solutions are the talk of the aviation industry. You just can't hear it.



Data Dictates Design

In soundproofing engineering, Skandia combines the latest technological advancements and innovations to reduce weight and maximize performance.

Utilizing state-of-the-art equipment, Skandia engineers perform sound frequency tests in order to establish an aircraft's unique acoustical signature while at cruise speed and altitude.

Customized Soundproofing Solutions

Everything you need customized in a single package
In-flight acoustical analysis of your cabin's sound levels to customize the best solution

The solutions starts with the finest materials

- Radiant panel certified thermal & acoustic materials
- Comprehensive selection of aircraft thermal/acoustic materials including insulation strip blankets, overframe blankets and carpet padding
- All Skandia soundproofing solutions meet the radiant panel flammability test for part 25 aircraft, 14 CFR 25.856(a)
- Complete soundproofing systems for more than 80 different aircraft

From a team you can trust

All divisions are supported by an in-house team of DERs and DARs that efficiently respond to our diverse customer base including major OEMs, completion and modification centers, as well as private aircraft owners and upholstery shops.

Don't take our word for it. Our final step in customizing a soundproofing package is to quantify the results with a second sound frequency analysis. The following graphs demonstrate quantified success generating major sound reduction results while adhering to cost, weight and other aircraft-specific parameters and considerations.



Silence starts with Skandia

Take advantage of Skandia's engineered approach and applications experience to meet your noise reduction and comfort goals.

Aircraft Soundproofing Solutions



dB(A)

The dB(A) rating scale measures the overall perception of loudness across the entire audible frequency range. This scale is weighted to diminish the value of lower frequencies and therefore, follows closely the frequency response of the human ear to sound.

dB(SIL)

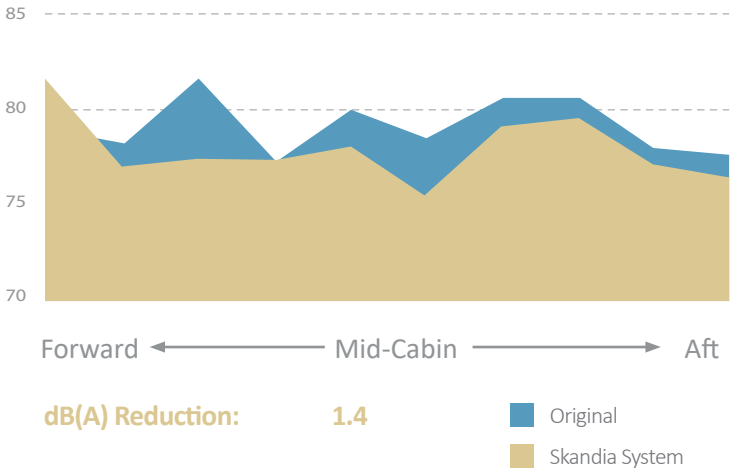
The dB(SIL) rating scale measures the difficulty of hearing speech, averaging the 1000, 2000 and 4000 Hertz frequencies. This scale is indicative of the sound levels that are perceived as most annoying to the human ear.



A 3 - 5 dB(SIL) reduction is equivalent to a 50% perceived reduction.

