TufTile’s 165,000 sq. ft. manufacturing and distribution facility is located in Lake Zurich, IL.

Surface-Applied
ADA COMPLIANT • DURABLE • REPLACEABLE

Galvanized Steel

www.TufTile.com
Surface-Applied (Replaceable) Tiles

**TufTile® SA** 16 gauge, galvanized steel tiles incorporate a UV stabilized, slip-resistant, abrasive powder coat finish.

**TufTile’s** combination of industrial strength sealant and tamper resistant drive pin anchors provide excellent adhesion strength.

**TufTile’s SA** low profile perimeter edges provides for an easy, safe transition from surrounding surfaces.

**TufTile’s** exclusive design incorporates truncated domes manufactured to exact ADA specifications for detectable warning systems.

**TufTile®** ADA Tiles have a 10-Year Limited Warranty and a 10-Year, No Rust Warranty - see website or contact customer service.

**TUFTILE® TACTILE IS ADAAG / PROWAG / CA TITLE 24 COMPLIANT**

www.tuftile.com/patents
Aesthetic textured ADA compliant wet and dry slip-resistant surfaces

Tamper-resistant drive pin fasteners provide security and efficient tile replacement if required

UV resistant powder coat finish over a galvanized, non-rust durable steel

Low profile perimeter edges provide for an easy, safe transition from surrounding surfaces.

Numerous Radius Sizes Available

TufTile®
ADA DETECTABLE WARNING PRODUCTS

Surface-Applied Fastening System

1-1/2” Stainless Steel (Nail) Drive Pin

1/4” carbide tipped masonry bit

Sealant

Manufacturer’s Identification

TUFTILE SURFACE APPLIED (REPLACEABLE) TILES

<table>
<thead>
<tr>
<th>SIZES</th>
<th>Anchors/Tile</th>
<th>COLORS</th>
</tr>
</thead>
<tbody>
<tr>
<td>2’ X 1’</td>
<td>6</td>
<td>BRICK RED (FED 22144)</td>
</tr>
<tr>
<td>2’ X 2’</td>
<td>9</td>
<td>YELLOW (FED 33538)</td>
</tr>
<tr>
<td>2’ X 3’</td>
<td>12</td>
<td>DARK GRAY (FED 36119)</td>
</tr>
<tr>
<td>2’ X 4’</td>
<td>15</td>
<td>COLONIAL RED (FED 20109)</td>
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<tr>
<td>2’ X 5’</td>
<td>18</td>
<td>BLACK (FED 17038)</td>
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<tr>
<td></td>
<td></td>
<td>SAFETY RED (FED 31350)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>PATINA (Powder Coat)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>GALV. STEEL (No Paint)</td>
</tr>
</tbody>
</table>

TufTile.com
1-888-960-8897

1200 Flex Court Lake Zurich, IL 60047

#TAC-PWSCB0114
PHYSICAL CHARACTERISTICS - GALVANIZED STEEL

DOME GEOMETRY
ADA (R305.1.1) specifies truncated domes shall have a base diameter of 0.9" minimum, a top diameter of 50%-65% of the base diameter minimum, and a height of 0.2".

DOME SPACING
ADA (R305.1.2) specifies truncated domes shall have a center-center of 1.6" to 2.4"

GALVANIZED STEEL - SURFACE-APPLIED (REPLACEABLE)
Material – 16 Gauge Galvanized Steel

