CEG-IG 100% Solids Industrial Grade Epoxy Grout

1 Product Name

CEG-IG 100% Solids Industrial Grade Epoxy Grout

2 Manufacturer

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3 Product Description

CEG-IG is an industrial grade, water cleanable, 100% solids epoxy grout that has high chemical, temperature and stain resistance. It is formulated for harsh environments such as commercial kitchens and food processing facilities. CEG-IG is a two component epoxy system that combines a pigmented hardener with epoxy resins and recycled aggregates to fill joint widths from 1/16" to 1/2" (1.6-13mm) and won't shrink or sag. With its fast cure time, CEG-IG provides a quick return to service.

CEG-IG is compatible with both CEG-Lite Part A and CEG Part A epoxy grout color pigment and hardener products.

Uses

- CEG-IG can be used as both a grout and as a setting mortar
- Use with virtually any tile: vitreous, semi-vitreous or impervious tile including ceramic, mosaic, quarry, pavers, cement, porcelain, glass, brick, mini-brick, precast terrazzo and natural stone, including green marble
- Use to fill joint widths from 1/16″ to ½″ (1.6-13mm)
- It may be used for both floor or wall installation after tiles have been properly embedded
- Interior applications

Suitable Substrates

- Excellent for use in chemical and food processing plants such as dairies, breweries, bottling plants, meat processing plants, restaurants, commercial kitchens, fast food restaurants, cafeterias, supermarkets and textile and metal finishing plants where the use of acids, alkalis, solvents, strong detergents, enzymatic cleaners and other chemicals would normally cause erosion and damage to the setting beds and grout joints.
- Hospitals, clinics, pharmaceutical factories, laboratories and similar installations where clinical sanitation is maintained by harsh cleaning methods.
- Plumb and true masonry, concrete, cured Portland cement mortar beds
- Bond directly to brick, ceramic tiles, cementitious backer board, steel, glass and fiberglass.

Composition of Product

2-part formula, with part A pigmented liquid epoxy hardener and part B liquid epoxy resins combined with recycled aggregates.

Benefits of Product in the Installation

- Excellent resistance to industrial cleaners.
- Excellent solvent resistance.
- Excellent resistance to inorganic and organic acids.
- Early return to service. As early as seven hour cure time at 75°F (23°C).
- 2-part 100% Solids Epoxy
- No shrinkage
- Color consistent, stain and chemical resistant
- Easy to spread and water clean-up
- No additive needed for critical grouting application
- Contains recycled LEED contributing materials.
- Fast curing
- Exceeds ANSI 118.3 (100% Epoxy) and ANSI 118.5 (Furan) performance requirements

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Limitations to the Product

- Should not be used in an environment with temperature requirements above 360°F (182°C) for any extended period of time.
- When used to install tile in an area that will be continually wet (e.g. swimming pools, gang showers, etc.), it is recommended that the complete installation be cured 14 days prior to full submersion with chemically treated water.
- Epoxy, epoxy residue, or wash water will discolor painted or anodized surfaces upon contact. Protect these surfaces from exposure.
- Vertical grout joint width should not exceed 1/2" (13 mm).
- Should be tested for possible staining or slight color changes when used with porous, absorptive, textured tile and stone units such as rough textured ceramic tile, natural stone or marble.
- All epoxies are temperature sensitive. Epoxies are easiest to apply when temperatures are between 70°F and 85°F (21°C and 29°C). Lower temperatures will cause the epoxy to become stiff and more difficult to work and will extend initial set. Higher temperatures will cause the epoxy to become more fluid and will accelerate the set.
- With all epoxies, a crystallization effect can occur when the liquid gets below 45°F (7°C) and/or has experienced multiple cycles of high and low temperature changes. If material is hard, place the sealed container (with the lid on), in warm tap water at approximately 120°F (49°C) for 10 to 20 minutes, and when re-liquified, let the material return to room temperature before mixing.
- Colors may be slightly different than shown on color samples. When color considerations are critical, a mock-up should be constructed prior to final selection and application.