Beechcraft

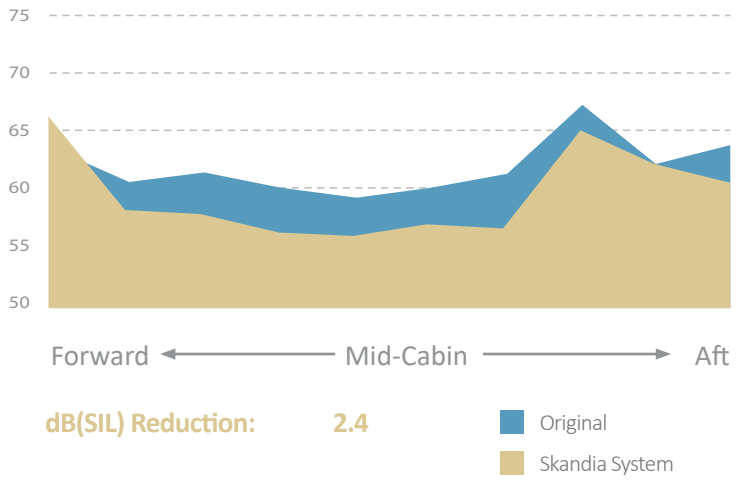
KING AIR 200-300 MODELS



dB(A) Reduction: 1.4

Original

Skandia System



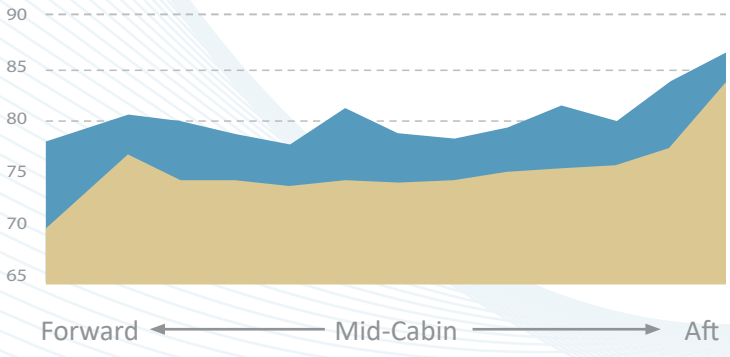
dB(SIL) Reduction: 2.4

Original

Skandia System

Bombardier

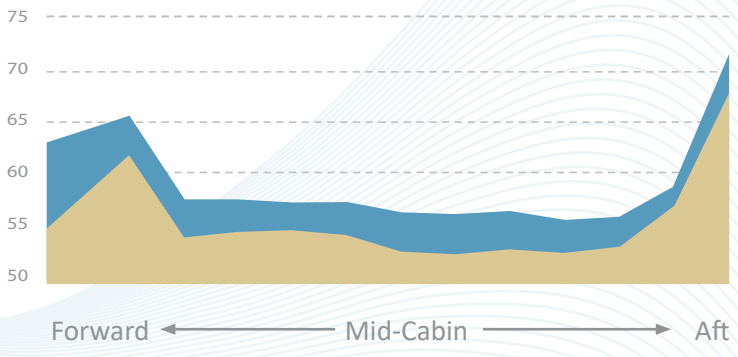
CHALLENGER 600 SERIES



dB(A) Reduction: 4.9

Original

Skandia System



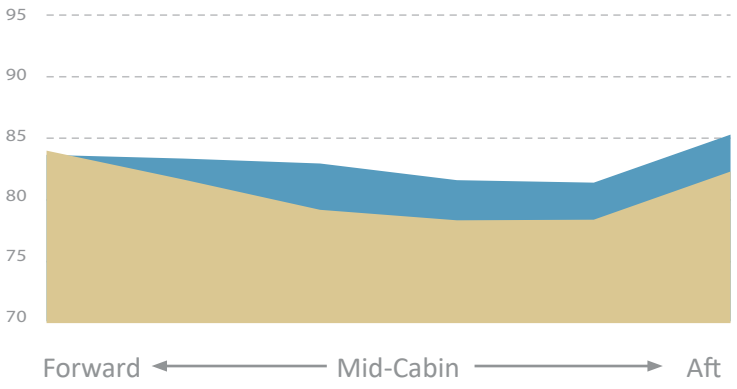
dB(SIL) Reduction: 3.1

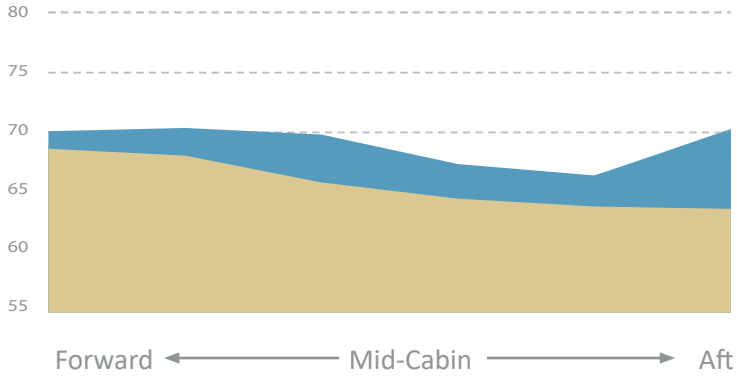
Original

Skandia System

Bombardier

LEAR 35





dB(A) Reduction: 2.4

Original

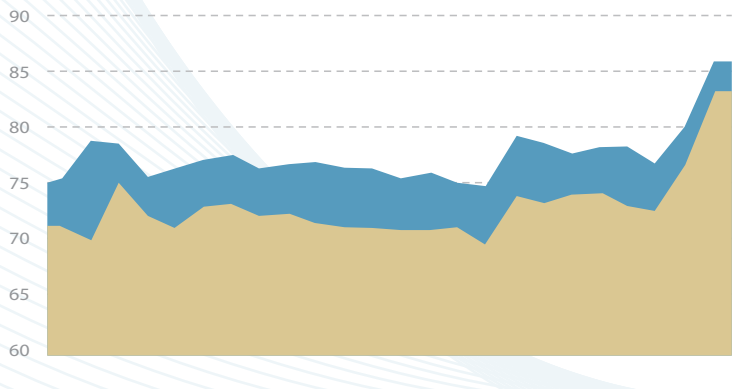
Skandia System

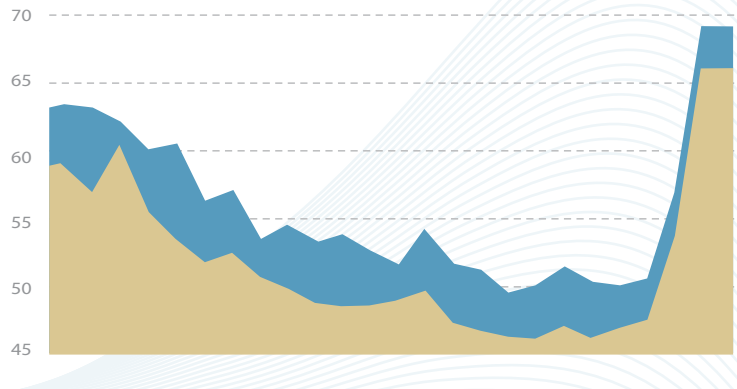
dB(SIL) Reduction: 3.3

Original

Skandia System

GLOBAL SERIES





dB(A) Reduction: 5.0

Original

Skandia System

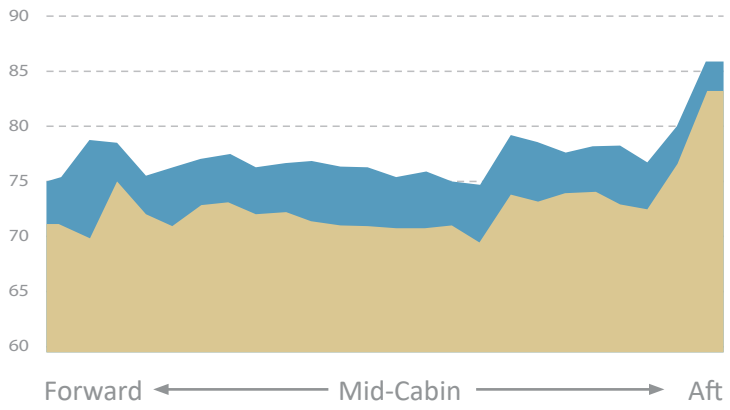
dB(SIL) Reduction: 3.5

Original

Skandia System

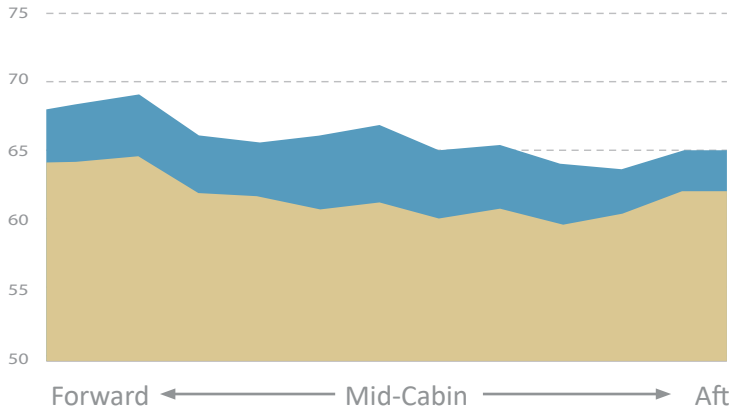
Cessna

CITATION 650



dB(A) Reduction: **2.5**

Original
Skandia System

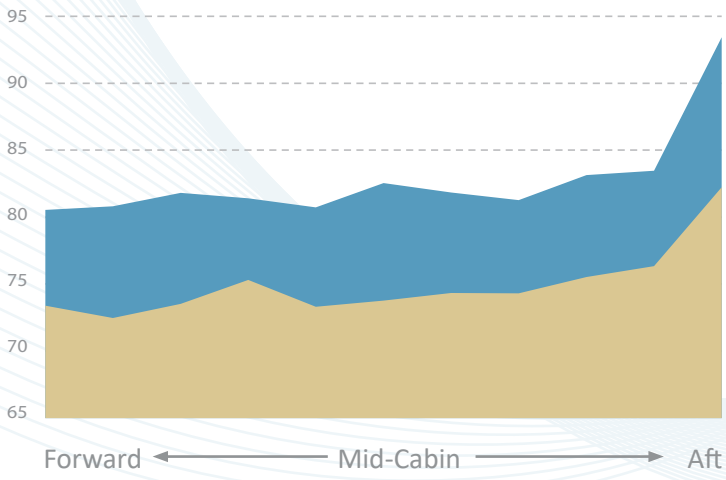


dB(SIL) Reduction: **4.3**

Original
Skandia System

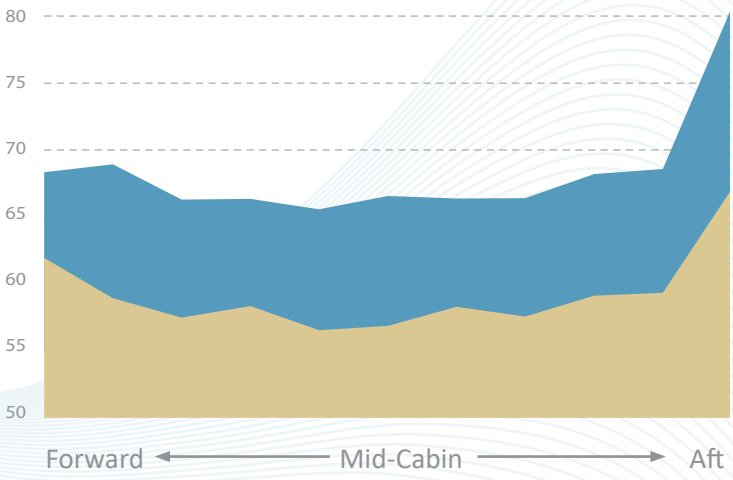
Dassault

FALCON 20



dB(A) Reduction: **7.5**

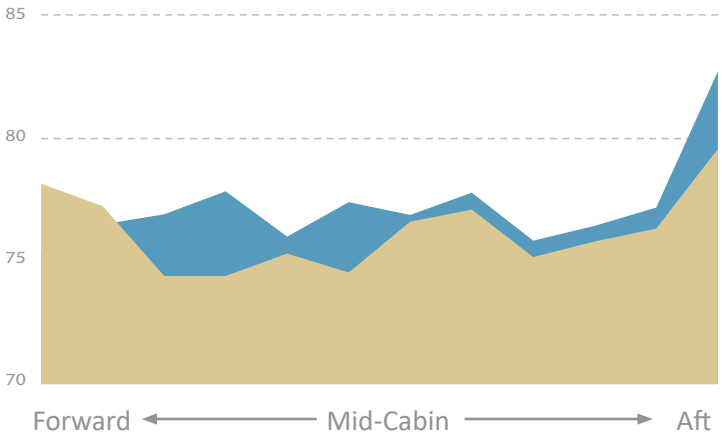
Original
Skandia System



dB(SIL) Reduction: **9.0**

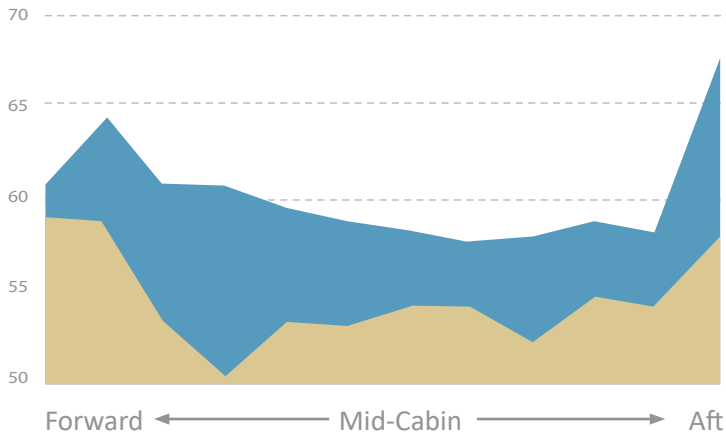
Original
Skandia System

FALCON 50



dB(A) Reduction: 4.8

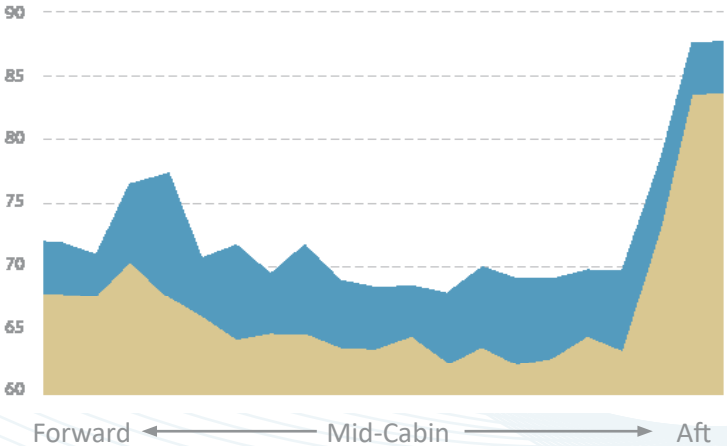
Original
Skandia System



dB(SIL) Reduction: 4.8

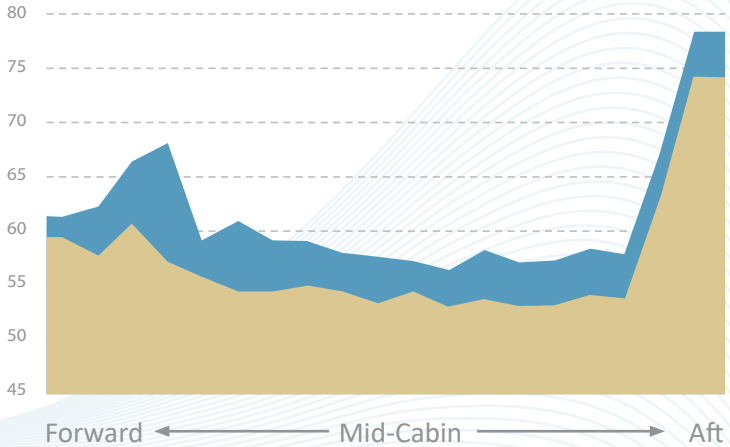
Original
Skandia System

FALCON 900 SERIES



dB(A) Reduction: 5.7

Original
Skandia System

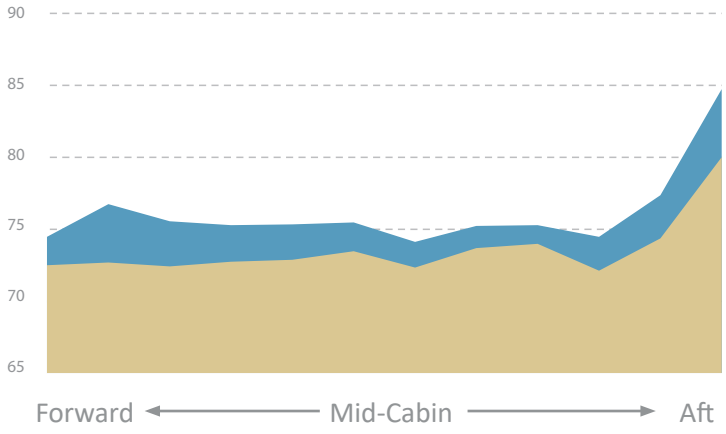


dB(SIL) Reduction: 4.4

Original
Skandia System

Dassault

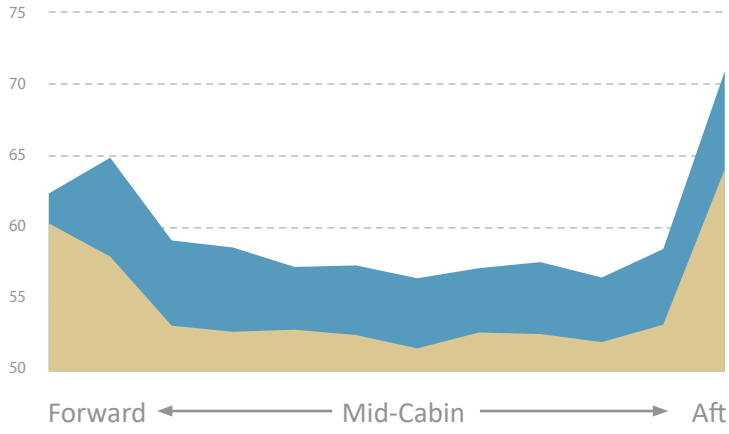
FALCON 2000



dB(A) Reduction: **2.1**

Original

Skandia System



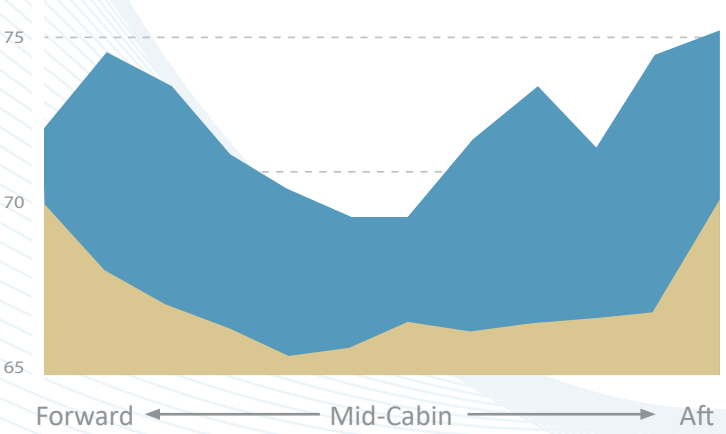
dB(SIL) Reduction: **5.0**

Original

