

[Between us, ideas become reality.][®]

SOUNDSCAPES[®] Shapes
Acoustical Clouds

Armstrong[®]

New!

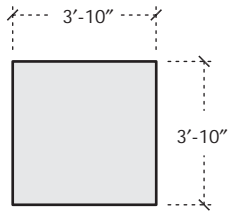
SOUNDSCAPES® Shapes

Acoustical Clouds

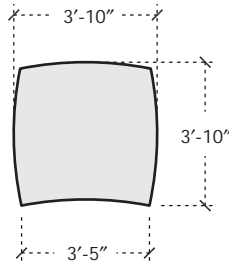
Imagine being able to wave a magic wand at the sky and position clouds of different sizes and shapes wherever you want. That's the beauty of SoundScapes Shapes Acoustical Clouds. Suspended individually or in groups, these shapely clouds can send ripples of quietude exactly where you want.

Panel Selection

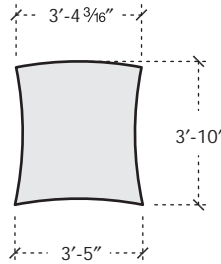
Nominal 4'x 4' Shapes



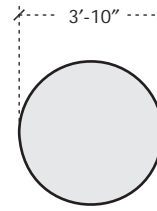
Item #5440
Square



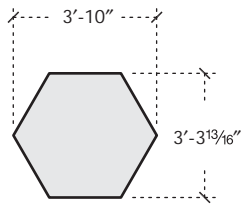
Item #5441
Convex



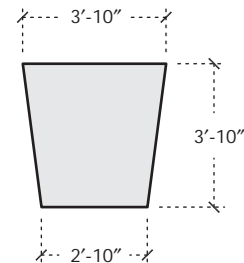
Item #5442
Concave



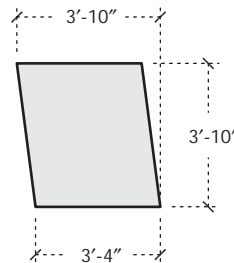
Item #5443
Circle



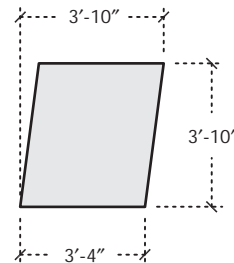
Item #5444
Hexagon



Item #5445
Trapezoid

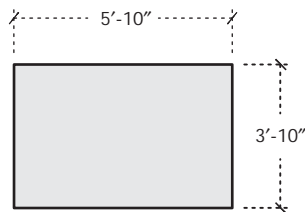


Item #5446
Left
Parallelogram



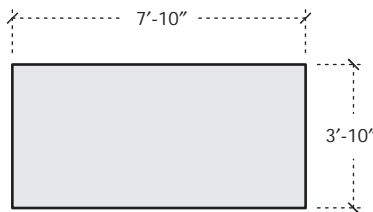
Item #5447
Right
Parallelogram

Nominal 4'x 6' Shape



Item #5448
Small Rectangle

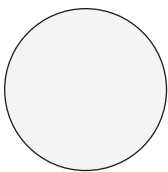
Nominal 4'x 8' Shape



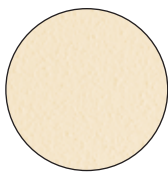
Item #5449
Large Rectangle

Color Selection

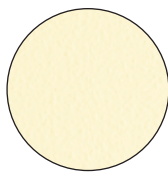
Due to printing limitations, shades may vary from actual product.



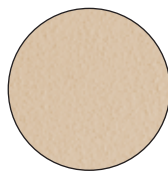
White (WH)



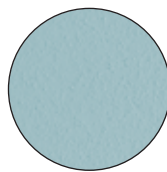
Shell (SH)



Pale Lemon
(LM)



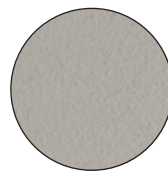
Pecan (PC)



Sky (SK)



Moss (MS)



Stone (SE)

NOTE: Special care in installation and handling must be taken with color shapes to avoid surface damage to the post-production paint finish.

