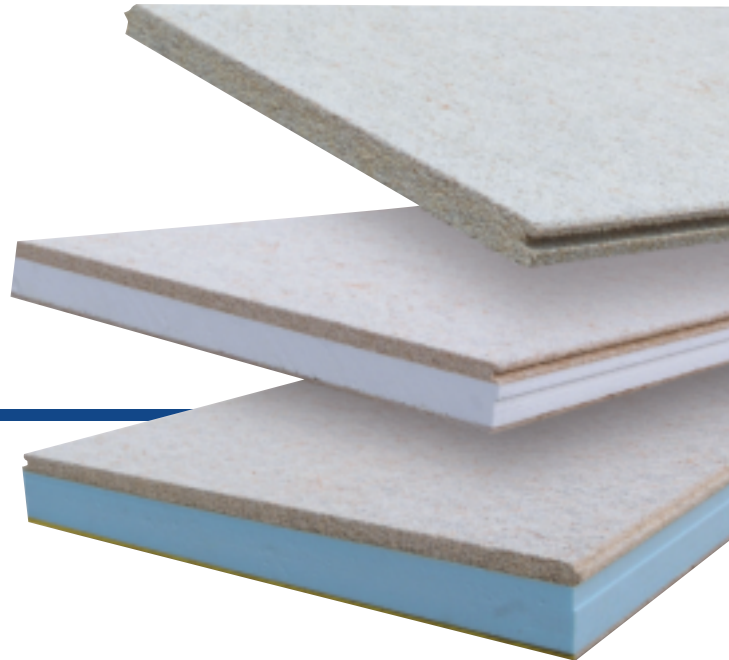


THE ULTIMATE STRUCTURAL SYSTEM

JANUARY 2010

Roof Deck Systems



◀YMCA Outdoor Pool House
(Newark, OH)
Tectum E



▲Palm Valley High School
(Palm Valley, CA)
Tectum E



◀Happy Feet Plus
(Clearwater, FL)
Tectum E (LEED Certified Gold)



▲Arthur & Gloria Muselman Wellness Pavilion
Swiss Village (Berne, IN)
Tectum IIIP

ROOF DECK PANELS

Tectum™ panels are composed of aspen wood fibers (excelsior) bonded with an exclusive inorganic hydraulic cement and are formed by a continuous process under heat and pressure. Tectum panels combine several materials to create a decorative product that provides excellent sound absorption, abuse resistance, insulation and a textured interior finish. These panels are structurally sound and lightweight and can be used either alone or as the underside of a composite panel to form a limited combustible roof deck system. A silicone treatment to the panel resists water and water migration. There are no urea formaldehydes or CFCs in any Tectum product or composite.

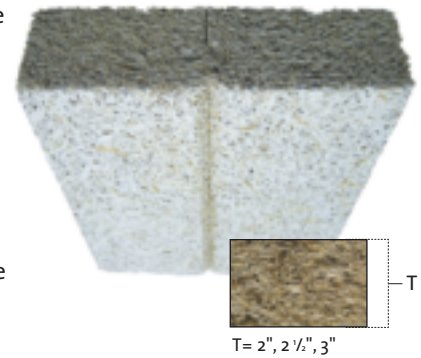
Tectum roof deck panels are available in natural (color may vary), white or custom colors.

NOTE: There is no asbestos, nor has there ever been any asbestos, used in Tectum products.

TECTUM I

Tectum I roof deck is typically used in low slope applications and provides a thermal barrier for field-applied foam plastics. It is compatible with virtually all roof installation materials. Underside exposed joints have attractive beveled edges. LS (long span) panels are available with steel channel reinforcement.

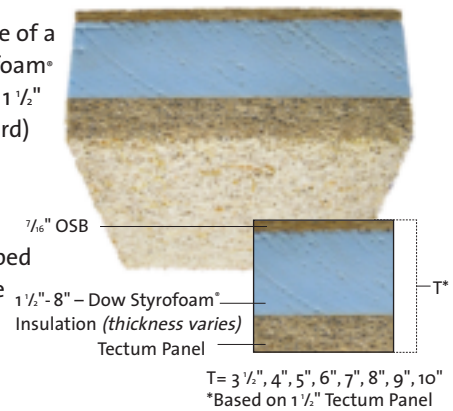
The Tectum I roof deck system consists of standard Tectum panels in either plank or tile configurations.



TECTUM III

The Tectum III roof deck panel is a composite of a 1 1/2" or thicker Tectum substrate, Dow 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. Components are bonded with code-listed structural adhesives.

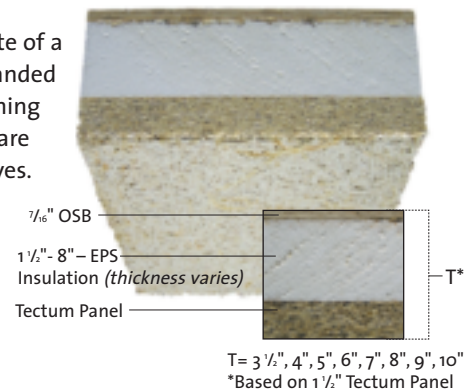
Tectum III panels are typically used in sloped applications where insulation and a nailable surface are required.