Skandia System

Gulfstream

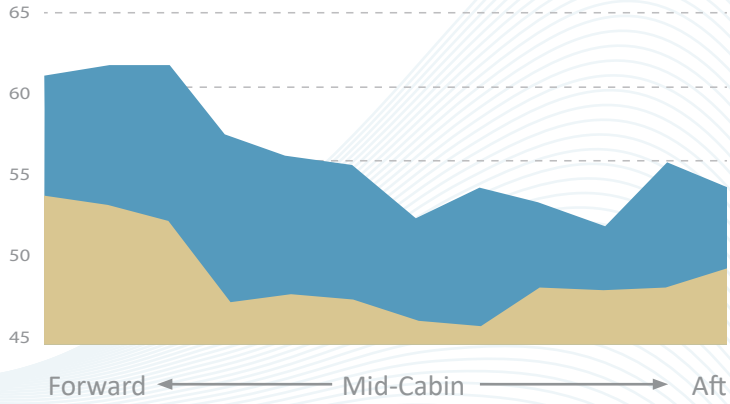
GIV



dB(A) Reduction: **5.0**

Original

Skandia System



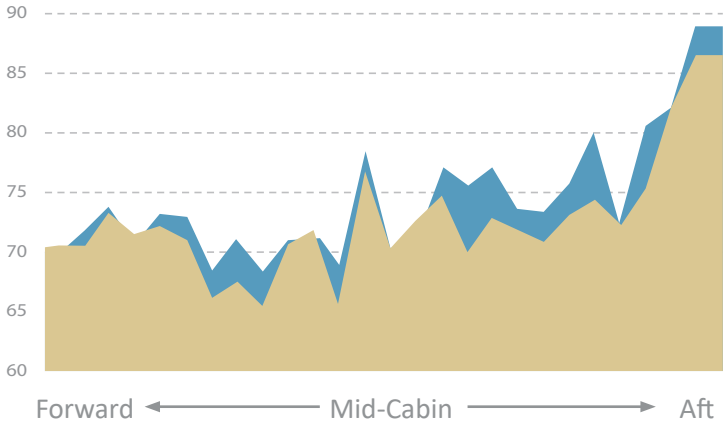
dB(SIL) Reduction: **8.7**

Original

Skandia System

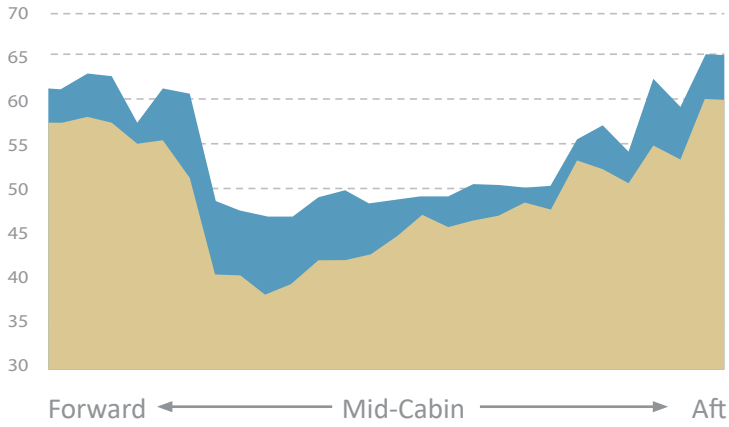
Gulfstream

GULFSTREAM G550



dB(A) Reduction: **2.1**

Original
Skandia System

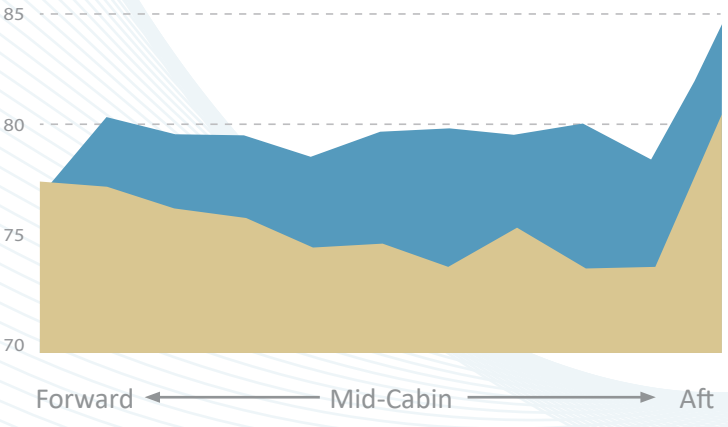


dB(SIL) Reduction: **4.3**

Original
Skandia System

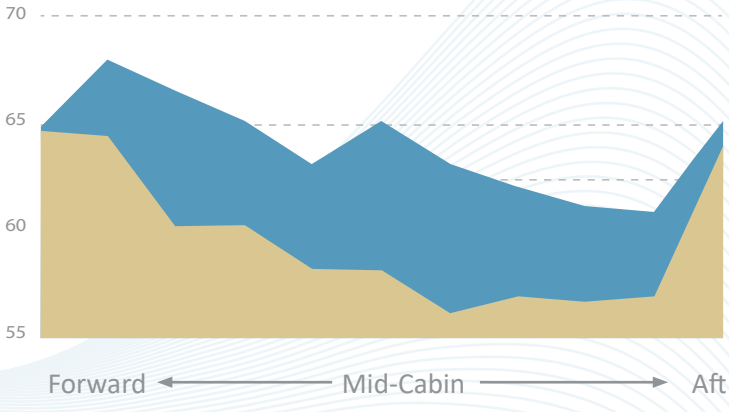
Hawker

HAWKER 800



dB(A) Reduction: **4.8**

Original
Skandia System

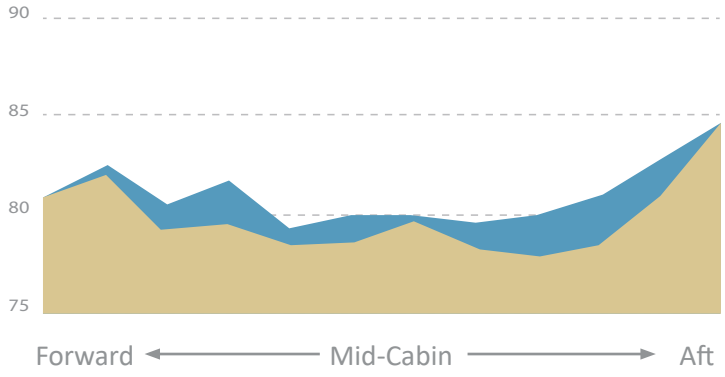


dB(SIL) Reduction: **5.5**

Original
Skandia System

Hawker

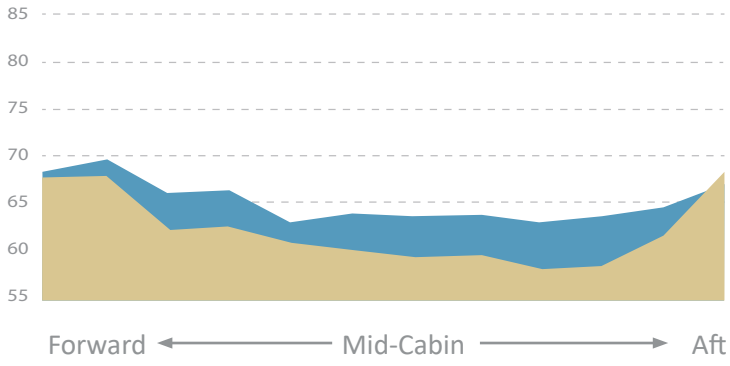
HAWKER 1000



dB(A) Reduction: 1.3

Original

Skandia System



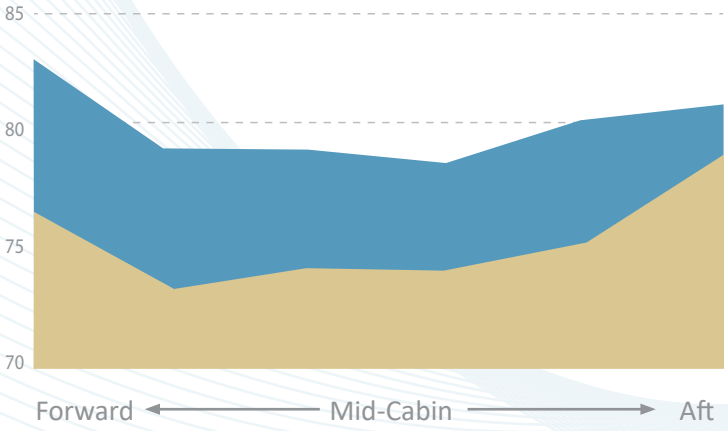
dB(SIL) Reduction: 2.8

Original

Skandia System

Israeli Aircraft

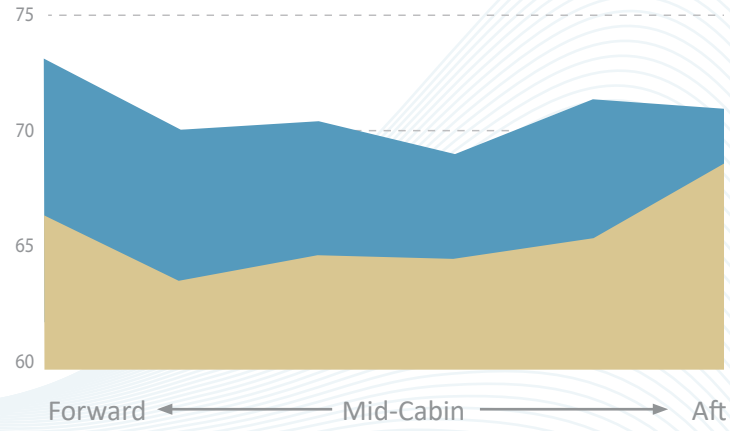
WESTWIND 1124



dB(A) Reduction: 4.5

Original

Skandia System



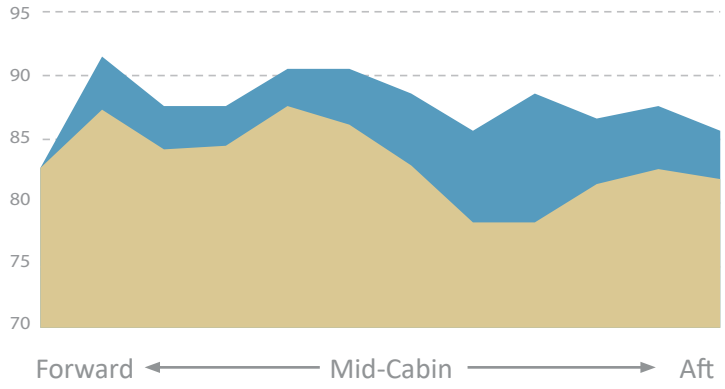
dB(SIL) Reduction: 5.1

Original

Skandia System

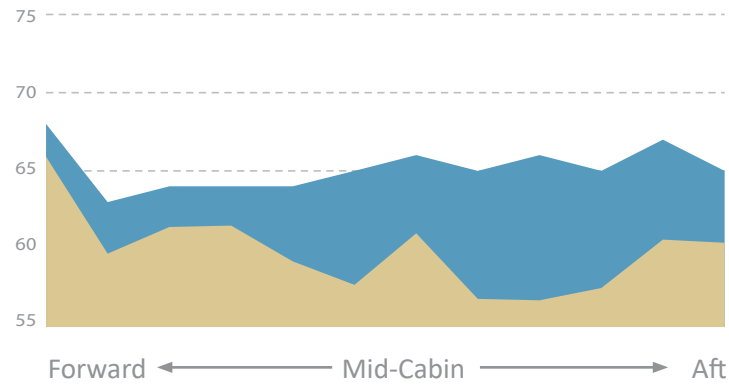
Mitsubishi

MU-2 LONG



dB(A) Reduction: 4.6

Original
Skandia System

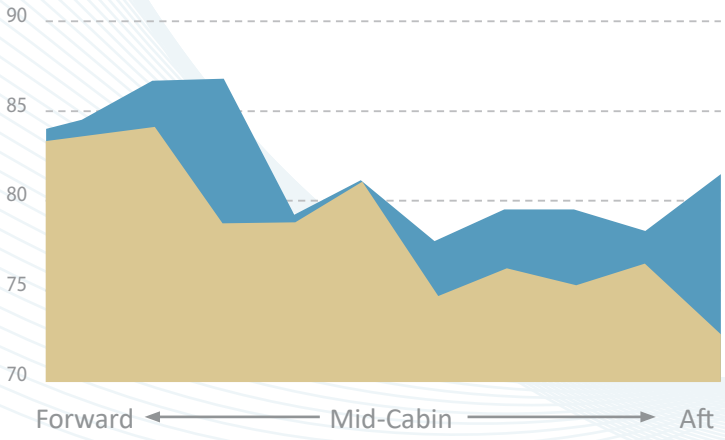


dB(SIL) Reduction: 5.5

Original
Skandia System

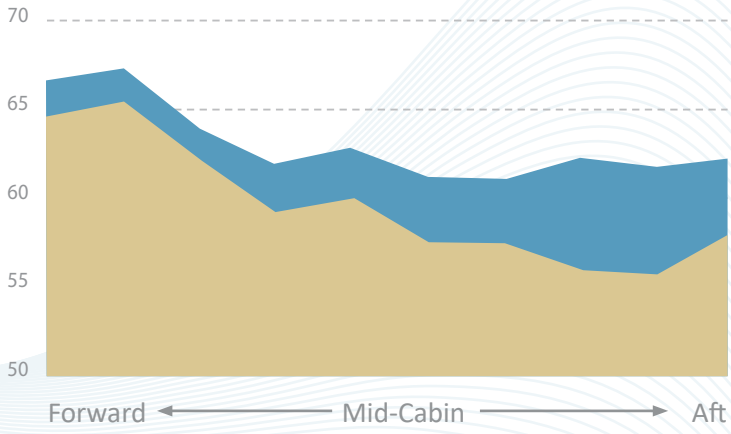
Pilatus

PILATUS PC-12



dB(A) Reduction: 2.6

Original
Skandia System



dB(SIL) Reduction: 3.3

Original
Skandia System

SKANDIA



WIRE PIN SAW MANUAL

FOR DIFFICULT, ACCURATE AND REPEATABLE FOAM PATTERN CUTTING

GREATLY ENHANCES SPEED AND REDUCES WASTE



INTRODUCTION

This manual has been prepared for the owner and those responsible for the operation of the Skandia, Inc. Wire Pin Saw. PLEASE NOTE: Your machine has been fully assembled, tested, operated and broken down for packaging to ensure that you have received a high quality product.