Pictured on cover: SOUNDSCAPES® Shapes Acoustical Clouds, Circle Panels in Sky and Stone

Ways You Can Suspend SoundScapes Shapes in Groups

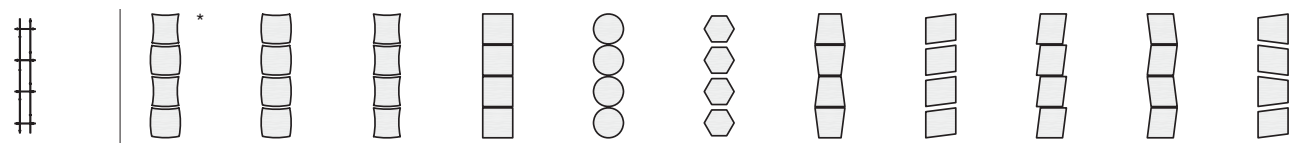
Grouping Ideas - You can group shapes in unlimited combinations. Below are a few ideas made possible with standard accessory kits. Group applications always require more than one kit.

To create these kinds of groups with 2" spacing between shapes, you need to order:



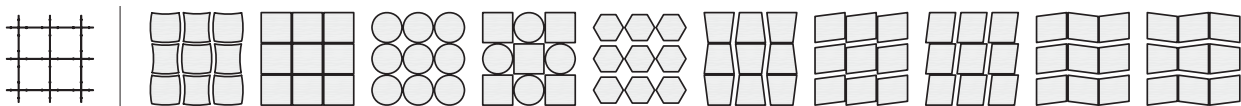
- (4) shapes: 5441 5442 5440 5443 5444 5445 5446 5447
 +
 (2) 5450 Deck Hanging Kits
 (1) 5451 Grouping Frames Kit
 (1) 5453 Frame Alignment Kit
 (4) 5454 Panel Hook Kits

To create these kinds of groups with 2" spacing between shapes, you need to order:



- (4) shapes: (2) 5441 (4) 5441 (4) 5442 (4) 5440 (4) 5443 (4) 5444 (4) 5445 (4) 5447 (4) 5446 (2) 5446 (2) 5447 (2) 5445 (1) 5446 (1) 5447
 +
 (3) 5450 Deck Hanging Kits
 (2) 5451 Grouping Frame Kits
 (2) 5453 Frame Alignment Kits
 (1) 5452 Frame Splice Kit
 (4) 5454 Panel Hook Kits

To create these kinds of groups with 2" spacing between shapes, you need to order:



- (9) shapes: (5) 5441 (4) 5442 (9) 5440 (9) 5443 (5) 5440 (4) 5443 (9) 5444 (9) 5445 (9) 5446 (9) 5447 (6) 5446 (3) 5447 (3) 5445 (3) 5446 (3) 5447
 +
 (5) 5450 Deck Hanging Kits
 (2) 5451 Grouping Frame Kits
 (3) 5453 Frame Alignment Kits
 (9) 5454 Panel Hook Kits

To create this group with 2" spacing between shapes, you need to order:



- (4) shapes: (2) 5440 & (2) 5448
 +
 (3) 5450 Deck Hanging Kits
 (1) 5451 Grouping Frame Kit
 (1) 5453 Frame Alignment Kit
 (4) 5454 Panel Hook Kits

To create these groups with 2" spacing between shapes, you need to order:



- (7) shapes: 5444 or 5443
 +
 (5) 5450 Deck Hanging Kits
 (2) 5451 Grouping Frame Kits
 (3) 5453 Frame Alignment Kits
 (7) 5454 Panel Hook Kits