Packaging

Grout mixture requires two separately-sold parts:

- Part A 1.3 lb (.58 kg) container of pigmented liquid epoxy hardener, available in 27 standard colors
- Part B 27.7 lb (12.6 kg) liquid epoxy resin combined with aggregates

4 Technical Data

Applicable Standards

Detailed installation procedures and use of epoxy mortars may be found in the TCNA Handbook under F-114, F-115, F-116, F-125, F-128, F-143, F-131, F-132, F-134, F-135, F-200, F-205, TR-711 and TR-712 and in addition, in ANSI A108.6. Exceeds ANSI A118.3 specifications. Conforms to requirements for chemical-resistant, water cleanable tile setting and grouting epoxy found in ANSI A108.6, ANSI A118.3, and ANSI A118.5.

Technical Chart

ANSI A118.3 Properties

Property	Test Method	Requirement	Typical results
Water clean-ability	ANSI 118.3 Section 5.1	>80 minutes	>80 minutes
Initial Set	ASTM C308	>2hrs	6 hrs
Shrinkage	ASTM C531	<0.25%	0.05%
Sag in Vertical Joint	ANSI 118.3 Section 5.4	No change	No change
Shear bond to quarry tile	ANSI 118.3 Section 5.5	>1000 psi	>1300 psi
Thermal shock resistance	ANSI 118.3 Section 5.8	>500 psi	>1300 psi
Compressive Strength	ASTM C579	>3500 psi	9500 psi
Tensile Strength	ASTM C307	>1000 psi	3200 psi

ANSI A118.5 Properties

Property	Test Method	Requirement	Typical results
Compressive Strength	ASTM C579	>3000 psi	9500 psi
Tensile Strength	ASTM C307	>400 psi	3200 psi
Absorption	ASTM C413	<1%	0%
Modulus of Rupture	ASTM C580	600 psi	7000 psi
Initial Set	ASTM C308	>5 hours	6 hours
Final Set	ASTM C308	<7 days	pass
Working Time	ASTM C308	10 minutes	40 minutes
Bond Strength	ASTM C321	>150 psi	pass
Linear Shrinkage	ASTM C531	< 1%	0.05%

5 Instructions

General Surface Prep

All surfaces on which tiles are to be set must be dry, structurally sound, and not subject to temperatures below 65° F (18° C) or above 95° F (35° C). Surfaces must be dry and free of all grease, oil, dirt, dust, curing compounds, sealers, coating, efflorescence, old adhesive residues, gypsum-based underlayments and any other foreign matter.

Bonding to Concrete Surfaces

Cleaning may be accomplished via mechanical abrasion, scraping or chipping. Smooth, steel-troweled concrete floors must be roughened to ensure a superior bond. Dry porous concrete should not be pre-dampened with water before applying CEG-IG™ mortar. Instead, use the flat side of the trowel to key the CEG-IG mortar to the substrate, just prior to applying the sufficient amount of mortar with the appropriate notched size side. test test test

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Bonding to Plywood Surfaces

All wood flooring, when placed over conventional floor joist or other systems, should be of a design and thickness so as to meet ANSI A108.01. Further, the flooring to receive the CEG-IG™ mortar should be Exterior Grade Plywood only, secured with screw-type nails and glued where possible. A gap of 1/8" (3 mm) should be left between sheets of plywood and between the plywood edges and all materials which they abut to allow for expansion. These gaps should remain empty when the installation is complete. Do not force epoxy between edges of plywood sheets. Follow TCNA EJ-171 for expansion joint details. In addition, all wooden surfaces must be for interior use only and protected from exposure to water.

Miscellaneous Substrates

Other substrates like existing ceramic tile, steel, glass and fiberglass must all be free of all oils, coatings, dust and moisture. In addition, these surfaces should be roughened to ensure a good bond. It is also absolutely essential that the existing surface be structurally sound and firmly attached to the supporting structure.

Construction/Expansion/Control/Isolation Joints: Follow installation procedures as outlined in TCNA EJ-171.

Bonding to Backerboards

Bonding to backerboards.

Bonding to Existing Surfacing Material

Resilient flooring or plastic laminates must be well-bonded, as well as clean and free of all contaminates. Roughen the surface by sanding or scarifying; rinse and allow to dry. Do not sand flooring that contains asbestos. For existing well-bonded ceramic tile, mechanically abrade the surface. Rinse and allow to dry. When sanding, an approved respirator should be used.