The purpose of this manual, aside from machine operation, is to promote safety through the use of accepted correct assembly and operating procedures. Read this manual thoroughly before assembling or operating the machine.

In order to obtain maximum life and efficiency from your Wire Pin Saw and to aid in operating and maintaining the machine with safety, read this manual thoroughly and follow all instructions carefully.

The specifications put forth in this manual were in effect at the time of publication. However, owing to Skandia's policy of continuous improvement, changes to those specifications may be made at any time without obligation on the part of Skandia, Inc.

The information and recommendations contained in this publication come from sources believed to be reliable and to represent the best current practice. Skandia, Inc. does not intend this manual to be a complete course of instruction on how to use this machine with safety and does not guarantee or represent that the information is absolutely correct or sufficient. In addition, it cannot be assumed that all acceptable safety measures are listed or that other additional measures are not needed under particular or exceptional circumstances or conditions.



SAFETY INSTRUCTIONS

Read, understand and follow the safety and instruction manual. Know the limitations and hazards associated with the Wire Pin Saw.

Adjust blade guard to approximately 1" above cutting piece.

The motor is thermally protected with a manual reset.

Be sure 110 Volt receptacle is property grounded.

Use safety shield, goggles or glasses that are approved to protect eyes during machine operation.

Remove or fasten all loose clothing such as neckties, sleeves, etc. Confine long hair.

Remove rings, watches, bracelets or other jewelry.

Keep the floor around the machine clean and free from scraps, oil or grease to minimize the danger of slipping.

Give the work you are doing all your attention. Horseplay and carrying on a conversation can cause injury.

When leaving the machine area or making adjustments, turn the machine off and wait until all moving parts stop.

Before performing any service or maintenance or when changing the blade be sure the power is off.

Use only Skandia, Inc. or factory authorized replacement parts and accessories; otherwise the warranty and guarantee is null and void.

Do not use the Wire Pin Saw for anthing other than its intended use. If used for other purposes, Skandia disclaims any real or implied warranty and holds itself harmless for any injury which may result from that use.

Read, understand and follow the safety and instruction manual.

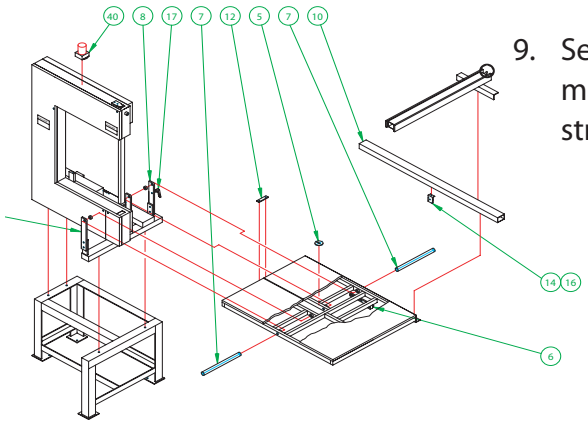
Know the limitations and hazards associated with the Wire Pin Saw.



ASSEMBLY INSTRUCTIONS

See the last page of this manual for large detailed drawing.

1. Bolt mainframe to stand using (4) -16 x HH bolts and (4) lock washers
2. Mount table with (2) table shafts (items #7). Start shaft through each side, slide lock collar onto each shaft before inserting shaft into inside frame rail. Do not lock collars in place yet.
3. Remove table locking handle (item #17) to attach table locking bar (item #6).
4. Bolt table guide mounting tube (item #10) onto support angle using (5) ¼-20 x ½ HH bolts and (5) lock washers.
5. Mount safety light (item #40) using (2) #8-32 x screws and (2) 8-32 nuts. Plug in connector wire.
6. Mount angle dial mounting plate (item #14, 16) to bottom of table guide mounting tube (item #10). Adjust indicator to zero.
7. Remove table tie plate (item #12). Install wire blade (directional arrow) through table slot, wrap wire over top wheels, then lower right, lower wheel. Be certain the wire is in the groove on the three pulleys before turning the wire over the drive pulley. To test blade tension, place hook of wire of wire tension gauge (WTG) onto wire blade an inch above the table surface. Pull the wire by using the WTG to the line on the table insert (item #5). Rotate pulley while adjusting tension screw. WTG needs to indicate between 6 and 7 pounds. Tighten bolts in adjusting plate and tension screw jam nut.
8. Adjust table to align wire through center of table insert—plain (item #5). Push lock collars against uprights (items #8, 9) and lock set screws. Then, lock the set screws on the table frame, locking the shaft.
9. Set up vacuum inside frame stand. Route hose between mainframe and table. Secure hose in place on hoop and loop strips. Hose can be removed quickly to clean machine.



WIRE BLADE INSTALLATION INSTRUCTIONS

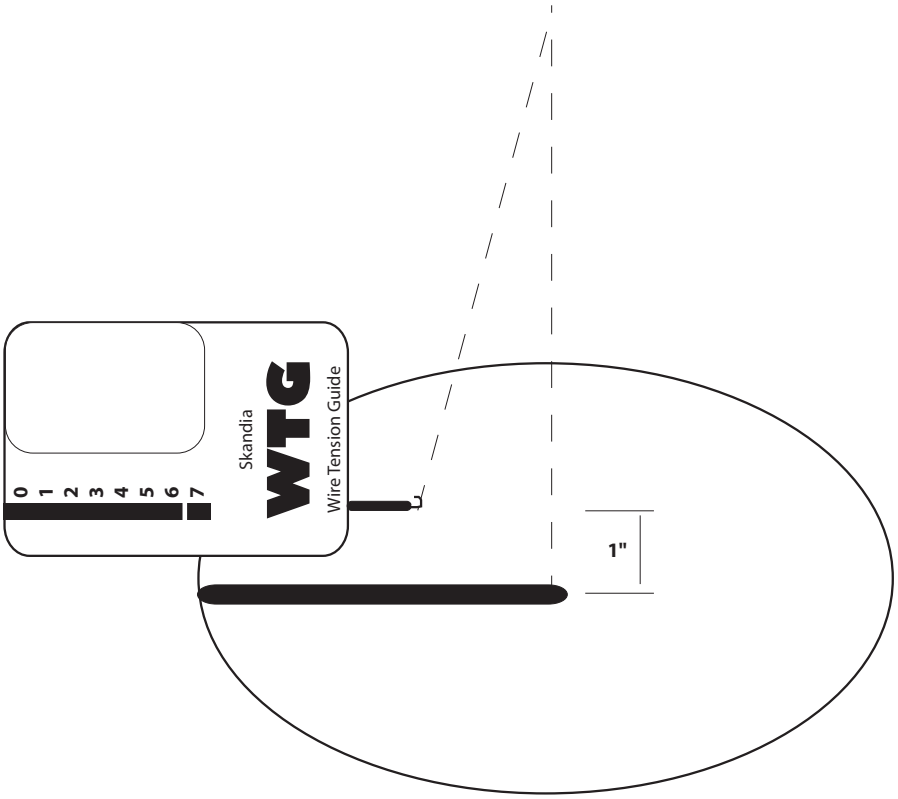
1. Remove table tie plate (item #12).

2. Install wire blade (directional arrow) through table slot, wrap wire over top wheels, then lower right, lower wheel.

Be certain the wire is in the groove on the three pulleys before turning the wire over the drive pulley.

3. Test blade tension by placing hook of wire tension gauge (WTG) onto wire blade an inch above the table surface. Pull the wire using the WTG to the line on the table insert (item #5). Rotate pulley while adjusting tension screw. The WTG needs to indicate between 6 and 7 pounds (see illustration below).

4. Tighten bolts in adjusting plate and tension screw jamnut.



OPERATING INSTRUCTIONS

A. MOTOR

The 1 HP (horsepower), 110 volt motor was specifically designed and manufactured to be used on the Wire Pin Saw. The motor is equipped with a soft start to give you increased life and service of your wire blade and is equipped with a manual reset for safety. The motor is a TEFC (totally enclosed fan cooled) so you can operate your saw in an industrial or dusty environment. Please note—since this motor was custom-made for your Wire-Pin Saw, it is highly recommended that you use only Skandia-authorized replacement parts.

B. BLADE GUARD

For safe operation, the blade guard must be in proper position. It is equipped with a friction lock so that the guard can be lowered or raised. Keep guard adjusted as low as possible allowing clearance for your work piece.

C. TABLE ADJUSTMENT

The table work service is mounted onto welded steel tubing and has a melamine top. To provide extra stability when the table is straight and level it has a positive lock to secure table down. The table may be tilted up to a 45-degree angle by adjusting the friction lock. To gauge the angle of the table an Inclinometer (angle indicator item #16) is attached to the side of the table.

D. FENCE

Standard equipment is a simple lift off Biesemeyer T-square that can go inside or outside of the wire blade. This adds for ease in cutting because you can cut from the right or the left. There is an optional "fence extension" that may be purchased to improve the cutting of taller pieces. Please see OPTIONS for more details.

E. LUBRICATION

The bearings in the pulleys are sealed for life, requiring no lubrication. Except drive bearings (item #42) need to be greased according to hours of operation, temperature, moisture and dirt. It is recommended that inspection is made at least every six months. The slides and adjusting screws should be lubricated at regular intervals with lightweight oil to insure proper operation.

WARRANTIES AND LIMITATIONS

Skandia warrants the equipment manufactured by Skandia, and not by others, to be free from defects in workmanship and material under normal use and service for a period of six months from date of delivery. This shall not include wire blades and/or preventative maintenance parts required for normal operation. Use or service with corrosive or abrasive chemicals or materials is not deemed normal. Upon written notice from Purchaser specifying the particular defect or defects, Skandia will correct without charge any workmanship which is demonstrated to Skandia's satisfaction to have been defective prior to installation and will repair or replace without charge f.o.b. Skandia, parts which upon inspection are found defective under normal use within the warranty period stated above. All work of removal and reinstallation or installation of parts, whether or not found defective and shipping charges for defective or replacement parts shall be at the sole expense of Purchaser.

This warranty shall not apply if installation is not performed under Skandia approved methods. Skandia shall not be liable for consequential damages of any kind which occur during equipment installation or which result from the use or misuse of Purchaser, its employees or other of the equipment supplied hereunder.

Purchaser's sole and exclusive remedy against Skandia for any breach of the foregoing warranty shall be valid and binding upon Skandia only if Purchaser operates and maintains the equipment and supplies hereunder in accordance with the instruction manual to be provided upon delivery of the equipment. Skandia does not warranty or guarantee the rate and quality of performance of the equipment herein specified, the process of manufacture, or the quality of the product to be produced by the equipment supplied hereunder, and Skandia shall not be liable for prospective profits.

THE FOREGOING WARRANTY IS EXCLUSIVE AND IS IN LIEU OF ALL OTHER EXPRESSED AND IMPLIED WARRANTIES AND SPECIFICALLY THERE ARE NO IMPLIED WARRANTIES OF MERCHANTABILITY OF FITNESS FOR A PARTICULAR PURPOSE. SKANDIA SHALL NOT BE SUBJECT TO ANY OTHER OBLIGATIONS OR LIABILITIES WHATSOEVER WITH RESPECT TO EQUIPMENT MANUFACTURED OR SUPPLIED BY, OR SERVICES RENDERED BY SKANDIA.

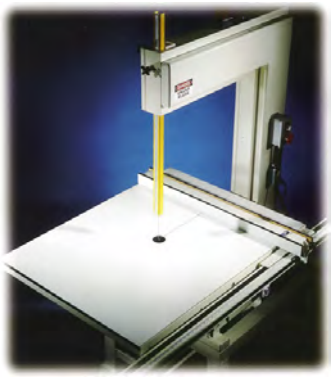
PIN SAW CLEANING INSTRUCTIONS

Skandia's exclusive Wire Pin Saw is designed to cut a variety of foam cut patterns prior to assembly into a finished product. We understand that there will be cases where cuts will be necessary after partial or final assembly of a cushion. Cutting parts that are already glued will cause glue to deposit on the surface of the cutting wire, and consequently in the grooves of the guiding wheels. Glue build-up will eventually produce excessive vibration of the wire and uneven cutting.

We recommend cleaning the wire after every job that includes cutting parts that have been glued. Doing this will control the frequency of total cleaning and the resulting down time. Use the Cleaning Stick as soon as possible after you finish cutting to prevent the glue from hardening. Rotate the wire by hand while moving the Cleaning Stick up and down to "scrub" the wire. Remove glue balls as they form on the Cleaning Stick.