<table>
<thead>
<tr>
<th>GALVANIZATION</th>
<th>G90 Guardrail Grade</th>
<th>G90</th>
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</thead>
<tbody>
<tr>
<td>ASTM C 501</td>
<td>Abrasion Resistance</td>
<td>800</td>
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<tr>
<td>ASTM C 1028</td>
<td>Slip Resistance</td>
<td>Dry - 0.90, Wet - 0.81</td>
</tr>
<tr>
<td>ASTM A 370</td>
<td>Tensile Strength</td>
<td>49,770 psi</td>
</tr>
<tr>
<td>ASTM D 695</td>
<td>Compressive Properties</td>
<td>55,170 psi</td>
</tr>
<tr>
<td>ASTM D 5420</td>
<td>Impact Resistance</td>
<td>No Cracking, No Delamination</td>
</tr>
<tr>
<td>ASTM E 84-18</td>
<td>Test for Surface Burning Characteristics</td>
<td>CFS - 0.00, FSI - 0, CSD - 5.8, SDI - 5</td>
</tr>
<tr>
<td>ANSI/UL723</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
TufTile® INSTALLATION INSTRUCTIONS
Galvanized Steel Surface-Applied (Replaceable)

2. Concrete surface must be clean and free of dust, debris, oil, moisture, and all contaminants that can prevent proper sealant adhesion. A wire brush or concrete cup grinder or other mechanical device can be used to prepare the surface.
3. Place TufTile on the concrete specifically where it is to be installed and mark the concrete at the four corners. (Figure 1) Remove the tile from the marked location.
4. Apply a bead of sealant supplied by TufTile to the back side completely around the perimeter about 1/2 inch from the edge and in a zig zag throughout the center of the tile. (Figure 2)
5. Replace the tile onto the concrete. With a 1/4 inch concrete bit, drill 3" (minimum) deep holes in the 4 marked corners. (Figure 3)
6. Remove dust from holes with a dustless drill, vacuum, or blower to ensure drive pins can be inserted to their full depth. Insert drive pins in the corners. (Figure 4)
7. Moving across the tile follow the numbers in Figure 5 to drill holes in provided locations and insert drive pins while ensuring the holes are clean and free of dust. Hammer in all drive pins as you go in the order illustrated by the numbers. (Figure 5)

RADIUS TufTile® INSTALLATION

Follow step 2 from above prepping concrete for the installation Use radius wedges between standard linear tiles to form radial surfaces
* Consult Surface-Applied, Steel Radius tutorial on website before beginning radius installation
* Use the TufTile EasyArc website or mobile app calculator to select the standard and radius components.
1. Lay out standard tiles alternating with radius wedges where the detectable warning surface is going to be installed. Add or remove tiles or wedges as space allows.
2. Once the desired position is achieved begin steps 4-7 above to complete the radial installation.

Cutting TufTile® Galvanized Steel

Some installations require cutting one or both sides of a detectable warning so that the tiles conform to the edge of the ramp. To cut steel tiles place the tile extended over the area the tile will be installed and mark the edge to be cut. Using a power cut-off saw with a metal cutting blade cut the material along the mark line. The tile may need to be supported below during the cutting process.

IMPORTANT: Using a 1/4 inch bit, drill new anchor holes at the new edge on the modified tile approximately 1 inch from the edge spaced along the edge and add anchors back to the new edge. (Figure 6)

Your TufTile installation is now complete.

Additional installation information including an installation tutorial is available at www.TufTile.com.
If you have any additional questions please contact TufTile®

Thank you for your business!
1-888-960-8697
www.TufTile.com
24" X 24" X 16 Ga SURFACE APPLIED