Mixing Ratios

test test

Mixing Procedures

Open Part B and stir thoroughly to eliminate the effects of settling due to shipping. Add the entire contents of two parts pigment Part A to Part B and stir to produce a homogeneous consistency, eliminating any color streaks from appearing in the mixed unit. Do not mix partial units. Make sure to scrape bottom and sides of container during mixing.

NOTE: **TWO UNITS OF COLOR ARE REQUIRED FOR ONE RESIN COMPONENT. GROUT WILL NOT HARDEN OR COME TO THE DESIRED COLOR IF INCORRECTLY MIXED.** If a power mixer is used, it must be 300 RPM or less to avoid entrapping air bubbles which cause pinholes in the grout. Do not overmix as this will cause the epoxy to flash set.

Application of Product

Tile Pretreatment

Pre-treating tiles may not be necessary but for easier grout application and cleanup, use Aqua Mix Grout Release for rough textured, diamond tread or abrasive quarry tile. For smooth surfaced tiles, apply an impregnating sealer such as Aqua Mix Penetrating Sealer that will not change the appearance of the tile.

Application for Use as a Grout

Remove all grout from container and spread out in piles over the surface to be grouted as soon as mixing is completed. This will extend working time. When grouting walls, place epoxy on a mortarboard placed on the floor. Grout vertical surfaces as soon as possible after mixing. Apply grout using a hard epoxy rubber float, filling all joints full and even with surface of tile.

It is important to achieve 100% fill coverage with no voids in the joints to prevent pinholes and slumping of the epoxy grout. Remove excess epoxy by holding the grout float at a 90° angle and pulling the float diagonally across the grout joints using it like a squeegee. Removing as much epoxy as possible will make final cleaning easier. Avoid gouging joints. Do not allow epoxy to set on face of tile. Apply liberal amounts of clean, warm water to the grouted area. Adding a few drops (maximum) of Dawn® dishwashing liquid to the water will aid in cleanup. Using a grout sponge and as little pressure as possible, work in a circular motion across tiles to loosen epoxy film and to finish the joints smoothly. Change rinse water (and sponge if buildup occurs) frequently to aid in cleanup and minimize epoxy residue left behind. As a final step, clean film from tile by dragging a damp, clean microfiber towel flatly across the tiles.

NOTE: On porous or rough tiles, pre-grout sealing with agrout release may be necessary to prevent staining. Try a test patch to be sure. Epoxy and epoxy wash residue should not be allowed to dry on painted, anodized and thin metal-plated surfaces. Clean uncured materials from these surfaces immediately with soap and water.

Application for Use as a Mortar

Spread mixed epoxy with flat side of trowel onto substrate. Then, reapply additional mortar to a depth sufficient to be notched with a suitable trowel. Troweling should leave enough mortar to give 100% contact with back of the tile with a minimum 3/32" thickness. Temperature affects set time; therefore, it is advisable to occasionally remove a tile to be sure mortar has not skinned over and sufficient transfer is being made. Approximate tack time is 30 minutes at 75°F (24°C). Pot life is approximately 60 minutes at 75°F (24°C). Should epoxy mortar get on surface of tile, it will be necessary to remove it with a damp sponge before it cures. Epoxy residue should notmbe allowed to cure on unintended surfaces (e.g. painted, wall papered, carpeted, wood, concrete, masonry and stucco surfaces).

Curing of Product

Available for light traffic after 7 hours with ambient temperature at 70° with 50% relative humidity; narrower grout joints and job site conditions may increase cure time. Protect from harsh industrial cleaners for seven days and from aggressive chemicals for 14 days. Initial maintenance for the first seven days should be using clean water only. All grouting and cleaning should be completed within 80 minutes. If a grout haze is present on the tile, depending on the severity, use Aqua Mix Nanoscrub alone or in conjunction with Aqua Mix Sealer & Coating Remover. Mechanical scrubbing with the above cleaners can be used when necessary.