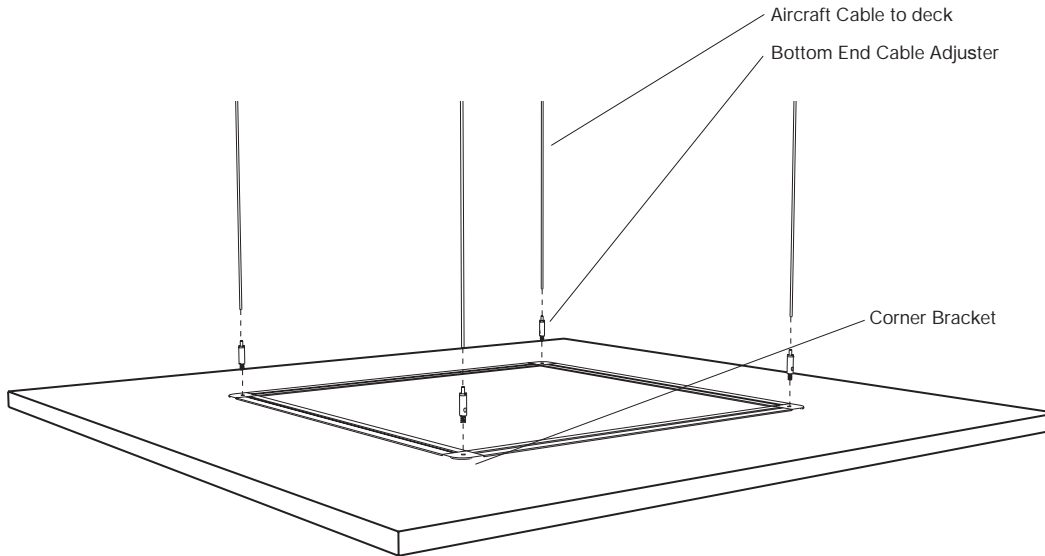
* See page 4 for installation photos.

Design Consideration for Sag: Spacing SoundScapes Shapes in close proximity to each other (6" apart or closer) may not be aesthetically desirable. SoundScapes Shapes maintain a natural sag that is highlighted when installed 6" or less apart. Deflection up to 1/8" has been documented and may become visibly noticeable.

NOTE: See Installation Instructions LA-297302 for details on typical group configurations. Installation will require field cutting of the grouping frames. Increasing the spacing between shapes may require additional hardware. If you need assistance identifying what and how many accessory kits are needed for your project, please contact TechLine at 1 877 ARMSTRONG.

Installation Options

1. Individual Suspension

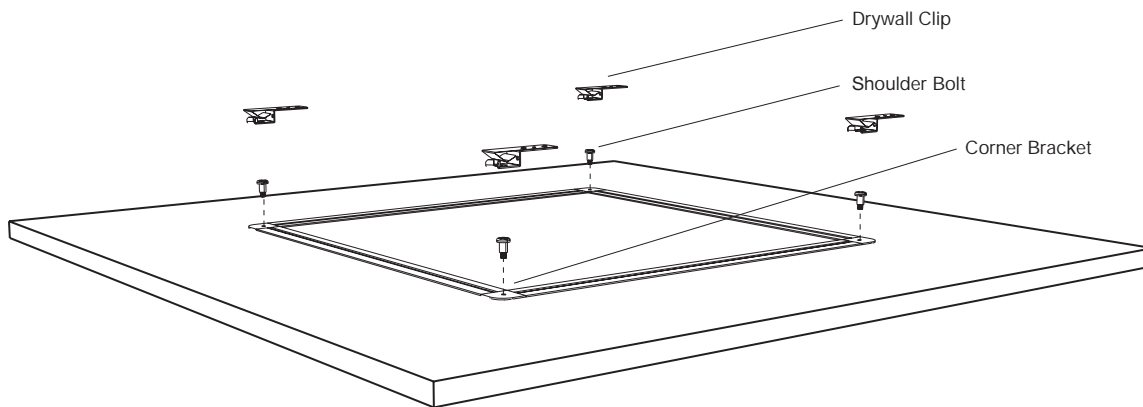


With individual suspension to the deck, you need the following for each type of shape:

Nominal 4' x 4' and 4' x 6' Shapes:
(1) Shape (Items 5440 through 5448)
(2) 5450 Deck Hanging Kits

Nominal 4' x 8' Shape:
(1) Item 5449, Large Rectangle
(3) 5450 Deck Hanging Kits

2. Individual Attachment to Drywall



With individual suspension to drywall, you need the following for each type of shape:

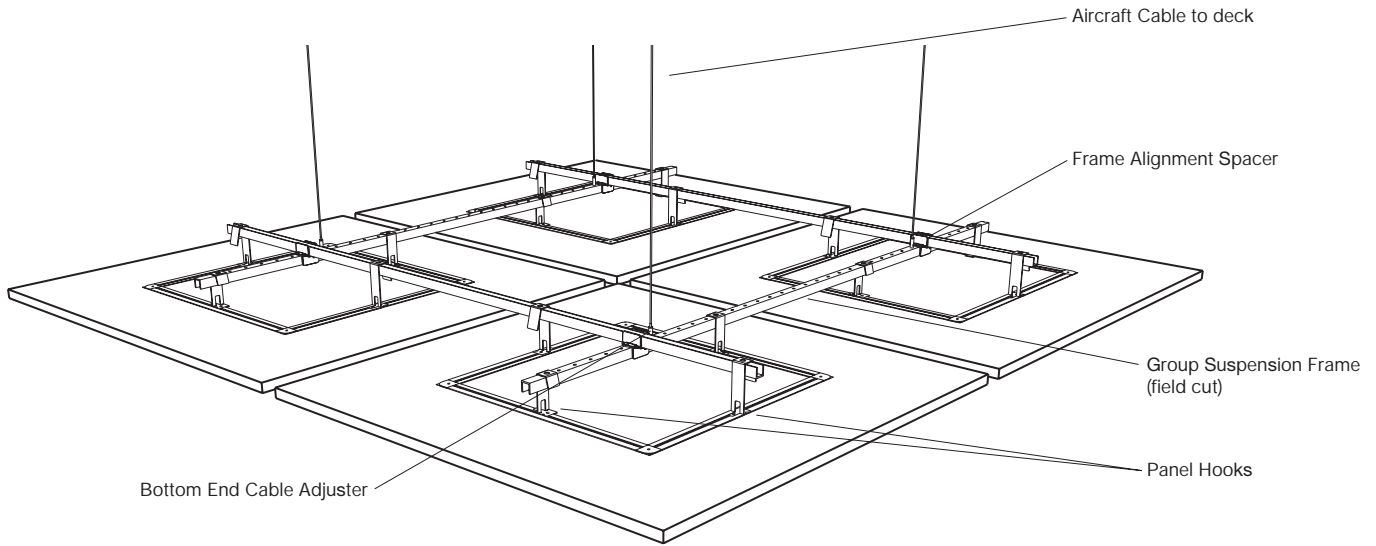
Nominal 4' x 4' and 4' x 6' Shapes:
(1) Shape (Items 5440 through 5448)
(2) 5455 Drywall Hanging Kits

Nominal 4' x 8' Shape:
(1) Item 5449, Large Rectangle
(3) 5455 Drywall Hanging Kits

NOTE: See Installation Instructions LA-297302 for details. If you need assistance identifying what and how many accessory kits are needed for your project, please contact TechLine at 1 877 ARMSTRONG.

Installation Options

3. Group Suspension



SoundScapes Shapes can also be installed together using a variety of group-related accessory kits. Group assemblies have been engineered for use in all seismic areas.

As an example, to install the design layout above with 2" spacing between shapes, you would need to order:

- Nominal 4' x 4' Shapes:
- (4) Shapes (items 5440 through 5447)
- (2) 5450 - Deck Hanging Kits
- (1) 5451 - Grouping Frames Kit
- (1) 5453 - Frame Alignment Kit
- (4) 5454 - Panel Hook Kits

Design Consideration for Sag: Spacing SoundScapes Shapes in close proximity to each other (6" apart or closer) may not be aesthetically desirable. SoundScapes Shapes maintain a natural sag that is highlighted when installed 6" or less apart. Deflection up to 1/8" has been documented and may become visibly noticeable.

Installation Views



(2) 5441, (2) 5442



(4) 5441



(7) 5444

NOTE: See Installation Instructions LA-297302 for details on typical group configurations. Installation will require field cutting of the grouping frames. Please note: Increasing the spacing between shapes may require additional hardware. If you need assistance identifying what and how many accessory kits are needed for your project, please contact TechLine at 1 877 ARMSTRONG.

