TECTUM® I

Structural Acoustical Roof Deck



Tectum I Acoustical Roof Deck panels; American Reading Company, Blue Bell, PA

Tectum® I structural acoustic roof deck provides excellent sound absorption, a thermal barrier for field-applied foam plastics, and is compatible with a wide variety of insulation and roofing materials.

KEY SELECTION ATTRIBUTES

- Sound absorption – NRC up to 0.80
- R-value up to 6
- Spans up to 6 feet
- 50-pound design load
- Diaphragm shear up to 542 dsn/lf
- Low slope applications
- Made in the U.S.A. of domestic and global content
- Build America, Buy America (BABA) Act compliant

TYPICAL APPLICATIONS

- Schools
- Gymnasiums
- Arenas

TECTUM® I

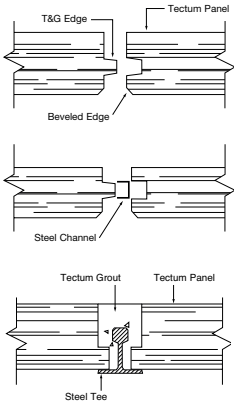
Using tongue-and-groove (T&G) edges, Tectum® I Plank can achieve spans of up to four feet.

TECTUM® I LONG SPAN PLANK (LS)

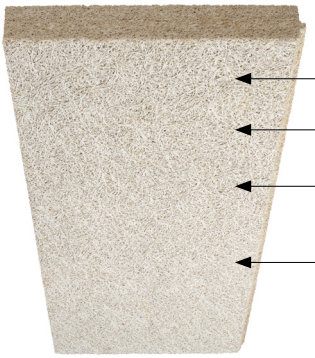
The Long-Span Plank adds a 16-gauge steel channel to the standard plank and allows for spans of up to six feet.

TECTUM® I TILE

With either tongue-and-groove or square ends, Tectum® I Tile is grouted to steel bulb tees and allows for spans of up to 10 feet.



Panel size determined by joist spacing and span.



Tectum I

Available Thicknesses:
2", 2-1/2", and 3"

Standard Widths:
31" and 47"

Standard Lengths:
48" to 144" in
one-inch increments

Custom widths and
lengths available
upon request

TechLine 877 276-7876
armstrongceilings.com/roofdeck

Armstrong® World Industries

TECTUM® I

Structural Acoustical Roof Deck

FSC www.fsc.org FSC® C007626
The mark of responsible forestry
(Upon Request)

LEED V5

COMMON MATERIALS FRAMEWORK	Climate Health
Human Health	Ecosystem Health FSC®
	Circular Economy
OCCUPANT EXPERIENCE	Acoustics ✓

DESIGN LOAD DATA[1]

System	Thickness[2]	Wt. (PFS)[2]	24"	30"	36"	38"	40"	42"	44"	48"	50"	52"	54"	60"	66"	72"
Plank	2"	3.5	130	75	50	45	40	35								
	2-1/2"	4.5	150	120	80	70	60	50	45	35						
	3"	5.3	200	125	102	91	82	74	65	50	45	40	35			
Long Span Plank	2"	3.8	130	75	75	75	70	64	57	50	45	40	35			
	2-1/2"	4.7	150	120	120	120	114	103	93	77	70	65	60	50	35	
	3"	5.5	200	125	125	125	125	120	115	110	104	96	88	71	58	50

For loads greater than 200 lbs., contact Armstrong TechLine.
[1] Contact Armstrong when designing high-humidity environments such as pools and ice arenas.
[2] Thickness and weight are nominal.

THERMAL PERFORMANCE

Total Thickness	R-Value*	Weight PSF
2"	3.68	3.7
2-1/2"	4.56	4.7
3"	6.43	6.2

* R-values include air films and built-up roofing.

ACOUSTICS

Panel Thickness	NRC
2"	0.60
2-1/2"	0.66
3"	0.80

DIAPHRAGM DESIGN DATA

Call TechLine for assistance when designing and detailing Tectum® Roof Deck Systems

Type	Panel Size D × W × L	Joist	Span[1]	Fasteners	Field Spacing	Perimeter	Adhesive[2]	Grout	ULT/LF	DSN/LF
Plank	3 × 31 × 96"	Steel	48"	S-25/2" Washer	3/Joist/Panel	16" O.C.	No	None	825	275
							T&G + Joist		1350	450
LS[3]	2-1/2 × 31 × 120"	Wood	60"	3-3/4" 14-Gauge Scr/2" w	2/Joist/Panel	10" O.C. sides + ends	T&G + Joist	None	1170	389
	3 × 31 × 144"	Wood	72"	4-1/2" 14-Gauge Scr/2" w	2/Joist/Panel	12" O.C. sides + ends	T&G + Joist	None	860	286
	2 × 31 × 96"	Wood	48"	3-3/4" 14-Gauge Scr/2" w	2/Joist/Panel	12" O.C. sides + ends	T&G + Joist	None	964	321
	3 × 31 × 144"[3]	Wood	72"	4-1/2" 14-Gauge Scr/2" w	2/Joist/Panel	12" O.C. sides + ends	T&G + Joist	None	1631	542
Tile	2 × 23-1/2 × 143"	Steel	72"	112 Ts/112 × Ts	24" O.C.	112 Ts	No	4 Sides	925	313
	2 × 31-1/2 × 95"	Steel	96"	168 Ts/112 × Ts	32" O.C.	158 Ts	No	4 Sides	575	200
	2 × 31-1/2 × 95"	Steel	96"	000-5-14-2 + S-25/2" w	2/Joist	10-1/2" O.C.	Joist	Long Edge	835	278
	2 × 31-1/2 × 96"	Steel	96"	218 Ts/3-1/4" 14-Gauge/2" w	2/Joist/Panel	12" O.C. sides + ends	Joist	Long Edge	1530	509
Tile T&G	2 × 31-1/2 × 96"	Steel	96"	000-5-14-2 + S-25/2" w	32" O.C. + 2/Joist	S-25@16" +3/End	T&G + Per	Long Edge	696	231

[1] Values over wood joists are conservative compared to values over steel.
[2] Adhesive is to meet the requirements of AFG-01. A 3/8" bead of adhesive is to be used.
Approximately 50 linear feet of adhesive per quart tube. Specific adhesive used on test assemblies was Miracle® SFA-66 adhesive.
[3] Spans achieved by bulb tee, not Tectum® tile.
* Contact Techline at techline@armstrong.com when designing and detailing this Tectum® Roof Deck system.

SUSTAINABILITY INFORMATION

- Made with wood fibers (excelsior) from self-propagating Wisconsin Aspen trees
- All Wisconsin Aspen used for Tectum® products is air-dried and aged naturally
- No chemicals are used to produce excelsior purchased by Armstrong
- All excelsior used in Tectum products comes from a single source that is Forest Stewardship Council (FSC) certified
- The magnesium sulfate binder has been manufactured on site by reclaiming waste materials since production first began in 1949
- The secondary binder is composed of sodium silicate and calcium carbonate (limestone)
- All water used in the manufacture of Tectum products is captured and recycled

ADDITIONAL DETAILS

For more information, or for an Armstrong representative, call 877 276-7876. For complete technical information, detail drawings, CAD design assistance, installation information, and many other technical services, call TechLine customer support at 877 276-7876 or email techline@armstrongceilings.com.

For the latest product selection and specification data, visit armstrongceilings.com/roofdeck.

TechLine / 877 276-7876
armstrongceilings.com/roofdeck

BPRD-1002-626

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