Protection

Chemical Resistance

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28 Day Immersion at 23°C	
Acids (Organic and Mineral)	
Acetic Acid, 10%	Pass
Citric Acid, 50%	Pass
Lactic Acid, 10%	Pass
Tartaric Acid, 50%	Pass
Oleic Acid 100%	Pass
Tannic Acid 50%	Pass
5% Benzoic acid	Pass
5% Formic Acid	Pass
50% Oleic Acid/Water	Pass
HCl, 36.5%	Pass
Nitric Acid, 30%	Pass
Phosphoric Acid 80%	Pass
Sulfuric Acid 50%	Pass
Alkalis	
Potassium Hydroxide, 45%	Pass
Sodium Hydroxide Saturated	Pass
Oxidizers/Bleach	
Sodium Hypochlorite, 5%	Pass
10% Potassium Permanganate	Pass
Hydrogen Peroxide	Pass
Water	
Mineral water	Pass
Sea water	Pass
Solvents	
Ethanol	Pass
Gasoline	Pass
Methylene Chloride	Fail
Mineral Spirits	Pass
Toluene	Pass
Xylene	Pass
methanol	Pass
ipa	Pass
MEK	Pass
Chloroform	Fail
Cleaners	
Aqua Mix Heavy Duty Tile & Grout Cleaner	Pass
Aqua Mix Heavy Duty Tile & Grout Cleaner with olive oil	Pass
Aqua Mix Heavy Duty Stripper & Cleaner	Pass
Aqua Mix Heavy Duty Stripper & Cleaner with olive oil	Pass
Aqua Mix 1 & 2 Deep Clean	Pass
Aqua Mix 1 & 2 Deep Clean with olive oil	Pass
Sure Grip Cleaner	Pass
Sure Grip Cleaner with olive oil	Pass
Eco Lab Wash and Walk	Pass

Cleaning of equipment

Clean tools and hands with water before material dries.

Storage

Keep from freezing.

Health Precautions

May irritate eyes. May irritate skin. Do not swallow. Do not get in eyes. Do not get on skin or clothing. Do not breathe fumes. KEEP OUT OF REACH OF CHILDREN. Wear safety glasses and chemical-resistant gloves. First Aid Treatment: If swallowed, call a poison control center or doctor immediately. Do not induce vomiting. If in eyes, rinse with water 15 minutes. If on skin, rinse well with water.

Conformance to Building Codes

Installation must comply with the requirements of all applicable local, state and federal code jurisdictions.

6 Availability & Cost

Item Code	Size	Grout Color	Package
Part A			
LWCEG09A-EA	1.3 lb pail	#09 Natural Gray	Tub
LWCEG10A-EA	1.3 lb pail	#10 Antique White	Tub
LWCEG19A-EA	1.3 lb pail	#19 Pewter	Tub
LWCEG35A-EA	1.3 lb pail	#35 Chaparral	Tub
LWCEG45A-EA	1.3 lb pail	#45 Summer Wheat	Tub
LWCEG52A-EA	1.3 lb pail	#52 Tobacco Brown	Tub
LWCEG59A-EA	1.3 lb pail	#59 Saddle Brown	Tub
LWCEG60A-EA	1.3 lb pail	#60 Charcoal	Tub
LWCEG92A-EA	1.3 lb pail	#92 Admiral Blue	Tub
LWCEG96A-EA	1.3 lb pail	#96 Quarry Red Clay	Tub
LWCEG101A-EA	1.3 lb pail	#101 Quartz	Tub
LWCEG105A-EA	1.3 lb pail	#105 Earth	Tub
LWCEG122A-EA	1.3 lb pail	#122 Linen	Tub
LWCEG127A-EA	1.3 lb pail	#127 Antique Linen	Tub
LWCEG135A-EA	1.3 lb pail	#135 Mushroom	Tub
LWCEG145A-EA	1.3 lb pail	#145 Light Smoke	Tub
LWCEG156A-EA	1.3 lb pail	#156 Fawn	Tub
LWCEG165A-EA	1.3 lb pail	#165 DeLorean Gray	Tub
LWCEG180A-EA	1.3 lb pail	#180 Sandstone	Tub
LWCEG183A-EA	1.3 lb pail	#183 Chateau	Tub
LWCEG185A-EA	1.3 lb pail	#185 New Taupe	Tub
LWCEG312A-EA	1.3 lb pail	#312 Bonsai	Tub
LWCEG333A-EA	1.3 lb pail	#333 Alabaster	Tub
LWCEG380A-EA	1.3 lb pail	#380 Haystack	Tub
LWCEG381A-EA	1.3 lb pail	#381 Bright White	Tub
LWCEG382A-EA	1.3 lb pail	#382 Bone	Tub
LWCEG386A-EA	1.3 lb pail	#386 Oyster Gray	Tub
Part B			
CEGIGB2	27.7 lb pail	n/a	Pail