Should it be necessary to do a complete cleaning of the Pin Saw, the following steps should be followed:

WARNING Replacement of wheels damaged by improper cleaning are the sole responsibility of the owner/operator.



1. DISCONNECT all power to the saw.

2. OPEN GUARD DOORS Vacuum inside saw to remove all dust from guide wheels and wire.

3. ROTATE THE BLADE by hand and apply Citrus Cleaner directly to the entire wire. Allow the cleaner to soak in to the wire and the wheels for at least 30 minutes. Longer soaking time makes glue easier to remove.

4. CLEANING THE WIRE Rub the cleaning stick up and down the wire, one section at a time. Grip the wire using a scrap piece of foam or a rag. Clean one section, then rotate wire and clean the next section. Continue until the entire wire has been cleaned.

5. CLEANING THE WHEELS Be sure to clean the groove on the wheels. CAUTION: Observe the following rules to avoid damage to the wheels:

    A. DO NOT USE SHARP TOOLS The wheels are made with a relatively soft urethane and can be easily damaged when sharp, metal objects are used to clean the wheel.

B. WHEN THE GLUE HAS SOFTENED, use the supplied groove cleaning tool to gently remove built up glue and foam from both the sides and bottom of the groove. DO NOT APPLY ENOUGH PRESSURE TO SCRATCH THE SURFACE OF THE GROOVE OR WHEEL. DOING SO MAY RESULT IN PERMANENT, IRREPARABLE DAMAGE TO THE WHEEL.

C. CAUTION Damaged wheels can not be repaired. Apply the minimum amount of pressure required to remove any built up glue and foam.

6. RECONNECT power to the machine and let the wire run gently along the side of the Cleaning Stick. Any remaining glue on the wire should start to come off as it rubs against the Cleaning Stick.



IN EXTREME CASES OF GLUE BUILD-UP, we recommend the following procedure:

1. DISCONNECT all power to the saw.
2. OPEN GUARD DOORS and vacuum inside saw to remove all dust from guide wheels and wire.
3. RELEASE TENSION on the wire and remove it.
4. PLACE WIRE in a container with enough glue solvent to cover wire and soak until glue is dissolved.
5. CAREFULLY CLEAN groove on the wheels according to above instructions and warnings. Do not use sharp tools.
6. REPLACE WIRE with cleaned or new wire.

To order more, please contact Skandia 815/393-4600:

Cleaning Stick	Item # SK158
Cleaning Tool (for wheel groove)	Item # 259-961
Wire Blade Replacement	Item # SKPINSAWIRE



259-961

Citrus-based cleaners are available at most hardware and lumber yards.

PARTS LIST

ITEM	PART	DESCRIPTION
1.	252-200	Base Frame Weldment
2.	251-100	Main Frame Weldment
3.	253-350	Table Weldment
4.	253-351	Table Top
5.	253-305	Table Top Insert-Plain
6.	253-306	Table Locking Bar
7.	253-307	Table Shaft
8.	253-308	Table Support (Locking)
9.	253-309	Table Support
10.	253-352	Table Guide Tube
11.	253-353	Table Guide Angle
12.	253-312	Table Tie Plate
13.	253-321	Table Insert Pin
14.	253-322	Angle Dial Plate
15.	259-923	Locking Collar
16.	259-922	Angle Indicator
17.	255-511	Table Locking Handle
18.	254-400	Motor Belt Guard
19.	254-401	Blade Guard
20.	255-500	Guard Assembly
21.	255-500	Guard Assembly Door
22.	255-507	Small Guard Door
23.	254-402	Bottom Blade Guide
24.	254-403	Top Blade Guide
25.	254-404	Blade Guard Lock
26.	259-917	Guard Boss
27.	259-919	Table Locking Clamp
28a.	256-601	Sheave Assy. Plain
28b.	256-610	Sheave Assy. w/Bearings
29.	256-603	Sheave Shaft Short
30.	256-604	Sheave Shaft Long
31.	256-605	Sheave Shaft Plate
32.	256-606	Sheave Adjust Plate
33.	256-607	Drive Shaft
34.	256-608	Motor Mounting Plate
35.	259-902	Drive Sheave
36.	256-602	Sheave Bearing Spacer
37.	256-609	Door Switch Guard
38.	259-911	Sheave Bearings
39.	259-910	Safety Switch
40.	259-909	Safety Light
41.	259-928	Start Stop Switch
42.	259-907	Drive Bearing
43.	259-904	Drive Belt
44.	259-905	Idler Pulley
45.	259-906	Drive Pulley
46.	259-918	Guard Locking Knob
47.	259-908	Wire Blade
	to reorder, reference SKPINSAWIRE	
48.	259-914	Caution Sticker
49.	259-933	Caution Sticker
50.	259-915	Danger Sticker
51.	259-901	Motor
52.	259-924	Table Top Guide
53.	259-929	1/4SQ11/8LGKEY
54.	259-930	1/4SW7/8LGKEY
55.	259-931	3/16SQX13/8LGKEY
56.	259-932	Sheave Push Screw
	259-950	Gas Spring
	259-951	Ball Stud Bracket
	259-952	End Fitting
	259-953	Safety Clip

SKANDIA

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Airbus & Boeing

Approved Test Lab

Worldwide OEM Approved

Supplier Status

Skandia's Flammability Testing is performed by highly trained technicians utilizing state-of-the-art equipment. Rapid turnaround times result from our in-house staff of DERs and DARs with the authority to perform conformity inspections and issue 8110-3 flammability certifications.

OUR COMPREHENSIVE CAPABILITIES INCLUDE

14 CFR 25.853(c)

Total Fireblocking Program

14 CFR 25.853(a)

Vertical and Horizontal
12- and 60-Second Composite Panel
Test to Boeing Specifications

14 CFR 25.856(a)

Radiant Panel

OTHER

45° Angle, 14 CFR 25.855(d)
60° Wire, 14 CFR 25.869 and 25.1713(c)

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Skandia's experience as an aircraft interiors specialist has enabled our insider's understanding of the aircraft refurbishment industry. From this foundation, Skandia has emerged as a high quality supplier delivering products and services in an ASAP environment.

QUALITY ASSURANCE

Our commitment to quality ensures that services are performed accurately and products arrive at our customer's dock on time with required documentation.

TESTING

Quick turnaround with FAA-Approval for flammability testing of aircraft interior materials is achieved by Skandia's experienced staff and sophisticated testing equipment. Full-time personnel include: qualified project coordinators, laboratory technicians and staff DERs and DARs with the authority to perform in-house conformity inspections and issue FAA-approval for a broad range of tests.

FIREBLOCKING CERTIFICATION

Test Plan Generation / Test Cushion Fabrication / Conformity / Inspection
Vertical Flammability on Dress Covers / 8110-3 Approval

BUNSEN BURNER

12- and 60- second Vertical / Horizontal / 45° Angle / 60° Wire

EXPERT CONSULTATION SERVICE AVAILABLE

Test Plans / Seat Design / Similarity Approvals / Composite Panel
Materials selection / OSU + Smoke Emission
Heat Release / Smoke Density / Toxicity Testing

Skandia will write the test plan while the specimens are sent to outside labs for testing. Skandia will need a completed Composite Panel Checklist with appropriate paperwork and test specimens.





SKANDIA

Flammability Testing & Certification Services

A resource for Skandia customers to improve their Flammability and Certification experience

Experience the Skandia Difference

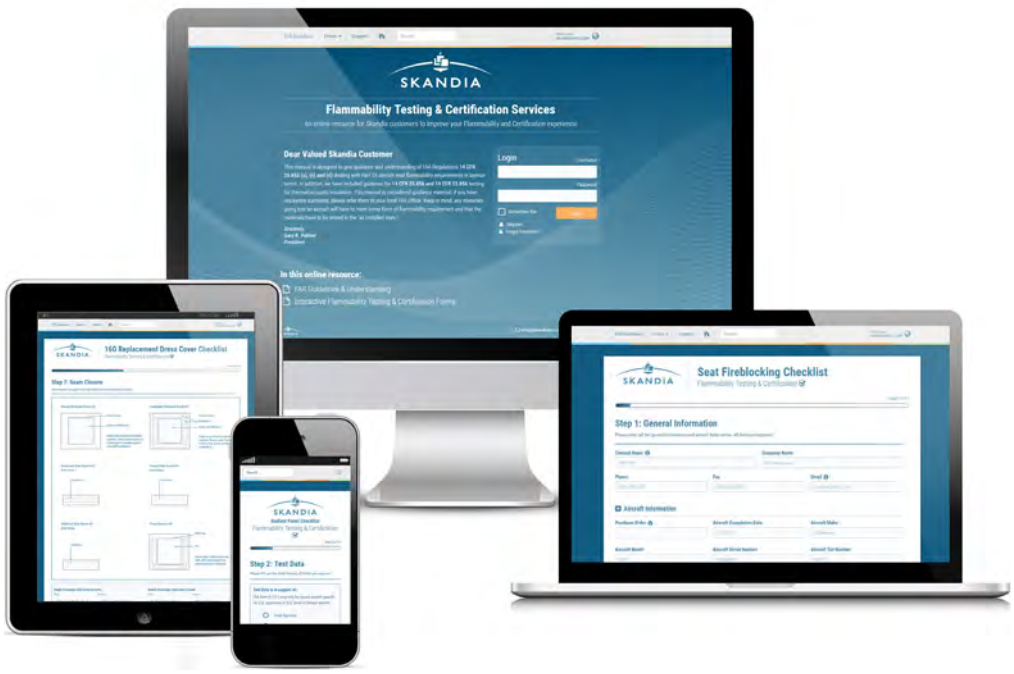
Interactive Flammability Testing & Certification Services Resource

www.flammability.skandiainc.com

A single online resource providing you everything necessary to prepare for your flammability testing and certification.

- Answers to 'Frequently Asked Questions' guiding you through preparation process.
- Guidelines to understanding FAA Regulations 14 CFR 25.853 (a), (c) and (d) for Part 25 aircraft.
- A comprehensive list of all necessary testing preparation checklists in an interactive format.

Skandia's online interactive resource allows you save your work progress and retrieve as needed. You and our engineering team will be provided a version of your project's completed information for easy reference.



Introduction



Dear Valued Skandia Customer:

This manual is designed to give guidance and understanding of FAA Regulations 14 CFR 25.853 (a), (c) and (d) dealing with Part 25 aircraft seat flammability requirements in layman terms.

Skandia has also made available an online and interactive version of all the information and checklists you may need in preparing your flammability testing. The online resource can be found at: www.flammability.skandiainc.com. We consider this printed resource guide to be supplemental (yet identical and completely usable) to our online Flammability Testing & Certification Services tool.

The online & interactive information allows Skandia customers to complete necessary checklist information, save progress and retrieve as needed, as well as provide you and our engineering team a version of your project's completed information.

In both versions of these resources, we have included guidance for 14 CFR 25.856 and 14 CFR 23.856 testing for thermal/acoustic insulation. These manuals are considered guidance material. If you have regulatory questions, please refer them to your local FAA Office. Keep in mind, any materials going into an aircraft will have to meet some form of flammability requirement and that the materials have to be tested in the "as installed state."

Sincerely,
Jarod Triplett
President

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Rules, Definitions, & Highlights

The Rules
14 CFR 25.853 Compartment Interiors

For each compartment occupied by the crew or passengers, the following apply:

a) Materials (including finishes or decorative surfaces applied to the materials) must meet the applicable test criteria prescribed in part I of appendix F of this Part, or other approved equivalent methods, regardless of the passenger capacity of the airplane.

b) Reserved

c) In addition to meeting the requirements of paragraph (a) of this section, seat cushions, except those on the flight crew member seats, must meet the test requirements of Part II of the appendix F of this Part, or other equivalent methods, regardless of the passenger capacity of the airplane.

d) Except as provided in paragraph (e) of this section, the following interior compartments of airplanes with passenger capacities of 20 or more must also meet the test requirements of parts IV and V of appendix F of this part, or other approved equivalent method, in addition to the flammability requirements prescribed in paragraph (a) of this section:

   1) Interior ceiling and wall panels, other than lighting lenses and windows;

   2) Partitions, other than transparent panels needed to enhance cabin safety;

   3) Galley structure, including exposed surfaces of stowed carts and standard containers and the cavity of walls that are exposed when a full complement of such carts or containers is not carried; and

   4) Large cabinets and cabin stowage compartments, other than under-seat stowage compartments for stowing small items such as magazines and maps.

e) The interiors of compartments, such as pilot compartments, galleys, lavatories, crew rest quarters, cabinets and stowage compartments, need not meet the standards of paragraph (d) of this section, provided the interiors of such compartments are isolated from the main passenger cabin by doors or equivalent means that would normally be closed during an emergency landing condition.

