

1. PRODUCT NAME

Tenon® Conproco® ISR CM

2. MANUFACTURER

TCC Materials®
2025 Centre Pointe Blvd.
Mendota Heights, MN 55120 USA
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3. PRODUCT DESCRIPTION

Tenon® Conproco® ISR CM is a color matched repair mortar for poured and precast concrete utilizing ISR (Internal Stress Relief) technology. ISR CM is available in 23 standard colors and custom color matching.

Features and Benefits

- Sustainable green technology; contains significant concentrations of both pre- & post-consumer recycled content
- Low shrinkage; maintains integrity of repair & resists cracking
- Thermal compatibility prevents delamination due to temperature change
- Resistant to weathering action, excellent freeze/thaw stability & abrasion resistance
- Resistant to deicing salts, carbonation, chloride & chemical attack
- Dimensionally stable
- Extensive color spectrum
- Available in 23 standard colors and custom color matching

When/Where to Use

- Protective repairs
- Vertical and overhead
- Large areas

4. TECHNICAL DATA

Typical Values • Conproco ISR CM	
Physical State & Appearance	Dry powder with aggregate
Base	Portland Cement
pH	>12
Length Change (ASTM C157)	<500 µstrains @ 28 days
Slant Shear Bond Strength - Epoxy (ASTM C882)	1250 psi
Short-term Bond Strength (ICRI 03739*)	400 psi
Freeze/Thaw Resistance - Procedure A (ASTM C666)	Weight gain (%) 0. Expansion (%) 0. Durability Factor DF (%) 99.
Tensile Strength - psi (ASTM C39*)	530 @ 28 days
Compressive Strength - psi (ASTM C39*)	7 days: 3,110 psi 28 days: 3,530 psi

Available Sizes

- 50 lb. pail (BOM #115227)

Coverage

Theoretical Yield		
Yield per Pail	Repair Depth	Square Feet
0.42 cubic feet	½ inch	10.08
0.42 cubic feet	1 inch	5.04
0.42 cubic feet	1 ½ inches	3.36
0.42 cubic feet	2 inches	2.52

5. INSTALLATION

Preparation

Read all directions before starting work. Proper surface preparation is crucial to achieving a successful application.

1. Remove loose and deteriorated material, laitance, dirt, dust, oil, and any surface contaminants that will inhibit proper bond.
2. Saw cut edges with a diamond blade at a 90° angle to eliminate feather edging. Avoid polishing the edges as this will inhibit bond.
3. Avoid bruising or micro cracking during surface preparation. Refer to ICRI Surface Preparation Guide 03732.
4. Repair zone must be a minimum of 1/2 inch deep, of simple geometry, with no complex edge conditions.
5. Avoid long narrow repairs; these have a tendency to crack.
6. Saturate substrate with clean water, (saturated surface dry/SSD), with no standing water during application.
7. Remove concrete from corroded steel and several inches beyond to expose non-corroded steel.
8. Provide a ¾ inch clearance between the concrete and steel.
9. Damaged reinforcing steel should be inspected by a qualified engineer an appropriate action taken.

Priming

1. Prime the prepared substrate including all edges with a bond coat of ISR CM.
2. Work the bond coat into the substrate to ensure intimate contact and establish bond.
3. ISR CM must be applied while bond coat is wet.
4. If bond coat dries, remove and reapply.

Embedded Metal & Steel

1. Remove all scaling rust from embedded metal and steel.
2. Apply Conproco® ECB anti-corrosion coating.

Note: It is the responsibility of the installer/applicator to ensure the suitability of the product for its intended use.

Mixing

Hand mixing

- Measure ISR CM powder and water to achieve a 5 (+/- 0.25) part powder to 1 part water ratio (or approximately 1 gallon of water per 50 lb. unit of ISR CM).

Mechanical mixing

- May require less water (ratio is approximately 5.5 - 6.0 parts powder to 1 part water).
- Pour measured water into a clean container suitable for mixing. Place ½ of powder and mix until fully blended and lump free.
- Mechanically mix using low-speed drill (400-600 rpm) and mixing paddle or mortar mixer.