Acoustical Performance

Sound Absorption in Sabin

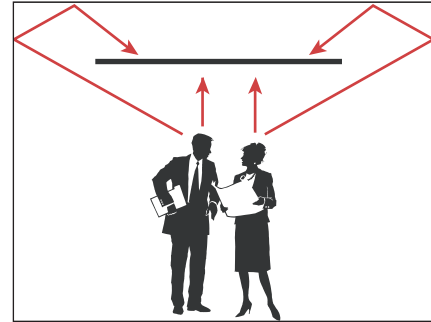
The Sabin is the unit of total sound absorption provided by an object. This is the preferred metric for “space absorbers” such as clouds, canopies or baffles installed within an architectural space.

Total acoustical absorption for a suspended ceiling is calculated by multiplying the exposed surface area by the material NRC while “space absorbers” are directly measured. SoundScapes Acoustical Clouds and Canopies provide greater sound absorption than a continuous ceiling of the same surface area because the sound is absorbed from both the front and back surfaces.

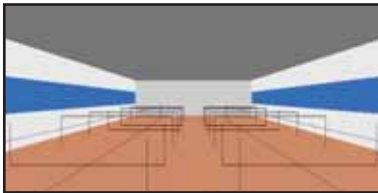
The installation of clouds and canopies in a reverberant space can significantly reduce the background noise and reverberation time, enhancing speech intelligibility.

Factors that may affect the installed acoustical performance relative to the published results are:

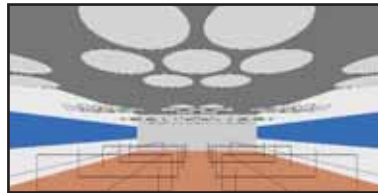
- Size and shape of cloud
- Number of clouds and their layout
- Suspension distance below exposed deck or finished ceiling
- Location and vertical or horizontal layering of clouds
- Material selection (fiberglass clouds or mineral fiber canopies)



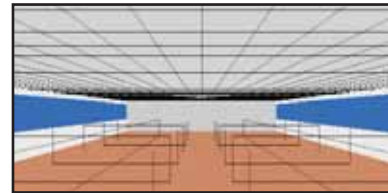
EXPOSED STRUCTURE



SOUNDSCAPES



FULL ULTIMA CEILING



5,000 SF Exposed Structure (50' x 100'), 15' to deck, drywall with windows two sides, commercial carpet

Ceiling	No Ceiling Exposed Structure	SoundScapes (25% of ceiling)		SoundScapes (50% of ceiling)		Full Ultima Ceiling
		52 SoundScapes Canopies*	105 SoundScapes Shapes-Circles	100 SoundScapes Canopies*	217 SoundScapes Shapes-Circles	
Reverberation Time(s)	3.4s	1.6s	1.4s	1.0s	0.9s	0.5s
RT Improvement	ref	+53%	+58%	+70%	+74%	+85%
Background Noise Reduction	ref	-1.6 dB	-2.0 dB	-2.6 dB	-3.0 dB	-5.0 dB
Total Sabin for Coverage Area	none	1248 sf x 1.25 = 1560	1216 sf x 1.49 = 1812	2400 sf x 1.25 = 3000	2515 sf x 1.49 = 3747	5000 sf x 0.70 = 3500

* For product information on SoundScapes Acoustical Canopies, see CS-3691

NOTE: Results based on acoustical testing of white SoundScapes Shapes circles suspended 48" below the deck. The absorption is approximately 10% lower for color panels and 20% lower for direct attachment to drywall.

Accessory Kits - Applications always require more than one kit. Please review your needs carefully.

ITEM # KIT CONTENTS

5450 - Deck Hanging Kit

Allows for suspending individual shapes or grouping frames from deck and bottom end adjustment of height at panel or frame level.

