

TRU[®] PC POLISHED CONCRETE

High Performance, Self-Leveling Topping



PRODUCT DATASHEET

DESCRIPTION: Rapid Set[®] TRU[®] PC POLISHED CONCRETE is an advanced, professional grade, hydraulic cement-based, self-leveling topping. It can be ground and polished to expose the aggregate and simulate the appearance of polished concrete. TRU PC levels rapidly, maintains workability for up to 20 minutes, produces a dense surface, and has high bond strength. TRU PC is ready for foot traffic in 2 to 3 hours. As an interior and exterior product, TRU PC is durable in wet or dry conditions.

USES: Use TRU PC for polished concrete floors in schools, airports, warehouses, retail, restaurants, lobbies, and more.

ENVIRONMENTAL ADVANTAGES: Use TRU PC to reduce your carbon footprint and lower your environmental impact. Production of Rapid Set cement emits far less CO₂ than portland cement. Contact your representative for LEED values and environmental information.

APPLICATION: Use TRU PC when a high quality, fast, polishable concrete topping is required. TRU PC is ideal for projects that need long flow life and working time while achieving high early strength. TRU PC cures to a gray color with the appearance of concrete. Protective coatings, sealers or epoxies can be applied per the manufacturer's recommendations after 12 hours.

SURFACE PREPARATION: Substrate must be clean, sound concrete that is free of gypsum compounds and all materials that may inhibit bond such as: oil, curing compound, dust, mastic, bond breakers, and other surface contaminants. Mechanical methods of surface preparation such as shot blasting are preferred. Surface shall be ICRI CSP 3 to 5. Acid etching the substrate is not recommended. Surface must be dry and be properly primed. Surface and ambient temperatures must be between 50°F to 90°F (10°C to 32°C).

PRIMING: Use Rapid Set[®] TXP[™] or Rapid Set[®] TXP[™] Fast epoxy primers with sand broadcast to refusal. Follow all product specifications and instructions.

MIXING: For each bag of TRU PC use 3.75 to 4.0 quarts (3.5 L to 3.8 L) of potable water. For polished floors, use less water to achieve maximum aggregate exposure with minimal grinding. Start with 3.75 quarts (3.5 L) per bag. Add the measured amount of water to the mixing container. While the mixer is running, add TRU PC. Additional water may be added if necessary. **Do not exceed 4.25 quarts (4.0 L) per bag.**

Multi-bag batches produce more uniform results. For 5-bag batches, use 18.75 quarts (17.7 L) of water in the appropriate sized batch mixer. Mix using a helix style mixing paddle. After the final bag is added to the batch, mix an additional 2 to 3 minutes until the mixture is lump-free. If additional flow is required, add 0.5 quart (0.5 L) increments of water and check the flow. Do not exceed 21.25 quarts (20.1 L) per 5 bags. Avoid mixers that entrap large amounts of air. Mixed TRU PC should be placed within 20 minutes. Maintain material temperature between 60°F (16°C) and 80°F (27°C).

PLACEMENT: Arrange work area to permit continuous placement without cold joints. Place the TRU PC onto the prepared and primed substrate with a minimum thickness of 3/8" (10 mm). For floors subjected to high-load, rubber-wheeled traffic, TRU PC must be applied at a minimum thickness of 1/2" (13 mm). All existing joints and moving cracks must be honored up through the topping. TRU PC will flow and level out within its 15 minute flow life. Use a gauge rake to coax the material into place as required. Immediately after placement, use a Rapid Set[®] TRU PC Spiked Roller to remove any entrapped air. A smoother may be used on the surface.

OVERVIEW

Highlights:

Polished Concrete Appearance: A high-flow topping that simulates polished concrete

Outstanding Clarity & Gloss: Highly polishable due to low polymer content and high density

Fast Track: Foot traffic in 2 to 3 hours, grind wet or dry in 24 hours, apply coatings in 12 hours

High Strength: 5000 psi (34.5 Mpa) in 24 hours, 7000 psi (48.3 Mpa) in 28 days

Interior/Exterior: Durable in dry and wet areas

Tested in accordance with:

ASTM C1708

MasterFormat[®] 2016

03 01 50 Maintenance of Cast Decks and Underlayment

03 53 19 Concrete Overlayment

03 54 16 Hydraulic Cement Underlayment

Manufacturer:

CTS Cement Manufacturing Corp.
12442 Knott St.
Garden Grove, CA 92841
Tel: 800-929-3030 | Fax: 714-379-8270
Web: www.CTScement.com
E-mail: info@CTScement.com



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CURING: No wet curing is required under normal conditions at 70°F (21°C). If used in exterior applications, apply a fine water mist to the newly hardened surface of Rapid Set[®] TRU PC POLISHED CONCRETE as soon as it can be done without marring the surface, and continue until one hour after final set. Avoid excessively dry, windy, hot or sunny conditions.