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7 Product Warranty

Custom® Building Products warrants to the original consumer purchaser that its product shall be free from defects in material and workmanship under normal and proper usage for a period of one year following the date of original purchase. Custom's® sole liability under this warranty shall be limited to the replacement of the product. Some states, countries or territories do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you. This warranty will not extend to any product which has been modified in any way or which has not been used in accordance with Custom's® printed instructions. Custom® makes no other warranties either expressed or implied. This warranty gives you specific legal rights, and you may have other rights that vary from state to state or from one country/territory to another. Click for details and complete warranty information.

Warranty duration section here.

8 Product Maintenance

Clean with a neutral cleaner such as Aquamix AquaKleen or Tilelab Grout & Tile Cleaner

9 Technical Services Information

For technical assistance, contact Custom® Building Products.

10 Filing System

Additional product information is available from the manufacturer upon request.

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Coverage

Coverage as a Grout

Coverage will vary depending on tile size and joint width. Coverages are approximate and may be reduced by 10-20%+ based on waste, spillage and project conditions.

SQUARE FOOT COVERAGE PER UNIT (SQUARE METER)
1 UNIT = 2 PART A + 1 PART B

	Joint Width				
Tile Size	**1/16" (1.6 mm)**	**1/8" (3 mm)**	**1/4" (6 mm)**	**3/8" (9.5 mm)**	**1/2" (13 mm)**
1" x 1" x 1/8" (25 x 25 x 3)	191 (17.8)	103 (9.6)	61 (5.6)	46 (4.2)	38 (3.6)
1" x 1" x 1/4" (25 x 25 x 6)	96 (8.8)	52 (4.8)	31 (2.8)	23 (2.2)	19 (1.8)
2" x 2" x 1/4" (50 x 50 x 6)	182 (16.8)	96 (8.8)	52 (4.8)	38 (3.6)	31 (2.8)
4 1/4" x 4 1/4" x 1/4" 108 x 108 x 6)	379 (35.2)	193 (18)	101 (9.4)	71 (6.6)	55 (5.2)
6" x 6" x 1/4" (150 x 150 x 6)	530 (49.2)	270 (25)	140 (13)	96 (8.8)	73 (6.8)
6" x 6" x 1/2" (150 x 150 x 13)	266 (24.6)	134 (12.4)	69 (6.4)	48 (4.4)	36 (3.4)
8" x 8" x 3/8" (200 x 200 x 9.5)	470 (43.8)	237 (22)	122 (11.4)	82 (7.6)	63 (5.8)
8" x 8" x 1/2" (200 x 200 x 13)	352 (32.6)	178 (16.6)	92 (8.6)	63 (5.8)	48 (4.4)
12" x 12" x 3/8" (300 x 300 x 9.5)	702 (65.2)	354 (32.8)	180 (16.8)	123 (11.4)	92 (8.6)
16" x 16" x 3/8" (406 x 406 x 9.5)	935 (86.8)	470 (43.8)	237 (22)	161 (15)	122 (11.4)
12" x 12" x 1/2" (300 x 300 x 13)	526 (48.8)	266 (24.6)	134 (12.4)	92 (8.6)	69 (6.4)
24" x 24" x 1/4" (600 x 600 x 13)	1050 (97.6)	526 (48.8)	266 (24.6)	178 (16.6)	134 (12.4)

Coverage as a mortar

SQUARE FOOT COVERAGE PER UNIT (SQUARE METER)
1 UNIT = 2 PART A + 1 PART B

Trowel Size	Coverage
1/4" x 1/4"x1/4" Square-Notch Trowel (6 x 6 x 6 mm)	38 - 48 sq. ft. (4 - 5 M²)
3/16" x 5/32" V-Notch Trowel (5 x 4 mm)	67 - 76 sq. ft. (6 - 7 M²)

Published Date: 2/27/2014