Classification
9G & 16G Seats

Seats are manufactured to the Aircraft Type Certificate (TC), Supplemental Type Certificate (STC) or a Technical Standard Order (TSO). The data tag on the seat should clarify which.

TSO-C39 is for 9g seats and the TSO generally only certifies the seat frame.

TSO-C127a is for 16g seats and the TSO certifies the completely upholstered seat and must have 14 CFR 25.853 (c) testing to meet the TSO. TSO-C127a was created by the addition of 14 CFR 25.562 in amendment 25-64. Any part 25 aircraft certified after 6/16/88 requires either 16g seats that meet TSO-C127a or seats meeting 14 CFR 25.562 that are TC to the aircraft.

Aircraft Operation

Part 91 Aircraft only require 14 CFR 25.853 (c) if they have 16g seats.

Part 135 Aircraft do require that the seats in these aircraft meet 14 CFR 25.853 (c).

Guidance Material

14 CFR 25.562

- 14 CFR 25.853
- 14 CFR Part 25 Appendix F Part I and Part II
- Aircraft Materials Fire Test Handbook DOT/FAA/AR-00/12
- Advisory Circular AC 25.853-1 Flammability Requirements for Aircraft Seat Cushions
- Advisory Circular AC 25-17A Transport Airplane Cabin Interiors
- Crash Worthiness Handbook
- Advisory Circular AC 21-25B Approval of Modified Seating
- Systems Initially Approved under a Technical Standard Order
- FAA Policy Statement PS-ANM-25.853-01
- FAA Order 8110.113
- FAA Memorandum 97-112-39

General FAQ

What is a 16g seat and which aircraft have them?

Any Part 25 Transport category aircraft certified after 1988 is required to have passenger seats that meet TSO-C127a or be Type Certificated with seats that meet SAE 8049A and 14 CFR 25.562

All 16g aircraft seats are certified for use in aircraft as a complete upholstered seat. Any changes to the seat, including upholstery, will affect the aircraft's certification. Even minor changes, such as changing the leather color, are considered a modification to the seat and its certification.

How do you re-upholster 16g seats?

First, Skandia suggests that the shop planning on re-upholstering 16g seats contact either the seat manufacturer if the seat has TSO or the aircraft manufacturer if the seat is part of the aircraft type certificate.

If neither is willing to provide guidance, then the FAA Advisory Circular 21-25B "Approval of Modified Seating Systems Initially Approved under a Technical Standard Order" would need to be followed. If you have a TSO seat and desire to follow AC 21-25B, Skandia can provide guidance. Skandia has developed a procedure to show compliance to the required regulations for "dress cover only" change.

You may want to contact your FAA FSDO (Flight Standards District Office) or FAA ACO (Aircraft Certification Office) for additional guidance.

Flammability testing will always be required when changing materials, but this is not the only requirement. It is the modifier's responsibility to ensure that the modified article is approved by the FAA.

16G Aircraft Seat Manufacturer Models

Aircraft seats are either manufactured and approved by technical standard order (TSO) or type certificate (TC) of aircraft (please check seat data tag)

The following is a comprehensive list of aircraft that have 16g seats:

Bombardier

- Challenger CL-300 (Continental)
- Global Express
- Global 5000

Cessna

- Citation seats are covered under the aircraft TCDS
  (Type Certificate Data Sheet)
- Mustang, Model 510
  (Normally Category Part 23)
  (see TCDS note 4)
- Citation Excel/XLS 560 (S/N 560-5001 and up)
- Citation Sovereign 680
- Citation X 750
- Citation Columbus 850

Dassault

- 2000
- 2000EX
  (2000EX EASy and 2000DX are still 2000EX with additional modification packages for marketing designation)
- 7X

Galaxy Aerospace

- Astra/Galaxy

Gulfstream

- G100
- G150
- G200
- G280
- Gulfstream V
- G450
- G550
- G650

Hawker Beechcraft

- 4000

Learjet

- 40
- 45
- 70
- 75
- 85

Embraer

- 135BJ
- 145BJ

Skandia Capabilities

Skandia's in-house Flammability Testing is performed by highly trained technicians utilizing state-of-the-art equipment. Rapid turnaround times result from our in-house staff of DERs and DARs with the authority to perform conformity inspections and issue 8110-3 flammability certification

14 CFR 25.853 (a)

- 45 Degree Panel Testing
- 60 Degree Wire Testing
- 12- and 60-Second Composite Panel Testing
- Test to Boeing and Airbus Specifications

14 CFR 25.853 (c)

- Total Fireblocking Test Program

14 CFR 25.853 (d)

- Heat Release
- Smoke Density

14 CFR 25.853 (h)

- Trash Containers

14 CFR 25.856 (a)

- Radiant Panel Testing with DER Certification

Plus

- Experienced Staff DERs and DARs
- State-of-the-Art Testing Equipment
- Re-qualify Existing Foam Cushions with New Dress Covers
- Test Plan Generation
- Test Specimen Fabrication
- Conformity Inspection
- 8110-3 Approval
- Similarity Approvals

Features & Benefits

Skandia's experience as an aircraft interiors specialist has enabled our insider's understanding of the aircraft refurbishing industry. From this foundation, Skandia has emerged as a high quality supplier, delivering products and services in an ASAP environment.

Quality Assurance

Our commitment to quality ensures services are performed accurately and products arrive at our customer's dock on time, with the required documentation.

Flammability Testing

Quick turnaround with FAA-approval for flammability testing of aircraft interior materials is achieved by Skandia's staff and sophisticated testing equipment. Full-time personnel include: experienced project coordinators, lab personnel, staff DERs and DARs with the authority to perform in-house conformity inspections and issue FAA-approval for a broad range of tests. Flammability certification is performed quickly and efficiently.

Skandia offers a wide range of Flammability Testing and Certification Services for all aviation needs.

Radiant Panel Testing Facts
for Thermal/Acoustic Insulation

Part 23 Aircraft – Radiant Panel Testing

As of December 2, 2011, the FAA added the requirement for Part 23 aircraft thermal/acoustic materials to meet the radiant panel test requirements. This testing requirement is the same as what has been previously required for Part 25 aircraft. 14 CFR 23.856 Thermal/Acoustic insulation materials states – "Thermal/acoustic materials installed in the fuselage must meet the flame propagation test requirements of part II of Appendix F to this part or other approved equivalent test requirements. This requirement does not apply to "small parts" as defined in 14 CFR 23.853 (d)(3)(v)." [Amdt 23-62, 76 FR 75759, December 2, 2011]

The major difference between the Part 23 14 CFR 23.856 and 14 CFR 25.856(a) is that "Part 23" 23.856 only applies to newly type certificated aircraft which the type design includes Part 23 amendment 23-62. Older Part 23 aircraft are not affected by this new rule. If you are replacing thermal/acoustic insulation, you are not required to meet this rule. This testing is only required for newly type-certificated aircraft that are certified after the December 2, 2011 rule.

The new rule, 14 CFR 23.856, is the same test and requirements as defined in 25.856(a) which is for flame propagation testing. The detailed FAQ questions that follow apply to both 23.856 and 25.856(a).

Part 25 Aircraft – Radiant Panel Testing

As of September 2, 2005, the new FAA standard for Thermal/Acoustic materials used in Transport Category Airplanes went into effect per www.fire.tc.faa.gov/pdf/handbook/00-12_ch24new.pdf. See page 16.

From Part 91 – General Operating and Flight Rules, §91.613 Materials for Compartment Interiors. For transport category airplanes type certificated after January 1, 1958:

- For airplanes manufactured before September 2, 2005, when thermal/acoustic insulation materials are installed in the fuselage as replacements after September 2, 2005, those materials must meet the flame propagation requirements of 14 CFR Part 25.856(a), referred to as Radiant Panel.

- For airplanes manufactured after September 2, 2005, thermal/acoustic insulation materials installed in the fuselage must meet the flame propagation requirements of 14 CFR Part 25.856(a), effective September 2, 2003.

From Part 121 – Operating Requirements: Domestic, Flag and Supplemental Operations §121.312 Materials for Compartment Interiors:

- For airplanes with a passenger capacity of 20 or greater, manufactured after September 3, 2007, thermal/acoustic insulation materials installed in the lower half of the fuselage must meet the flame penetration resistance requirements of 14 CFR Part 25.856, which was later postponed to September 2, 2009.

Radiant Panel Testing Summary

The FAA extended, by 24 months, the date for operators to comply with the fire penetration resistance requirements of thermal/acoustic insulation used in transport category airplanes manufactured after September 2, 2007. This extension was from September 2, 2007 to September 2, 2009. This action was necessary to allow airframe manufacturers enough time, after getting an acceptable certification test facility, to select and certificate appropriate installations.
For additional information: www.epa.gov/epa-impact/2007/january/day-12/i338.htm

25.856(a) Thermal/Acoustic Insulation Materials Testing

Thermal/acoustic insulation material installed in the fuselage must meet the flame propagation test requirements of Part VI of Appendix F Part 25, or other approved equivalent test requirements. This requirement does not apply to “small parts,” as defined in Part I of Appendix F Part 25.

Summary

The FAA has upgraded flammability standards for thermal/acoustic insulation materials used in transport category airplanes. These standards include new flammability tests and criteria that address flame propagation and entry of an external fire into the airplane. This action was necessary because current standards did not realistically address situations in which thermal/acoustic insulation materials contributed to the propagation of a fire.

What kind of test is it?

Think of it as a vertical burn test in a toaster oven. Flame is applied for 15 seconds down on the sample which is under a radiant heat source. This test is more demanding than the 12- and 60-second verticals and measures both flame propagation and after flame time.

Per the Advisory Circular, under certain conditions, we are given the latitude to apply the burner flame for 30 seconds or 60 seconds.

As with any test method, there will be good material that for some unknown reason has a slight after flame and does not meet the pass/fail requirements. To reach passing criteria, should any of the initial three specimens fail; a minimum of seven additional specimens may be tested. None of the additional specimens can fail either criterion. In addition, the average of all of the specimens, including the original failed specimen, must meet the pass/fail criteria as called out in AC25.856-1.

What materials have to be tested?

Thermal/acoustic insulation in the aircraft that cannot be accessed in-flight (entry curtains, under carpet pads do not have to meet this requirement).

Any fiberglass insulation, bagged or not, tapes used to assemble or repair insulation bags, skin damping materials, hook and loop (Velcro) used in the assembly and installation of insulation, sound blankets, or any other materials in the fuselage for thermal/acoustic insulation.

What about having to meet 14 CFR 25.853 (A) and (D)?

Thermal/acoustic materials may have to meet additional testing requirements dependent on what they are attached to. If thermal/acoustic material is glued, adhered, or attached to something that must meet the requirements 14 CFR 25.853, then it will need to be tested as a complete (composite) build-up as installed to 14 CFR 25.853(a) and (d).

14 CFR 25.853(a) is the Vertical Burn requirement. If the aircraft has 20 or more seats, then it would also have to meet 14 CFR 25.853(d) Heat Release and Smoke Density requirement.

Does existing material have to be replaced?

No, only new materials being installed after September 2, 2005 have to meet this requirement. Aircraft do not have to be retrofitted.

What aircraft are affected?

Aircraft that were built to CFR Part 25 requirements (includes commercial airliners, larger corporate aircraft, etc.).

What information is needed for testing to 14 CFR 25.856(A)?

A checklist can be downloaded from our website at SkandiaInc.com in the Forms and Checklists section. Specimen size is 12.5" x 23" for flexible materials; 11.5" x 23" for rigid materials and 4" x 12" for hook and loop fasteners. Three specimens are required for each test.

Testing Of Tape

A separate procedure has been developed to show compliance for the use of tape. Each type of tape requires qualification on each material on which it is used. If tape is to be tested, please follow specimen fabrication of draft Advisory Circular 25.856-1 on the Fire Tech Center website www.fire.tc.faa.gov

Testing of Hook And Loop Fasteners

A test procedure has been developed to simplify the certification process for hook and loop fasteners (Velcro). Hook and loop specimens are tested as mated components. Specimen sizes are 4" x 12". Three specimen of each are required. If hook and loop fastener (Velcro) is to be tested, please follow specimen fabrication of draft Advisory Circular 25.856-1 on the Fire Tech Center website www.fire.tc.faa.gov and later revisions.

Who has to comply?