TECTUM E

The Tectum E roof deck panel is a composite of a 1 1/2" or thicker Tectum substrate, EPS (expanded polystyrene) insulation and 7/16" OSB sheathing with a slip-resistant surface. Components are bonded with code-listed structural adhesives.

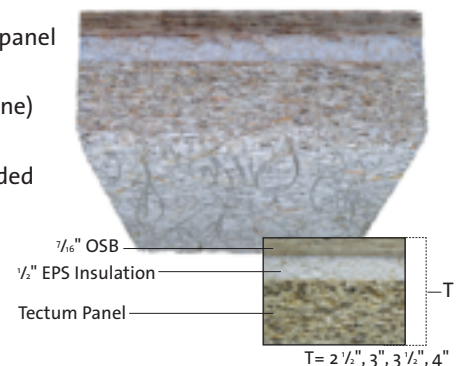
The EPS core exceeds the requirements of ASTM C-578 Type I and bears the UL classification mark.



TECTUM NS

The Tectum NS (nailable surface) roof deck panel is a composite of a 1 1/2" or thicker Tectum substrate, 1/2" thick EPS (expanded polystyrene) insulation and 7/16" OSB sheathing with a slip-resistant surface. Components are bonded with code-listed structural adhesives.

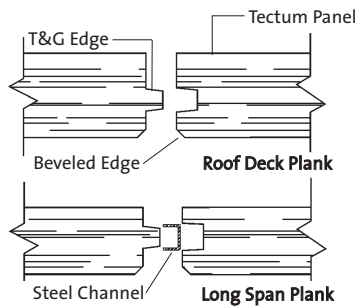
Tectum NS Panels are typically used in sloped applications where minimal insulation is required, such as outdoor pavilions.



TECTUM I PLANK, TILE, CTD & TECTUM IIIP

TECTUM PANEL SIZES

TECTUM I ROOF DECK PLANK AND LONG SPAN PLANK



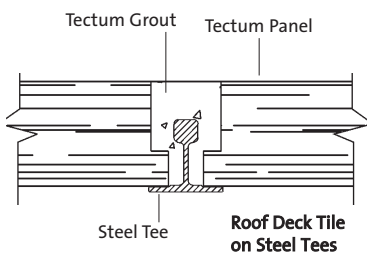
Tectum **Roof Plank** with a T&G edge is available in all Tectum roof deck systems.

Tectum **Long Span Plank**, available only in Tectum I panel, uses a 16 gauge galvanized steel channel for increased spans.

These products are applicable to flat and pitched roofs.

Edge Detail	Thickness	Width x Length	Tectum Panels
T&G Sides w/ Square Ends	All	23" x 48 - 144"	I, III, E, NS

ROOF DECK TILE

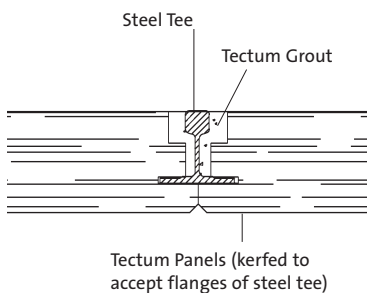


Tectum **Roof Deck Tile** uses any of the Tectum panels to span between steel tees or concrete joists.

The rabbeted edges of Tectum tile rest on steel tee flanges or on top of concrete joists. Spaces between tile and tees, or tile and anchors in concrete joists, are filled with Tectum grout for excellent anchorage and wind uplift resistance. Custom lengths allow roof design with no exposed end joints.

Edge Detail	Thickness	Width x Length	Tectum Panels
Rabbeted Sides w/ Square Ends	All	23 1/2" x 48 - 144"	I, III, E, NS
Rabbeted Sides w/ T&G Ends	All	31 1/2" x 48 - 144"	I
	Over 2 1/2"	47 1/2" x 48 - 144"	I, III, E, NS
Rabbeted Sides w/ T&G Ends	All	23 1/2" x 48 - 96"	I
	Over 2 1/2"	31 1/2" x 48 - 96"	I
		47 1/2" x 48 - 96"	I, III, E, NS

TECTUM I – CTD

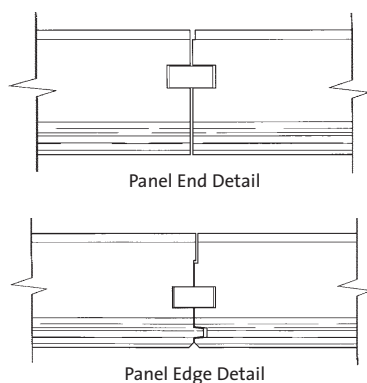


Tectum I – CTD (Concealed Tee Deck) system uses a 3" thick Tectum I panel kerfed to accept a maximum size #218 bulb tee. The flanges of the steel tee are concealed in the body of the Tectum panel.

The Tectum CTD system allows spans up to 10' without visible edge support.