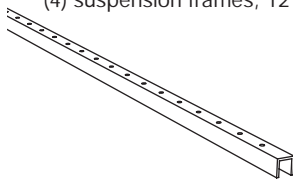
- (2) gripper structure anchors
- (2) gripper structure caps
- (2) 8' aircraft cables
- (2) bottom end cable adjusters
- (2) nuts with washers



5451 - Grouping Frames

Suspension frames used to group panels together

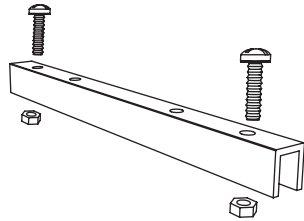
- (4) suspension frames, 12' long, black



5452 - Frame Splice Kit

Connects group suspension frames for longer runs (> 12 feet)

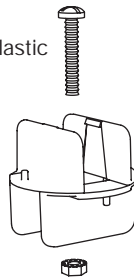
- (2) group frame connectors, 10" long, black
- (4) screws with washers
- (4) nuts



5453 - Frame Alignment Kit

For use with group suspension frames

- (4) frame alignment spacers, clear plastic
- (4) screws
- (4) nuts with washers

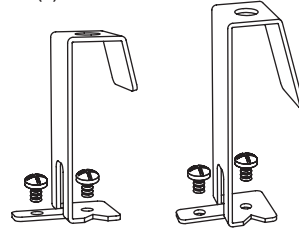


ITEM # KIT CONTENTS

5454 - Panel Hook Kit

For use with group frames, one kit per panel

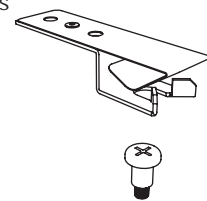
- (2) 4-1/2" high panel hooks, black
- (2) 3-1/2" high panel hooks, black
- (8) screws



5455 - Drywall Hanging Kit

For individual panel attachment to drywall

- (2) drywall clip assemblies
- (2) shoulder bolts



625530 - Extended Hanging Cables

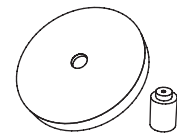
For use with deck hanging kit when longer cables are needed

- (4) 30' aircraft cables

7006 - Escutcheon Kit

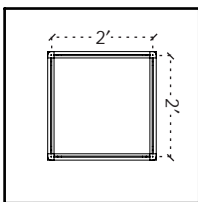
Used when hanging panels below an existing ceiling

- (2) collars with set screws
- (2) 2" escutcheons

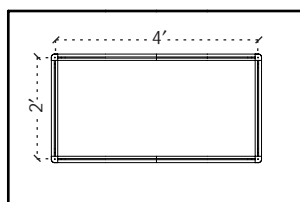


NOTE: If you need assistance identifying what and how many accessory kits are needed for your project, please contact TechLine at 1 877 ARMSTRONG.

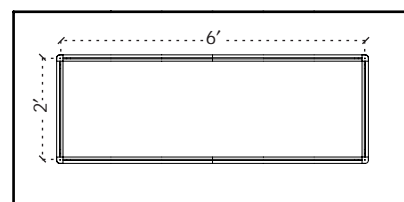
Accessory kit hardware is attached to panels via the metal extrusion or corner brackets on the back of each panel. These diagrams show the location of extrusions and corner brackets in the back of each size panel. See Installation Instructions LA-297302 for more details.



Nominal 4' x 4' Shapes



Nominal 4' x 6' Shape



Nominal 4' x 8' Shape

New!

SOUNDSCAPES® Shapes

Acoustical Clouds

Recycled Content: 35%

Contact TechLineSM for LEED Information. 1-877-ARMSTRONG

LEED Credits						
Energy	Waste Mgmt	Recycled Content	Local Materials	Renewable Materials	Low-Emitting Materials	Daylight & Views
✓	✓	✓	✓		✓	✓

Key Selection Attributes

- Enhance acoustics in open areas
- Improve sound absorption and reduce reverberation time
- Aesthetically define spaces
- 10 flat fiberglass panels in multiple sizes and shapes
- Install individually or in groups, create your own unique design
- Exclusive DuraBrite™ finish on sides and edges
- Full line of hanging kits and accessories
- Adjustable to special heights
- Quick and easy to install from a deck, through a ceiling or directly attached to drywall
- Engineered for use in seismic areas

Typical Applications

- Exposed structure areas
- Offices
- Lobbies and reception areas
- Public spaces
- Higher education
- Retail
- Hospitality