- Insufficient water will not hydrate the material and it will not achieve full strength.
- Mix only as much material as can be placed in 15-20 minutes.
- Do not over mix, as this will entrain excess air.

Application

1. At the time of application, surfaces should be saturated surface dry (SSD) but hold no standing water.
2. Follow instructions for priming.
3. Force the material against the edges of the repair, working toward the center.
4. Material may be applied in multiple lifts of not less than 1 inch and no greater than 2 inches.
5. Consolidate each lift and allow to stiffen to thumb-print hard before continuing.
6. Scratch (screed/open pores) each lift and allow to prepare surface for subsequent lift.
7. Repairs 2 inches or greater may be filled with ISR VO or ISR Ag to within 1 inch of surface. Minimum depth of ISR CM is 1 inch.
8. Over-build ISR CM final lift by 1/8 inch.
9. Shave to final form with a miter rod or trowel edge up to 2 hours after application.
10. Do not over work the finish.
11. Finishing techniques and the length of time the material has cured when shaved will have a significant effect on the appearance of the color and degree of texture.

Curing

- Keep repair zone damp for 24 hours. Refer to ACI 308R-01 for detailed curing recommendations. If repair is inaccessible, tape polyethylene over area to retain moisture. Maintain an air gap – do not allow polyethylene to contact material. Protect repair from direct sunlight, wind, rain and frost during curing period.

Clean Up

Clean tools and equipment with water immediately after use. Cured material must be removed mechanically.

Limitations

1. Do not apply unless substrate and ambient temperature can be maintained at a minimum of 40°F for 24 hours. Refer to ACI Cold Weather Application Guidelines.
2. Cold mixing water and low temperature will retard set. Hot water and high temperature will accelerate set.
3. Protect application from precipitation and high wind for at least 8 hours.
4. Do not add more water than specified, this will lower strengths, induce shrinkage cracking and alter final color
5. Avoid overworking material during placement and finishing - this will affect color and produce surface (map) cracking.
6. Do not allow polyethylene or burlene to touch surface while curing as this will cause whitening of the material.
7. Do not ingest.
8. Avoid breathing dust.
9. Avoid contact with skin & eyes.

Safety

READ THE SAFETY DATA SHEET (SDS) BEFORE USING THIS PRODUCT. SDS information is available on our website: tccmaterials.com

- In case of skin contact, wash thoroughly with soap and water.
- For eye contact, flush immediately with a high volume of water for at least 15 minutes and contact a medical professional.
- For respiratory problems, remove person to fresh air.

Cautions

Read complete cautionary information printed on product container prior to use. This Product Data Sheet has been prepared in good faith on the basis of information available at the time of publication. It is intended to provide users with information about and guidelines for the proper use and application of the covered Tenon brand product(s) under normal environmental and working conditions. Because each project is different, TCC Materials cannot be responsible for the consequences of variations in such conditions, or for unforeseen conditions.

6. AVAILABILITY

To locate Tenon products in your area, please contact:

Phone: 651.688.9116
 Email: info@tccmaterials.com

7. WARRANTY

Seller warrants that its product will conform to and perform in accordance with the product specifications. The foregoing warranty is in lieu of all other warranties, expressed or implied, including, but not limited to those concerning merchantability and fitness for a particular purpose. Because of the difficulty in ascertaining and measuring damages hereunder, it is agreed that Seller's liability to the Buyer shall not exceed the total amount billed and billable to the Buyer for the product hereunder.

Shelf Life	12 months when properly stored
Storage Conditions	Transport and store in cool, clean, dry conditions in unopened containers. High temperature or high humidity will reduce shelf life.
Color	Gray
KEEP PRODUCT IN CONTAINER FROM FREEZING	
WARNING: INJURIOUS TO EYES	
KEEP OUT OF REACH OF CHILDREN	



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