Anyone installing or changing thermal/acoustic insulation after September 2, 2005 and aircraft manufacturers building new aircraft after September 2, 2005 must comply with the regulations.

Can I get an FAA 8110-3 form for this test?

An FAA Form 8110-3 can be issued for aircraft specific for U.S. registered or U.S. State of Design aircraft when a burn test is in support of an FAA project or in support of a major repair or alteration. Many of the thermal/acoustic insulation materials are used in combinations and must be tested in a composite build-up form. In this case Skandia can provide a test plan for the materials or accept customer conformed specimens for testing.

Composite Panel Testing Facts

Composite panel burn testing and why it is required

Single element vertical burn tests do not meet all of the requirements for installing materials in aircraft or on aircraft seating. The following is a look at the rule and details on what is required, though each FAA Flight Standard District Office or Aircraft Certification Office may have slight variations or interpretation. This information is for guidance only and any specific questions should be directed to your local FAA FSDO or ACO office. Additional reference materials are Advisory Circulars AC 25.853-1, AC 21-25B, AC 23-2A and Aircraft Materials Fire Test Handbook DOT/FAA/AR-00/12.

The rule §25.853 Compartment interior

For each compartment occupied by the crew or passengers, the following apply: Materials (including finishes or decorative surfaces applied to the materials) must meet the applicable test criteria prescribed in Part I of Appendix F of this part, or other approved equivalent methods, regardless of the passenger capacity of the airplane.

Frequently Asked Questions

What and how is it to be complied with appendix f to part 25?

Part I – Test Criteria and Procedures for Showing Compliance with §25.853, or §25.855 (a) Material test criteria

(1) Interior compartments occupied by crew or passengers.

> *(i) Interior ceiling and wall panels, partitions, galley structure, large cabinet walls, structural flooring, and materials used in the construction of stowage compartments (other than under-seat stowage compartments and compartments for stowing small items such as magazines and maps) must be self-extinguishing when tested vertically in accordance with the applicable portions of Part I of this appendix. The average burn length may not exceed 6 inches and the average flame time after removal of the flame source may not exceed 15 seconds. Drippings from the test specimen may not continue to flame for more than an average of 3 seconds after falling. (60-second burn)*

(ii) Floor covering, textiles (including draperies and upholstery), seat cushions, padding, decorative and non-decorative coated fabrics, leather, trays and galley furnishings, electrical conduit, air ducting, joint and edge covering, liners of Class B and E cargo or baggage compartments, floor panels of Class B, C, D or E cargo or baggage compartments, cargo covers and transparencies, molded and thermo-formed parts, air ducting joints, and trim strips (decorative and chafing), that are constructed of materials not covered in subparagraph (iv) below, must be self-extinguishing when tested vertically in accordance with the applicable portions of Part I of this appendix or other approved equivalent means. The average burn length may not exceed 8 inches, and the average flame time after removal of the flame source may not exceed 15 seconds. Drippings from the test specimen may not continue to flame for more than an average of 5 seconds after failing. (12-second burn)

(iv) Clear plastic windows and signs, parts constructed in whole or part of elastomer materials, edge lighted instrument assemblies consisting of two or more instruments in a common housing, seat belts, shoulder harnesses, and cargo and baggage tie-down equipment, including containers, bins, pallets, etc., used in passenger or crew compartments, may not have an average burn rate greater than 2.5 inches per minute when tested horizontally in accordance with the applicable portions of this appendix. (horizontal)

(v) Except for small parts (such as knobs, handles, rollers, fasteners, clips, grommets, rub strips, pulleys, and small electrical parts) that would not contribute significantly to the propagation of a fire and for electrical wire and cable insulation, materials in items not specified in paragraphs (a)(1)(i), (ii), (iii), or (iv) of part I of this appendix may not have a burn rate greater than 4.0 inches per minute when tested horizontally in accordance with the applicable portions of this appendix. (horizontal)

(b) Test Procedures–(2) Specimen configuration

Except for small parts and electrical wire and cable insulation, materials must be tested either as section cut from a fabricated part as installed in the airplane or as a specimen simulating a cut section, such as a specimen cut from a flat sheet of the material or a model of the fabricated part. The specimen may be cut from any location in a fabricated part; however, fabricated units, such as sandwich panels, may not be separated for test. Except as noted below, the specimen thickness must be no thicker than the minimum thickness to be qualified for use in the airplane. Test specimens of thick foam parts, such as seat cushions, must be ½-inch in thickness. Test specimens of materials that must meet the requirement of Paragraph (a)(1)(v) of Part I of this appendix must be no more than 1/8-inch in thickness.

Electrical wire and cable specimens must be the same size as used in the airplane. In the case of fabrics, both the warp and fill direction of the weave must be tested to determine the most critical flammability condition. Specimens must be mounted in a metal frame so that the two long edges and the upper edge are held securely during the vertical test prescribed in subparagraph (4) of this paragraph and the two long edges and the edge away from the flame are held securely during the horizontal test prescribed in subparagraph (5) of this paragraph. The exposed area of the specimen must be at least 3 inches wide and 12 inches long, unless the actual size used in the airplane is smaller. The edge to which the burner flame is applied must not consist of the finished or protected edge of the specimen but must be representative of the actual cross-section of the material or part as installed in the airplane. The specimen must be mounted in a metal frame so that all four edges are held securely and the exposed area of the specimen is at least 8 inches during the 45-degree test prescribed in subparagraph (6) of this paragraph.

I thought that 14 CFR 25.853(C) “the oil burn test” took care of the flammability testing for aircraft seats?

14 CFR 25.853(c) is for the seat cushions (backrest, bottom cushion, footrest, and headrest). It was developed for what was considered large volumes of foam. Seat armrest, base shrouds, back shell, etc. have to meet 14 CFR 25.853(a)(ii) or the 12-second vertical burn requirements as installed in the aircraft.

So footrests and headrests have to meet 14 CFR 25.853(C) even if they have no foam or a very small amount?

Footrests and headrests that are made up of substrate and dress cover only would have to be tested to 14 CFR 25.853(a)(ii) as a composite assembly. If there are any other components, the assembly would have to be burned to 14 CFR 25.853 (c).

Do armrests, base shrouds, back shells, etc, have to be tested even though I had the test done on the dress cover material?

Seat components that are upholstered such as armrests, shrouds, back shells, etc. have to be tested in the “as installed state” which includes substrate, foams, glues, dress cover material, etc. to the test requirements of 14 CFR 25.853 (a)(ii), which are the 12-second vertical burn requirements.

I'm just replacing the dress cover material on the headliner; so can't I just use single element vertical burn test results for that?

No, you will need to test the completed build-up in the "as installed state" which would include all materials that make up the headliner panel such as the dress cover, foam, glue and substrate material that makes up the headliner. Some FSDO will let you fabricate surrogate panels to replicate the substrate panel or foam, some will not. Those that won't may require samples to be cut from the part to be tested. You will have to get guidance from your FSDO. Headliners, window liners, and sidewalls all have to be tested to 14 CFR 25.853(a)(i) 60-second vertical test.

What if I cannot provide the substrate and the FSDO/ACO won't let me use a surrogate?

You would need to cut enough material from existing panels to perform the testing and then make a repair to replace what was used. Flammability testing would then be required for the repair.

What if I have the same material combinations but in different thicknesses, do I have to test them all?

Per 14 CFR Appendix F Part 1(b)(2) "Except as noted below, the specimen thickness must be no thicker than the minimum thickness to be qualified for use in the airplane. Test specimens of thick foam parts, such as seat cushions, must be ½-inch in thickness. Test specimens of materials that must meet the requirements of Paragraph (a)(1)(v) of Part I of this appendix must be no more than 1/8-inch in thickness. Electrical wire and cable specimens must be the same size as used in the airplane. In the case of fabrics, both the warp and fill direction of the weave must be tested to determine the most critical flammability condition." (This is only for Part I burns.) For further clarification, please see FAA Policy Statement PS-ANM-25.853-01.

What about cabinetry and bulkheads?

Cabinetry, bulkheads, and any large structures have to meet the requirements of 14 CFR 25.853(a)(i) 60-second vertical testing. This would include the cabinet structure, along with decorative finish as installed in the aircraft.

What has to be tested if we are just changing the finish?

Any time you are refinishing cabinetry, composite testing is required. This testing would have to include the cabinet structure, materials being added, glues used to attach, any finish material such as stains, paints, clear coat, etc. We would need to know the process specifications and material used, plus the mixing ratios for paints and stains. Some FSDO will let you fabricate surrogate panels to replicate the substrate panel or foam, some will not. Those that won't may require samples to be cut from the part to be tested. You will have to get guidance from your FSDO.

What about similarity testing for cabinetry in different aircraft?

Skandia's policy is not to do any similarities for different aircraft as substrate material, mix ratios and veneers can vary.

Can I just get an FAA 8110-3 for stock so that I can use the material or composite in many different aircraft?

No, an FAA form 8110-3 can only be issued aircraft specific for U.S. registered or U.S. State of Design aircraft. An 8110-3 can only be issued when a burn test is in support of an FAA project or in support of a major repair or alteration. An authorized DER must know how the material or part will be installed on an end product and identify that use on the FAA form 8110-3. DER's must follow order 8110.113 when issuing an 8110-3.

Flammability Certification
of Dynamic Certified Seats

Seats manufactured to meet Dynamic test criteria have additional requirements or restrictions. These seats would have been manufactured to either TSO C127A or 14 CFR 25.562. It is the responsibility of the upholsterer/fabricator to ensure that the work performed is compliant with the original certification. These seats are dynamically certified as an assembly which includes the detailed foam construction and dress cover. Any changes can affect the certification.

How do I know if a seat is dynamically certified?

In order to determine what the seat is certified to, we suggest you inspect the seat frames for TSO tags and also review the aircraft Type Certificate Data Sheet (TCDS).

What if there is no TSO tag on the seat?

You should review the TCDS and/or aircraft equipment list to verify the correct seat is installed. Some aircraft manufacturers include the dynamic seat approval on the aircraft Type Certificate (TC). In this case, there may not be a TSO tag on the seat, however, the seat could be dynamic certified and you should contact the aircraft manufacturer for guidance.

Additionally, Advisory Circular AC21-25B provides guidance utilizing a DER with 14 CFR25.562 authorization to generate acceptable data that the work can be performed in accordance with.

How do I perform re-upholstery and show FAA-compliance?

In general, FAA-compliance can be separated into two categories:

1. Upholstery Practices and Build-ups

The upholstery/foam build-ups must be performed in accordance with approved data. Contact the TSO holder or aircraft manufacturer for guidance.

2. Flammability

Flammability Testing and Certification is similar to non-dynamic seats and can be performed by Skandia. Skandia DERs are authorized to generate acceptable data for Flammability only.

Skandia, Inc. tests combinations of materials to show compliance to 14 CFR 25.853(c). Skandia does not approve production.

Additional testing of seat components is required to show compliance when seat armrests, wraparound shrouds, base shrouds, etc. are upholstered. These items need to comply with 14 CFR 25.853 (a) Appendix F Part I (a)(I)(ii) per the installed configuration, i.e., composite panels.

Headrests and leg rests are required to meet the requirements of 14 CFR 25.853(c) as called out in Advisory Circular AC 25.853-1.

For Flammability testing that is not performed under an FAA Project (FAA Project Number) or has FAA Request for Conformity, Skandia's Quality department will perform a company conformity inspection.

Additional reference material:

- Advisory Circular AC 25.853-1
- Advisory Circular AC 21-25B
- Advisory Circular AC 25-17A
- Technical Standard Order TSO-C127a
- Technical Standard Order TSO-C39b
- Aircraft Materials Fire Test Handbook DOT/FAA/AR-00/12

This information can be found either on the FAA website, www.faa.gov or on the FAA Fire Tech Center website, www.fire.tc.faa.gov. Skandia, Inc. offers this information only as guidance.

TSO-C127a Dynamic Seats

14 CFR 25.562 became effective May 17, 1988 (Amendment 25-64) requiring dynamic testing of seats. These requirements incorporate the foam cushion build-ups and dress cover materials as an integral part of the seat certification. Upholstery and foam build-ups cannot deviate from the original configuration without an approval process, typically controlled by the TSO holder or aircraft manufacturer.

TSO-C39c Non-Dynamic Certified Seats

The certification for TSO-C39c seats is limited to the seat structure and does not incorporate the foam build-up and dress cover materials. These seats can be re-upholstered without interaction of the TSO holder or aircraft manufacturer.