POLISHING: TRU PC may be polished after 24 hours at normal conditions. TRU PC grinds and polishes much like concrete and can achieve a very high gloss and Distinctness-of-Image (DOI) due to its high density and low polymer content. Polishing any topping requires a high degree of experience and craftsmanship. Contact CTS Cement for a list of approved installers.

COLD WEATHER: Environmental and material temperatures below 70°F (21°C) may delay setting time and reduce the rate of strength gain. Lower temperatures will have a more pronounced effect. Thinner sections will be more significantly affected. To compensate for cold temperatures, keep material warm, use heated mix water, and follow ACI 306 Procedures for Cold Weather Concreting.

WARM WEATHER: Environmental and material temperatures above 70°F (21°C) may speed setting time and increase the rate of strength gain. Higher temperatures will have a more pronounced effect. To compensate for warm temperatures, keep material cool, use chilled mix water, and follow ACI 305 Procedures for Hot Weather Concreting.

YIELD & PACKAGING: TRU PC is available in 60-lb (27.2-kg) polyethylene-lined bags. Yield is 0.5 ft³ (0.01 m³) per 60-lb (27.2-kg) bag. Coverage is approximately 16 ft² (1.5 m²) at 3/8" (10 mm) thickness or 12 ft² (1.1 m²) at 1/2" (13 mm) thickness for flat surfaces.

SHELF LIFE: TRU PC has a shelf life of 12 months when stored properly in a dry location, protected from moisture, out of direct sunlight, and in an undamaged package.

USER RESPONSIBILITY: TRU PC is a rigid, non-structural topping. It is not possible to predict the appearance of micro-cracking in a non-structural topping and such overlayers may not be capable of restraining movement from the substrate. Reflective cracks may appear due to vibration, substrate flexure or existing joints and cracks. TRU PC is designed as a wear surface for foot traffic, forklift traffic or other rubber-wheeled traffic. The result of highly localized imposed loads, such as steel or hard-plastic wheeled traffic, heavy metal equipment, or pallets with protruding nails, may cause abrasion or gouging to the flooring surfaces. TRU PC is designed to have a non-uniform appearance and optical variations to the finished floor should be expected. TRU PC is not recommended in locations subjected to freezing temperatures or where deicing salts will be used.

Before using CTS products, read current technical data sheets, bulletins, product labels and safety data sheets at www.CTScement.com. It is the user's responsibility to review instructions and warnings for any CTS products prior to use.

WARNING: DO NOT BREATHE DUST. AVOID CONTACT WITH SKIN AND EYES. Use material in well-ventilated areas only. Exposure to cement dust may irritate eyes, nose, throat, and the upper respiratory system/lungs. Silica exposure by inhalation may result in the development of lung injuries and pulmonary diseases, including silicosis and lung cancer. Seek medical treatment if you experience difficulty breathing while using this product. The use of a NIOSH/MSHA-approved respirator (P-, N- or R-95) is recommended to minimize inhalation of cement dust. Eat and drink only in dust-free areas to avoid ingesting cement dust. Skin contact with dry material or wet mixtures may result in bodily injury ranging from moderate irritation and thickening/cracking of skin to severe skin damage from chemical burns. If irritation or burning occurs, seek medical treatment. Protect eyes with goggles or safety glasses with side shields. Cover skin with protective clothing. Use chemical resistant gloves and waterproof boots. In case of skin contact with cement dust, immediately wash off dust with soap and water to avoid skin damage. In case of skin contact with wet concrete, wash exposed skin areas with cold running water as soon as possible. In case of eye contact with cement dust, flush immediately and repeatedly with clean water, and consult a physician. If wet concrete splashes into eyes, rinse eyes with clean water for at least 15 minutes and go to the hospital for further treatment.

Please refer to the SDS and www.CTScement.com for additional safety information regarding this material.

LIMITED WARRANTY: CTS CEMENT MANUFACTURING CORP. (CTS) warrants its materials to be of good quality and, at its option, will replace or refund the purchase price of any material proven to be defective within one (1) year from date of purchase. The above remedies shall be the limit of CTS's responsibility. Except for the foregoing, all warranties expressed or implied, including merchantability and fitness for a particular purpose, are excluded. CTS shall not be liable for any consequential, incidental, or special damages arising directly or indirectly from the use of the materials.

⚠ WARNING

CANCER and REPRODUCTIVE HARM - www.P65Warnings.ca.gov

CTS Cement Manufacturing Corp. | 12442 Knott St., Garden Grove, CA 92841 | 800-929-3030 | www.CTScement.com

TYPICAL PHYSICAL DATA

Working time 20 minutes

Flow life 15 minutes

Compressive Strength, ASTM C109*

4 hours 2800 psi (19.3 MPa)

24 hours 5000 psi (34.5 MPa)

28 days 7000 psi (48.3 MPa)

*Data obtained at 70°F (21°C)



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