FASTENER LOCATION 9 PLACES

24' X 24' X 16 GAUGE
GALVANIZED STEEL
DETECTABLE WARNING TILE
SURFACE APPLIED

NOTE: "XXX" DESIGNATES COLOR

EXPANSION ANCHOR

EXPANSION ANCHOR DETAIL

SECTION A-A
TufTile, Inc. 10-Year Limited Warranty – Galvanized Steel. TufTile, Inc. values your business, and the TufTile, Inc. tactile galvanized steel tile (the “product”) you purchased comes with a limited warranty that the product will be free from defects for a period of ten years from date of installation subject to ordinary wear and tear. Further, TufTile warrants the product will not rust for 10 years. Failure to comply with recommended applications and installation of the product voids this warranty. Customer misuse including negligence, physical abuse and defects resulting from improper installation or resulting from outside forces (including, but not limited to, snow plows causing damage) are not covered by this warranty. Local building codes may require minimum tactile tile performance specifications and TufTile, Inc. does not warrant product installations that violate building codes. While within the limited warranty period, if the product is not in good working order for its intended purposes, a replacement product shall be made available to the purchaser of the product. Purchaser’s remedy is limited to replacement of the product and no consequential or incidental damages and costs (including, but not limited to, lost profits, labor or transportation costs in connection with the removal, replacement and installation of the product) are recoverable or within the coverage of this limited warranty. Any representations made in connection with the sale of this product that differs from the terms of this limited warranty are not covered and should be brought to the attention of TufTile, Inc. immediately. No claim for replacement of a defective product will be honored without TufTile, Inc.’s reservation of its right to inspect the product for the claimed defect and its determination that the replacement of the product is covered by this warranty. The term of this limited warranty shall commence on the date of installation. Proof of purchase shall be required to be eligible for this warranty and to establish the commencement date of this limited warranty. No warranty replacement of the product is provided unless the purchaser’s written replacement claim is submitted to TufTile, Inc. before the expiration of ten years from the date of installation of the product.

TO THE MAXIMUM EXTENT APPLICABLE AND ALLOWABLE UNDER LAW, THERE ARE NO WARRANTIES WHICH EXTEND BEYOND THE FACE OF THE TUFTILE INC. LIMITED WARRANTY, AND TUFTILE INC. DISCLAIMS ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, REGARDING THE PRODUCT, INCLUDING ANY IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR NON-INFRINGEMENT. TO THE MAXIMUM EXTENT ALLOWABLE BY FEDERAL AND STATE LAW, THIS WARRANTY SUPPLEMENTS OR SUPERSEDES FEDERAL AND STATE CONSUMER GOODS WARRANTY PROTECTION.
TufTile’s SDS document for galvanized steel detectable warning tiles is available upon request from TufTile. Please contact customer service at sales@tuftile.com or 888.960.8897

Thank You
TufTile Radius Calculator

Enter values in the 2 fields provided (Radius Length and Chord Length) then click the 'Calculate' button to create the estimate for your Radius installation. You can enter the Height or Rise in lieu of the Radius Length. Arc Length can be used as an alternative to the Chord as well. The recommended Tile Size, Wedge Size and their respective Quantities will display in the space provided.

The Metric option will expect the lengths to be entered in Meters.

Polymer vs Cast Iron will make use of the 24"x36" tiles or 24"x30" respectively as required.

The values 'arc length', 'segment length', 'arc overrun' and 'variance' are informational.

Arc Length is calculated when the chord length is given. Segment Length is known by adding the top edge lengths of 1 selected Tile and Wedge. Arc overrun is the remainder when the Arc Length is different than the sum of the Tiles and Wedges. Variance occurs when the Radius calculated is different than the Radius made from the suggested components. The variance amount is the distance between those two values.

The Size change warning line will display when the program calculates an 'Arc overrun' that is negative. In the case when a smaller tile will leave less extra radius it recommends that instead of just adding another equal width tile. So if the job calls for 7 24"x24" tiles and 7 wedges and it leaves less than 14 inches of remaining radius, it tells the user to order 1 24"x12" tile instead of another 24"x24". The same goes for 30" and 36" wide tiles where it can substitute a 24"x12" or 24"x24" as required. This is only a suggested solution.

Our Radius calculator is provided as a reference to help you estimate the amount of material you need for your project. This calculator provides an ESTIMATE.

