

TECTUM® III & TECTUM® IIIP

Structural Acoustical Roof Deck



Sun-N-Fun Lifestyle Wellness Center—Sarasota, FL (Tectum IIIP Roof Deck)

Three-in-One Composite Roof Deck Panels provide acoustics, insulation, and a nailable surface that accepts a wide variety of roofing materials.

KEY SELECTION ATTRIBUTES

- Sound absorption—NRC up to 0.60
- R-value up to 44
- Spans up to 8 feet
- 50-pound design load
- Diaphragm shear up to 786 dsn/lf
- Nailable surface
- Low or high slope applications

TECTUM® III

The Tectum® III roof deck panel is a composite of a 1-1/2" or thicker Tectum substrate, Styrofoam™ brand XPS (extruded polystyrene) insulation 1-1/2" to 8" thick and 7/16" OSB (Oriented Strand Board) sheathing with a slip-resistant surface. Tectum III panels are typically used in sloped applications where insulation, ease of installation, and a nailable surface are required.

TECTUM® IIIP

Tectum® IIIP roof deck is made of the same components as Tectum III, but with an edge detail specifically designed for use over high-humidity applications such as swimming pools and ice arenas. The detail, when properly sealed with urethane adhesive, provides for a continuous vapor retarder from panel to panel in all directions. Tectum IIIP provides optimal insulation and a nailable surface for high-humidity environments.

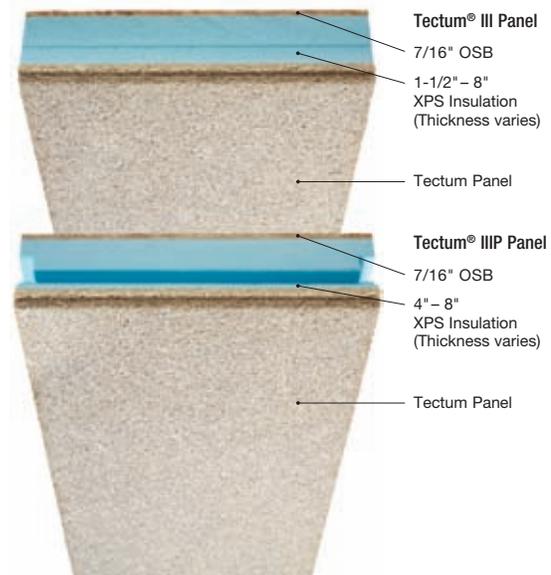
TYPICAL APPLICATIONS

TECTUM® III

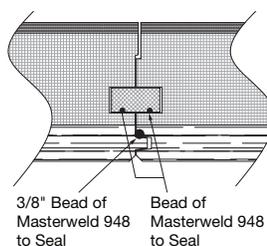
- Schools
- Gymnasiums
- Arenas

TECTUM® IIIP

- High Humidity Areas
- Swimming Pools
- Ice Arenas



Tectum® IIIP End Joint



TECTUM® III & TECTUM® IIIP

Structural Acoustical Roof Deck design guidelines



TECTUM® III & TECTUM® IIIP ROOF DECK DESIGN LOAD DATA¹

System	Thickness ²	Wt. (PFS) ²	24"	30"	36"	38"	40"	42"	44"	48"	50"	52"	54"	60"	66"	72"	84"	96"
			Plank	3-1/2"	4.4	200	180	165	150	135	125	115	95	85	75	70	60	55
	4"	4.4	200	195	175	155	140	120	110	100	95	85	70	60	50	55		
	5"	4.6					200	175	135	125	115	105	85	70	60	50	35	
	6", 7"	4.8, 4.9						200	180	170	160	120	125	105	75	60		
	8", 9", 10"	5.1, 5.3, 5.4											200	165	136	100	75	

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

TECTUM® III & IIIP THERMAL PERFORMANCE

(Based on 1-1/2" Tectum Substrate)

Insulating Foam Thickness	Total ¹ Thickness	R-Value ²	Weight PSF
1-1/2"	3-1/2"	11.86	4.0
2"	4"	14.36	4.1
3"	5"	19.36	4.7
4"	6"	24.36	4.8
5"	7"	29.36	5.0
6"	8"	34.36	5.4
7"	9"	39.36	5.8
8"	10"	44.36	6.2

¹ Total thickness includes 7/16" OSB nailable top surface.
² R-values include air films and built-up roofing.

TECTUM® III & TECTUM® IIIP DIAPHRAGM DESIGN DATA Call for assistance when designing and detailing Tectum® Roof Deck Systems

Type	Panel Size D x W x L	Joist	Span ¹	Fasteners	Field Spacing	Perimeter	Adhesive ²	Grout	ULT/LF	DSN/LF
Plank	3-1/2 x 47 x 120"	Wood	60"	6" 14-Gauge Sip Scr	3/Joist/Panel	12" o.c. sides + ends	T&G + Joist	None	1093	363
	3-1/2 x 47 x 144"	Wood	72"	6" 14-Gauge Sip Scr	3/Joist/Panel	12" o.c. sides + ends	T&G + Joist	None	1068	355
	5 x 47 x 144"	Wood	72"	6" 14-Gauge Sip Scr	3/Joist/Panel	12" o.c. sides + ends	T&G + Joist	None	964	320
Plank/Overlay	5 x 47 x 144"	Wood	72"	6" 14-Gauge Sip Scr/1-1/2" w	6/Joist/Panel	6" o.c. sides + ends	T&G + Joist	None	2363	786
	7/16 x 48 x 144"	OSB	–	2" x 16-Gauge Staples	8"@24" Centers	4" o.c. sides + ends	Per & 24" o.c.	None	2363	786
Tile	3-1/2 x 47-1/2 x 96"	Steel	96"	000-3-14 3-1/2"+ 14GA/1-1/2" w	3/Joist/Panel	12" o.c. sides + ends	Joist	Long Edge	939	312

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.

COMPOSITE ROOF DECK PANELS

TECTUM® PRODUCTS – SUSTAINABLY MADE

- 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 Building Solutions
- 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

TECTUM PRODUCTS AND LEED®

Armstrong® Tectum® Roof Deck products may contribute to the following LEED® V4 credit areas:

- Energy & Atmosphere (EA)**
 - Minimum Energy Performance
 - Optimize Energy Performance
- Materials & Resources (MR)**
 - Construction Waste Management
 - Regional Materials
 - Building Life Cycle Reduction
 - Interiors Life Cycle Reduction
 - Building Disclosure and Optimization – Sourcing of Raw Materials
- Indoor Environmental Quality (EQ)**
 - Acoustic Performance

MORE INFORMATION

For more information, or for an Armstrong Building Solutions representative, call 1 877 276-7876. For complete technical information, detail drawings, CAD design assistance, installation information, and many other technical services, call TechLine customer support at 1 877 276-7876 or email techline@armstrongceilingsolutions.com. For the latest product selection and specification data, visit armstrongbuildingsolutions.com/tectum.