Edge Detail	Thickness	Width x Length	Tectum Panel
Beveled Kerfed & Rabbeted	3"	31 1/2" x 48 - 144"	I

TECTUM IIIP*



Tectum IIIP roof deck has an edge detail specifically designed for use over high-humidity applications such as swimming pools and ice arenas. This detail, when properly sealed with latex adhesive, provides for a continuous vapor retarder from panel to panel in all directions.

* Contact Tectum Inc. when designing high-humidity environments such as pools and ice arenas.

Edge Detail	Thickness	Width x Length	Tectum Panel
T & G sides with spline	5" up to 10"	47" x 48 - 144"	IIIP

TECTUM ROOF DECK DESIGN GUIDELINES

DESIGN LOAD DATA**

Span in inches based on nominal 3" wide structural support members. Deflection L/240 or less. Contact Tectum Inc. for recommended spans when used in high-humidity applications.

System	Thickness***	Wt. (psf)***	Product	24"	30"	36"	38"	40"	42"	44"	48"	50"	52"	54"	60"	66"	72"	84"	96"	120"	
Plank	2"	3.5	I	130	75	50	45	40	35												
	2 1/2"	4.5	I	150	120	80	70	60	50	45	35										
	3"	5.3	I	200	125	102	91	82	74	65	50	45	40	35							
LS Plank	2"	3.8	I	130	75	75	75	70	64	57	50	45	40	35							
	2 1/2"	4.7	I	150	120	120	120	114	103	93	77	70	65	60	50	35					
	3"	5.5	I	200	125	125	125	125	120	115	110	104	96	88	71	58	50				
Comp. Plank	3 1/2"	4.4	III	200	180	165	150	135	125	115	95	85	75	70	60	55	50				
	4"	4.4	III		200	195	175	155	140	120	110	100	95	85	70	60	50	35			
T-III*	5"	4.6	III						200	175	135	125	115	105	85	70	60	50	35		
	6", 7"	4.8, 4.9	III							200	180	170	160	150	125	105	75	60			
	8", 9", 10"	5.1, 5.3, 5.4	III											200	165	136	100	75	50		
E Plank	2 3/4"	4.2	E	200	125	100	90	80	74	65	50										
	3 1/2"	4.2	E	200	150	135	120	110	100	90	75	70	65	60	50						
	4"	4.3	E	200	180	165	150	135	125	115	95	85	75	70	60	55	50	35			
	5"	4.4	E		200	195	175	155	140	120	110	100	95	85	70	65	60	45			
	6", 7"	4.4, 4.5	E							200	180	170	160	150	125	105	75	60			
	8", 9", 10"	4.6, 4.7, 4.8	E											200	165	130	100	75	50		

* Contact Tectum Inc. when designing high-humidity environments such as pools and ice arenas.

** All published design loads are based on minimum safety factor of four. For example, 50 psf design load has an ultimate load of 200 psf.

*** Thickness and weight are nominal. For loads greater than 200 lbs., contact Tectum Inc.

CODE COMPLIANCE AND GENERAL INFORMATION

UNDERWRITERS LABORATORIES, CLASS 90 WIND UPLIFT RESISTANCE.

Tectum I, III and E plank have been tested in roof assemblies in accordance with standard UL 580, resulting in UL Class 90 uplift resistance.

THERMAL BARRIER

Tectum panels 1 1/2" or thicker are a thermal barrier for foam plastic insulation.

CODE COMPLIANCE/STANDARDS

- International Code Council Evaluation Service
ICC-ES Report 1112

LIMITED WARRANTY

We at Tectum Inc. believe the information and recommendations herein to be accurate and reliable and the products mentioned herein are fit for the recommended purposes. However, as use conditions are not within its control, Tectum Inc. does not guarantee results from use of such products or other information herein.

Tectum Inc. assumes full responsibility for its products and systems when installed and erected by an approved contractor in accordance with the published recommendations at the time of the purchase. No responsibility will be assumed for other applications not referred to in the literature. Liability is limited to a refund of the purchase price or replacement of the material.

As governmental regulations and use conditions may change, it is the buyer's responsibility to determine the appropriateness of the seller's products for the buyer's specific end uses.

ENVIRONMENTAL STATEMENT/LEED CONTRIBUTION

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

- EA Prerequisite 2: Fundamental Energy Performance
- EA Credit 1: Optimized Energy Performance
- MR Credits 2.1 and 2.2: Construction Site Waste Management

- MR Credits 4.1 and 4.2: Recycled Content
- MR Credit 7: Certified Wood
- EQ Prerequisite 3: Minimum Acoustical Performance
- EQ Credit 3.1 and 3.2: Construction IAQ Plans
- EQ Credit 4.1: Low-Emitting Materials, Adhesives and Sealants

- EQ Credit 4.4: Low-Emitting Materials, Composite Wood & Agrifiber Products
- EQ 10: Mold Prevention (LEED for Schools)
- EQ Credit 11: Low-Impact Cleaning and Maintenance Equipment Policy (LEED for Schools)
- ID 1 - 1.4: Innovation in Design