

**CE-160**  
**11/13 Supersedes 04/11**

## **PENNCHEM<sup>®</sup> CIP TILE GROUT**

### **DESCRIPTION**

PENNCHEM CIP Tile Grout is a three-component vinyl ester resin based carbon-filled tile grout. Supplied as a Resin, Catalyst and Filler, these components are mixed to obtain a fluid consistency suitable for grouting chemical resistant ceramic and masonry flooring. (For bricklayer's installation method, refer to data sheet CE-231 Vinyl Ester Carbon Mortar) PENNCHEM CIP Tile Grout exhibits a high degree of chemical resistance, excellent bond strength, and high compressive strength. **Consult Corrosion Engineering specification [CES-309](#) for complete installation details.**

### **AREAS OF USE**

PENNCHEM CIP Tile Grout is resistant to oxidizing chemicals, mineral and organic acids, alkaline solutions, some organic solvents, and chemicals containing fluorides. It is ideally suited for brick and tile flooring in CIP and COP areas in food and beverage processing plants that are continuously or routinely exposed to concentrated acid and caustic cleaners containing nitric and acetic acids and sodium hypochlorite.

Vinyl Ester resin based corrosion resistant materials, such as PENNCHEM CIP Tile Grout, emit an odor once the resin and catalyst packaging are opened until the mixed material is fully cured. Care must be taken when using PENNCHEM CIP Tile Grout around food products in operating plants to manage the risk of imparting an undesirable taste to the food. Consult Corrosion Engineering for alternative grout recommendations when it is not practical to effectively manage this risk.

### **OUTSTANDING FEATURES**

- Excellent properties - including high bond strength, tensile and compressive strengths, low absorption and shrinkage.
- Easy to mix and apply.
- Resistant to strong oxidizers, hot 50% caustic soda, bleach and fluoride attack.

**TYPICAL PHYSICAL PROPERTIES**

PROPERTY	PENNCHEM CIP Tile Grout
Color	Black
Density (ASTM C138)	97.5 lbs/cu. ft. (1,560 kg/m <sup>3</sup> )
Work life / Set time @ 70°F (ASTM C308)	30 – 45 minutes / 1 – 1.5 hours
Compressive strength (ASTM C579)	20,000 psi (138 MPa)
Tensile strength (ASTM C307)	2,100 psi (14.5 MPa)
Bond strength to brick (Pull Blocks)	1,600 psi (11.0 MPa)
Water absorption (ASTM C413)	0.2%
Maximum service temperature	225°F (107°C)

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

PRODUCT	CODE	PACKAGING	MIX RATIO*
PENNTROWEL Vinyl Ester L/F Resin Clear	29464	43 lb (5 gal) pail	1.67 Filler: 1.0 Resin: 0.016 Hardener  A 116 lb unit consists of 1x 43 lb pail resin, 1 x 0.7 lb bottle hardener, and 2 x 36 lb bags filler.
CHP Hardener	19552	0.7 lb (0.7 pint) bottle	
PENNTROWEL L/F Filler Carbon	29446	36 lb bag	

\*NOTE: Mix ratios vary due to ambient air temperatures and the handling preferences of individual tile-setters. The above information is provided as a general guide only. For usage rates for specific masonry units, consult Corrosion Engineering.

**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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