Colors

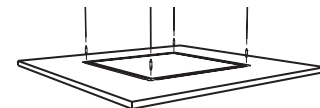
- White (WH)
- Shell (SH)
- Pale Lemon (LM)
- Pecan (PC)
- Sky (SK)
- Moss (MS)
- Stone (SE)

Visual Selection

Item Number*	Description	Dimensions*
SOUNDSCAPES Shapes		
5440_ _	Square	Nominal 4' x 4' x 7/8"
5441_ _	Convex	Nominal 4' x 4' x 7/8"
5442_ _	Concave	Nominal 4' x 4' x 7/8"
5443_ _	Circle	Nominal 4' x 4' x 7/8"
5444_ _	Hexagon	Nominal 4' x 4' x 7/8"
5445_ _	Trapezoid	Nominal 4' x 4' x 7/8"
5446_ _	Left Parallelogram	Nominal 4' x 4' x 7/8"
5447_ _	Right Parallelogram	Nominal 4' x 4' x 7/8"
5448_ _	Small Rectangle	Nominal 4' x 6' x 7/8"
5449_ _	Large Rectangle	Nominal 4' x 8' x 7/8"

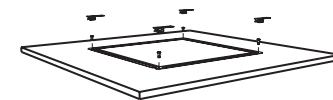
Suspension Options

1. Individual Suspension



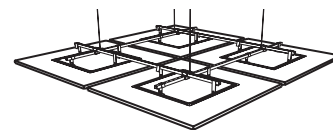
(See page 3 inside)

2. Individual Attachment to Drywall



(See page 3 inside)

3. Group Suspension



(See page 4 inside)

* Add 2-letter color suffix to item number when specifying or ordering. Panel item number ex: 5440WH for White.
 * Exact dimensions for each shape are shown on page 1 inside.

Physical Data

Material

7/8" thick Fiberglass with DuraBrite scrim on face and sides

Surface Finish

DuraBrite with factory-applied paint. Standard white has energy-saving, high light-reflective finish (LR 0.90).

Panel Weight

0.63 lbs/sf

Design Consideration for Sag

Spacing SoundScapes Shapes in close proximity to each other (6" apart or closer) may not be aesthetically desirable. SoundScapes Shapes maintain a natural sag that is highlighted when installed 6" or less apart. Deflection up to 1/8" has been documented and may be visibly noticeable.

Fire Performance

SOUNDSCAPES, as with other architectural features located in the ceiling plane, may obstruct or skew the existing or planned fire sprinkler water distribution pattern, or possibly delay the activation of the fire sprinkler or fire detection system. Consult a fire protection engineer, NFPA 13, and their local codes for guidance on the proper installation techniques where fire detection or suppression systems are present.

SOUNDSCAPES Shapes panel material is Class A: Flame Spread 25 or under and Smoke Developed 50 or less per ASTM E 1264.

ASTM E 1264 Classification
 Type XII, Form 2, Pattern E

Acoustical Performance

SoundScapes Shapes offer excellent sound absorption. They provide greater sound absorption than a continuous ceiling of the same area because sound is absorbed from front and back surfaces. Color shapes have slightly reduced acoustical performance. (See chart on page 5)

Seismic Restraint*

The International Building Code allows architectural components to swing freely as long as they will not be damaged or cause damage. Shapes suspended individually with aircraft cable will swing no more than 18" in any direction for each panel. Shapes direct attached to drywall or suspended in group systems have been engineered for application in all seismic areas.

*Pendulum reaction information is based on full scale testing and computer modeling conducted at the Structural Engineering Earthquake Simulation Lab located at the State University of New York at Buffalo.

Recommended Suspension Systems

SOUNDSCAPES Shapes are pre-assembled with metal extrusions in the back of the panels. Standard accessory kits facilitate quick and easy installation from the deck, through a ceiling or directly attached to drywall. See Installation Instructions LA-297302 or contact TechLine.

Warranty

Limited 1-Year Warranty when installed according to Armstrong installation recommendations. See armstrong.com for details.

U.S. Patents Pending

TechLineSM / 1 877 ARMSTRONG
 1 877 276 7876

armstrong.com/soundscapesshapes
 CS-3867-807