Heat Release
and Smoke Density Requirements

For Part 25 aircraft at Amendment 25-61 (8/20/1986), the FAA developed the following requirements for Heat Release:

"(a-1) For aircraft with a passenger capacity of 20 or more, interior ceiling and wall panels (other than light lenses), partitions, and outer surface galleys, large cabinets and stowage compartments (other than under-seat stowage compartments and compartments for stowing small items, such as magazines and maps) also must meet the test requirements of Part IV of Appendix F of this Part, or other approved equivalent method, in addition to the flammability requirements prescribed in paragraph (a) of this section."

For Part 25 aircraft at Amendment 25-66 (9/26/1988), aircraft must meet the requirement of Part V for Smoke Density.

These requirements only apply to aircraft with a capacity of 20 or more passengers.

Are the heat release and smoke density requirements applicable to seats?

The pre-amble of rule 25.853 exclude seats from the requirements of Part IV and Part V. However, with the invention of larger seats with integral stowage compartments and other console assemblies, the FAA has issued additional guidance.

On October 17, 1997, the FAA issued Memorandum 97-112-39 "Guidance for Flammability Testing of Seat/Console Installations." This document provide guidance as to when Heat Release and Smoke Density testing is required for aircraft seating, with capacity of 20 or more passengers.

Seat Fireblocking Checklist

User Guide

The following is the Seat Fireblocking Checklist and completion details. All information is very important for the development of a Flammability Test Plan. Please take the time to review each section as you are completing the checklist so that we receive complete and accurate information.

1) **Company Name:**
   Requesting the work.

2) **Contact Name:**
   Point of contact.

3) **Phone**

4) **Fax**

5) **Email:**
   to contact #2.

6) **Date Sent:**
   Date complete checklist is submitted.

7) **PO#:**
   Purchase Order that Skandia is to reference for this work.

8) **A/C Completion Date:**
   The date the aircraft is to be delivered.

9) **Aircraft Make:**
   Enter the aircraft make as listed on the type certificate data sheet.

10) **Aircraft Model:**
    Enter either the aircraft model series or the specific aircraft model number, as appropriate and as listed on the type certificate data sheet.

11) **S/N#:**
    Aircraft serial number.

12) **Tail#:**
    The registration number of the aircraft. (If the aircraft is not United States Registered or United States State of Design, an 8110-3 cannot be issued unless it is an FAA project).

13) **Test Data is in support of:**
    This tells us how the aircraft is being returned to service. If Skandia is fabricating the test specimens, an FAA form 8130-9 will need to be issued and signed. Authorization from you, the customer, will allow Skandia to sign the Statement of Conformity on your behalf.

14) **FAA Project#:**
    If testing is performed for either a Supplemental Type Certificate or Organization Designation Authorization, we require the FAA Project number and FAA Aircraft Certification Office involved with the project.

15) **Seating Configuration:**
    Skandia needs to know how many seats/divans/lav/jumpseats are being produced for inclusion in this test plan.

16) **Seat Manufacturer:**
    Please list the seat manufacturer as this helps us to better understand the testing that may be required.

17) Seat Testing:
We need to understand if the seats are being tested to comply with a TC/STC, a TSO or neither.

18) Seat Part Numbers:
If the seats are being tested to support TSO C-127, we need the model number and serial number of each seat. This information can be found on the seat's data tag.

19) Seat Composite Tests:
All components of a seat must also meet the requirements of 14 CFR 25.853 (a)(ii) 12-second vertical burn test as a composite representing the actual build-up. Skandia can perform this additional testing.

20) Cushion Packing List:
Copies of all packing lists or invoices are required for each material used within the seat upholstery. Without traceability, conformity cannot be performed and test specimens will not be burned.

21) Cushion Production Drawings:
Skandia requires production drawings or a sketch of what the production cushion foam build-up will be in each of the different components, including; back, bottom, headrest or legrest.

22) Cushion Dress Cover:
Dress cover material is needed for each fireblock test. In some cases, we may have to perform multiple tests with the same dress cover material.

23) Padding/Muslin:
We need to know if padding or batting is attached to the dress cover or if you have batting placed between the dress cover and the foam cushion, as well as how it is attached. If this is different for various cushions (seat back, bottom, headrest or legrest) we also need to know this.

24) Fireblocking Material:
If a fireblocking material is being used, we need to know how.

25) Adhesives:
Skandia may require you to provide us with your adhesive if we are fabricating the burn specimens. Skandia tries to maintain inventory of many common adhesives.

26) Seat Seam Closures:
This section deals with how the dress cover is closed after it is installed on the foam cushion in order to ensure proper testing.

27) Armrests/Shrouds:
If Skandia is performing flammability testing of armrests and shrouds, we need the same information as required for seat cushions. B/E Aerospace requires that these items are all tested for their 16g seats.

28) Packing List:
Again, invoices or packing lists for each component that comprise the armrests, shrouds, seat base, etc. are required. Some of these items may need to have several tests if different combinations of material are used.

29) Production Drawings:
As with the seat cushion, we require a production drawing or sketches of each component (armrests, shrouds, etc.).

30) FAA Form 8130-9:
If you are supplying Skandia with fabricated test specimens, we require an original completed FAA Form 8130-9.

31) Vertical Burn Test:
When performing FAA flammability testing, three samples for each test are needed. However, if the material is woven, we need to burn six (three fabricated with the warp of the material and three with the fill. Warp is up the roll, fill is across the roll.).

32) Substrate Material Information:
We need to know what the substructures of the armrest, shrouds, etc. (B/E Aerospace and Decrane Aerospace can provide substrate lists for their seats). When testing armrests, shrouds, and seat bases we need to know everything that makes up the component.

33) Seat Production Buildup Matrix:
On this chart please list all materials used and where. Any special notes should be listed in the comment area.

34) Production Cushion Build-Up:
This is a simplified sketch that you may use if you do not have production drawings or sketches. If you use this template, please identify on the drawing the various layers of materials utilized and identify them in the table below. One of these would be needed for each cushion (back, bottom, headrest, legrest) for all seats, divans, lavs, and jumpseats.

35) Composite Panel Production Build-Up:
This information is the same as required for the cushion drawing and needs to be completed for each component armrest, seat shroud, seat base, etc. Some components may require several tests for one armrest; in many cases there are different build-ups or the substrate will change the combination. For example; in armrests there are frequently different build-ups or changes in the substrate that will require multiple tests.

16G Replacement Dress Cover

Fire-Blocking Checklist

The following is Skandia's 16g Dress Cover Replacement Checklist and details of how to complete it. All this information is important to the development of the Certification and Flammability Test Plan. Please take the time to review each section as you are completing the checklist to be able to give Skandia the most complete and accurate information.

1) **Company Name:**
   Requesting the work.

2) **Contact Name:**
   Point of contact.

3) **Phone:**

4) **Fax:**

5) **Email:**
   to contact #2.

6) **A/C Completion Date:**
   The date the aircraft is to be delivered.

7) **PO#:**
   Purchase Order that Skandia is to reference for this work.

8) **Aircraft Make:**
   Enter the aircraft make as listed on the type certificate data sheet

9) **Aircraft Model:**
   Enter either the aircraft model series or the specific aircraft model number, as appropriate and as listed on the type certificate data sheet.

10) **S/N#:**
    Aircraft serial number.

11) **Tail#:**
    The registration number of the aircraft. (If the aircraft is not United States Registered or United States State of Design, an 8110-3 cannot be issued unless it is an FAA project).

12) **Test Data in Support Of:**
    If Skandia is fabricating the test specimens, an FAA Form 8130-9 will need to be issued and signed. Authorization from you, the customer, will allow Skandia to sign the Statement of Conformity on your behalf.

13) **AC 21-25A TSO:**
    Skandia must know if Test Data is in support of AC 21-25A TSO Modification.

14) **Existing TSO Tags:**
    Are there existing modification tags on the seats next to the original tags? This will let Skandia know if the original seats have been modified.

15) **Seating Configuration:**
    Skandia needs to know how many seats/divans/lavs/jumpseats are being produced for inclusion in this test plan. Depending on your aircraft, all or some of your seats may be 16g.3

16) Dress Cover Replacement:
Skandia must have verification that this is for dress cover change only.

17) Seat Manufacturer:
Please list the seat manufacturer as this helps to better understand what testing may be required.

18) Seat Composite Tests:
All components of a seat must also meet the requirements of 14 CFR 25.853 (a)(ii) 12-second vertical burn test as a composite representing the actual build-up. Skandia can perform this additional testing.

19) Seat Serial Numbers:
You must list all of the seat model numbers and serial numbers. This information can be found on the seat data tag.

20) Packing List:
Copies of all packing lists or invoices are required for each material used within the seat upholstery. Without traceability, conformity cannot be performed and the test specimens will not be burned.

21) Cushion Images:
Skandia requires that pictures be taken to verify all cushion build-ups, including back, bottom, headrest and legrest. This information, along with the information you provide on pages 6-9 will be the basis for verification of existing materials. Please make special note of hook and loop tape placement as stated on the checklist.

22) Cushion Dress Cover:
Dress cover material is needed for each fireblock test. In some cases, Skandia may have to perform multiple tests with the same dress cover material.

23) Muslin/Padding:
We need to know if padding or batting is attached to the dress cover. It is permissible to add up to 0.25" of padding to allow for a padded dress cover. We need to know if the padding or batting is attached to the dress cover or if it is placed between the dress cover and the foam cushion, as well as, how it is attached. If this is different for various cushions (seat back, bottom, headrest or legrest) we also need to know this information.

24) Fireblocking Material:
If a fireblocking material is being used, we need to know how it is used in the build-up.

25) Production Drawings:
If you have a copy of the original report or copies of the original production drawings, Skandia will require you to provide this information. Please list the original foam assembly drawing numbers in the table provided.

26) Seam Closure:
On page 4, Skandia has listed various types of seam closures, please list the number of seam closure on page 4 to the corresponding description. Example: If the single back cushion has a fully encapsulated back cushion and hook and loop for a final seam closure, please put #3 next to the Single Back.

27) Production Article Matrix:
On this chart, please list all materials used and where. Any special notes should be listed in the comment area.

28) Seat Dimensions:
On pages 7-10 you will list all of the dimensions of the finished cushion assemblies. It is very important to complete the entire page.

29) Substrate Build-Ups:
On pages 11-13 list all build-ups for the armrest and include any substrate information. It may be permissible to refoam armrests, seat bases and seat shrouds, if needed.

30) Seat Location:
On page14 indicate each seating location. List seat part numbers and serial numbers for each seat.

31) Hook & Loop:
Page 15 is an example of how hook and loop attach strips may be shown. It is a requirement that this be an accurate representation of the production articles. Since these attach strips are examples, it may be more accurate to submit your own sketch with dimensions.

Skandia Support



Our team of engineers and support technicians are ready to clarify or help with any issues you experience with Skandia's flammability testing system. Please don't hesitate to contact us.

Hours of Operation

We are open from 8am to 4:30pm CST

Email Address

info@skandiainc.com

Address

Skandia Inc
5000 N. Highway 251
Davis Junction, IL 61020











SKANDIA

FOAM FABRICATION PROGRAMS





Utilizing Latest Technologies

Skandia is equipped with the latest and most advanced CNC equipment to hold tight tolerances and results in highly repeatable products.

Speed, repeatability and precision are based on advanced manufacturing practices to provide consistent, uniform seat cushion production.

From small, simple components to large volume seating programs, Skandia's Fabrication team can meet your needs efficiently and cost-effectively.

CNC capabilities to precision cut components combine to produce dimensionally accurate cushions in high volume production quantities.

Cost Effective Solution

ELIMINATE

Purchasing, Receiving and Warehousing of Sheet Stock, In-House Hand Building

REDUCE

Shipping Costs, Labor and Sheet Stock Waste (estimated at 25%)

STREAMLINE

Flammability Testing and Certification Process, including Fireblocking; Free-up Manufacturing Space

EXPERIENCE

Skandia supports many fabrication programs for major OEMs and airlines. Contact our Fabrication Manager for more information.

Qualifications

FAA TSA C72c Authorization

FAA 8110-3 Flammability Certification

In-House Team of DERs + DARs

Approved OEM Supplier Status

5000 North Highway 251, Davis Junction, IL 61020 | 800 945 7135 | www.skandiainc.com





Special Programs

CUSTOM ORDERS – OUR SPECIALTY

Skandia's expert engineers and fabricators can design and build custom seats to suit your needs. From 30 seats to 30 aircraft, our CNC machine capabilities coupled with precision cut components produce comfortable cushions to meet your completion schedule.