

**CE-237**

**11/13 Supersedes 04/13**

## **TUFCHEM<sup>®</sup> TILING SYSTEMS**

### **DESCRIPTION**

TUFCHEM<sup>®</sup> Tiling Systems (TTS) are direct-bonded chemical-resistant vitrified tile flooring systems designed for superior performance, outstanding aesthetics and maximum installation speed. The systems consist of: dense, fully-vitrified (porcelain quality) **tiles** of nominal 3/4" (18-19 mm) thickness with integrally molded side joint spacers, available in a variety of slip-resistant surface textures, colors, and shapes; time-tested high bond strength THINSET<sup>®</sup> Adhesive epoxy **setting bed** (refer to product data sheet CE-158); and chemical-resistant **tile grout**, selected from Corrosion Engineering's broad product line to meet each application's specific chemical and thermal service requirements. Corrosion Engineering supplies a complete range of companion products including **expansion joint sealant**, chemical-resistant **membranes**, high-performance **underlayments**, and castable **polymer grouts** for equipment supports. **Consult your local Corrosion Engineering Representative for the full range of architectural choices and complete specification details.**

### **AREAS OF USE**

Applications include floor and curb areas that require sanitary and hygienic floors resistant to acids, alkalis, or solvents such as food processing plants, dairies, bakeries, bottling plants, distilleries, pharmaceutical manufacturing facilities, and chemical process plants. Other commercial applications include cafeterias and institutional kitchens, where chemically resistant flooring systems are required.

TUFCHEM Tiling Systems can be designed for applications requiring electrically conductive flooring systems such as electronics processing, solvent processing and storage, and munitions and explosives manufacturing. Consult you Corrosion Engineering representative for details.

### **OUTSTANDING FEATURES**

- Self-spacing tiles enable high installation productivity, often resulting in lower installed cost than conventional paver systems.
- The use of vibration setting techniques minimizes tile lippage. Hexagonal field tiling conforms tightly to changing slopes on floors with central drains.
- Numerous solid and mingled color options create a uniquely attractive floor.
- A choice of abrasion-resistant integrally molded surface textures provide well-balanced slip resistance and ease of cleaning for different processing environments.
- TUFCHEM<sup>®</sup> Tiling Systems are antimicrobial by design. Consult Corrosion Engineering for details.

**TYPICAL PHYSICAL PROPERTIES**

PROPERTY	TUFCEM Tiles	Red Shale Acid Brick Floor Pavers
Colors	Numerous solid and mingled colors	Red (red shale)
Shape Availability	Rectangular or hexagonal	Rectangular
Slip Resistance	Integrally molded profiles from flat to heavily textured	Abrasive, Smooth, Wire Cut
Dimension Tolerance (L, W)	< +0.5% (DIN 18-158)	+3% (ASTM 279)
Thickness	3/4" (18-19 mm)	1 3/16" (30 mm), 1 3/8" (35 mm), 1 1/2" (38 mm)
Flexural Strength	4,400 – 9,065 psi	3,600 psi
Water Absorption	<0.5% (ANSI 137.1 Table 10) <0.25% typical	3.0% (ASTM Type III) 5-7% (ASTM Type II)
Acid Resistance	No trace of deterioration (DIN EN99)	H2SO4 Solubility - 8% (ASTM C279)
Coefficient of Thermal Expansion	4-5 x 10 <sup>-6</sup> /cm/cm/°C @ 100°C (EN176 maximum allowable value: 9 x 10 <sup>-6</sup> /cm/cm/°C @ 100 °C)	4-5 x 10 <sup>-6</sup> /cm/cm/°C @ 100°C (red shale) 5 x 10 <sup>-6</sup> /cm/cm/°C @ 100°C (fireclay)
Hardness (Moh scale)	>7	6-7
Nominal Joint Width	5/64" (3 mm) (integrally molded)	1/8-1/4" (6 mm) (set with spacers)
Production Method	Dry pressed	Extruded

**ESTIMATING/PACKAGING THEORETICAL QUANTITIES – NO OVERAGE ALLOWANCE**

PRODUCT	CODE	PACKAGING	COVERAGE
4" x 8" x 3/4" (100 x 200 x 18 mm)	Varies with color and surface texture	TUFCEM Tiling components are sold in full package quantities. Consult your Corrosion Engineering representative for specific applications including companion wall and stair system pieces, cove base, and internal/external cove corners	Allow 4.6 of the 4" x 8" pieces per SF
4-1/4" hexagonal x 3/4" (108 x 18 mm)			Allow 9.2 pieces of the 4-1/4" hexagon tile per SF
4" hexagonal x 3/4" (100 x 18 mm)			Allow 10.7 pieces of the 4" hexagon tile per SF
Consult Corrosion Engineering for detailed information about available tile colors, textures, and shapes			

**SAFETY PRECAUTIONS / DISCLAIMER**

Mixes and applications of this product present a number of hazards. Read and follow the hazard information, precautions and first aid directions on the individual product labels and [material safety data sheets](#) before using. While all statements, technical information, and recommendations contained herein are based on information our company believes to be reliable, nothing contained herein shall constitute any warranty, express or implied, with respect to the products and/or services described herein and any such warranties are expressly disclaimed. We recommend that the prospective purchaser or user independently determine the suitability of our product(s) for their intended use. No statement, information or recommendation with respect to our products, whether contained herein or otherwise communicated, shall be legally binding upon us unless expressly set forth in a written agreement between us and the purchaser/user.



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