Coverage is affected by a number of factors. " In order for us to ensure that you have adequate material for your job, please round up to the nearest foot."
The Law and Detectable Warning Surfaces

FEDERAL

The Americans with Disabilities Act (ADA) (42 U.S.C. 12101 et seq.) is a federal civil rights law that prohibits discrimination against individuals with disabilities. The regulations issued by the Department of Justice include accessibility standards for the design, construction, and alteration of facilities. One of those requirements requires installation of detectable warning surfaces as described in these sections of the ADA Accessibility Guidelines (ADAAG) for Public Rights-Of-Way (July 26, 2011). To view the entire proposed guidelines document go to www.access-board.gov

R305.1.1 Dome Size.
The truncated domes shall have a base diameter of 23 mm (0.9 in) minimum and 36 mm (1.4 in) maximum, a top diameter of 50 percent of the base diameter minimum and 65 percent of the base diameter maximum, and a height of 5 mm (0.2 in).

R305.1.2 Dome Spacing.
The truncated domes shall have a center-to-center spacing of 41 mm (1.6 in) minimum and 61 mm (2.4 in) maximum, and a base-to-base spacing of 17 mm (0.65 in) minimum, measured between the most adjacent domes.

R305.1.3 Contrast.
Detectable warning surfaces shall contrast visually with adjacent gutter, street or highway, or pedestrian access route surface, either light-on-dark or dark-on-light.

R305.1.4 Size.
Detectable warning surfaces shall extend 610 mm (2.0 ft) minimum in the direction of pedestrian travel. At curb ramps and blended transitions, detectable warning surfaces shall extend the full width of the ramp run (excluding any flared sides), blended transition, or turning space. At pedestrian at-grade rail crossings not located within a street or highway, detectable warnings shall extend the full width of the crossing. At boarding platforms for buses and rail vehicles, detectable warning surfaces shall extend the full length of the public use areas of the platform. At boarding and alighting areas at sidewalk or street level transit stops for rail vehicles, detectable warning surfaces shall extend the full length of the transit stop.

R305.2 Placement.
The placement of detectable warning surfaces shall comply with R305.2.
R305.2.1 Perpendicular Curb Ramps.
On perpendicular curb ramps, detectable warning surfaces shall be placed as follows:

1. Where the ends of the bottom grade break are in front of the back of curb, detectable warning surfaces shall be placed at the back of curb.
2. Where the ends of the bottom grade break are behind the back of curb and the distance from either end of the bottom grade brake to the back of curb is 1.5 m (5.0 ft) or less, detectable warning surfaces shall be placed on the ramp run within one dome spacing of the bottom grade break.
3. Where the ends of the bottom grade break are behind the back of curb and the distance from either end of the bottom grade brake to the back of curb is more than 1.5 m (5.0 ft), detectable warning surfaces shall be placed on the lower landing at the back of curb.

R305.2.2 Parallel Curb Ramps.
On parallel curb ramps, detectable warning surfaces shall be placed on the turning space at the flush transition between the street and sidewalk.

R305.2.3 Blended Transitions.
On blended transitions, detectable warning surfaces shall be placed at the back of curb. Where raised pedestrian street crossings, depressed corners, or other level pedestrian street crossings are provided, detectable warning surfaces shall be placed at the flush transition between the street and the sidewalk.

R305.2.4 Pedestrian Refuge Islands.
At cut-through pedestrian refuge islands, detectable warning surfaces shall be placed at the edges of the pedestrian island and shall be separated by a 610 mm (2.0 ft) minimum length of surface without detectable warnings.

R305.2.5 Pedestrian At-Grade Rail Crossings.
At pedestrian at-grade rail crossings not located within a street or highway, detectable warning surfaces shall be placed on each side of the rail crossing. The edge of the detectable warning surface nearest the rail crossing shall be 1.8 m (6.0 ft) minimum and 4.6 m (15.0 ft) maximum from the centerline of the nearest rail. Where pedestrian gates are provided, detectable warning surfaces shall be placed on the side of the gates opposite the rail.

R305.2.6 Boarding Platforms.
At boarding platforms for buses and rail vehicles, detectable warning surfaces shall be placed at the boarding edge of the platform.

R305.2.7 Boarding and Alighting Areas.
At boarding and alighting areas at sidewalk or street level transit stops for rail vehicles, detectable warning surfaces shall be placed at the side of the boarding and alighting area facing the rail vehicles.