

Product Data Sheet

CasTech Tile C2TE

Nov-2025, Ver. 01.01

High-Performance Cementitious Tile Adhesive with Reduced Slip and Extended Open Time

DESCRIPTION

CasTech Tile C2TE is a single-component, high-performance polymer-modified cementitious tile adhesive supplied as a factory-blended powder. When mixed with clean water, it forms a smooth, thixotropic mortar with enhanced adhesion, reduced slip, and extended open time for reliable fixing of tiles on prepared substrates.

The product is intended for demanding interior and exterior wall and floor applications. It is suitable for ceramic and porcelain tiles, including medium- and large-format units, in wet areas, balconies, terraces, and heavily trafficked locations, subject to tile size, weight, substrate condition, and project requirements.

TYPICAL USES

- Interior and exterior tile installation on walls and floors
- Bathrooms, showers, kitchens, and other wet or moisture-prone areas
- Residential, commercial, institutional, and heavily trafficked areas
- Concrete, cement-sand render, cement screed, and compatible masonry substrates
- Balconies, terraces, external steps, and other exposed applications
- Ceramic and porcelain tiles, including medium- and large-format tiles, on vertical and horizontal surfaces

ADVANTAGES

Key advantages:

- C2TE classification: improved cementitious adhesive with reduced slip and extended open time
- Enhanced tensile adhesion of at least 1.0 N/mm² after dry, water, heat, and freeze-thaw conditioning
- Reduced tile slip for reliable vertical application
- Extended open time supports accurate positioning of medium- and large-format tiles
- Smooth thixotropic consistency and easy application with a notched trowel
- Good resistance to moisture, heat, and freeze-thaw exposure after full cure
- Factory-controlled, single-component system

available in grey and white

STANDARDS

CasTech Tile C2TE is designed to meet the C2TE performance requirements of EN 12004 for improved cementitious ceramic-tile adhesives with reduced slip and extended open time, based on the stated test data and subject to project specification requirements.

TYPICAL PROPERTIES

Appearance / colour	Grey or white powder
Chemical base	Polymer-modified cementitious mortar
Water addition	5.0-6.0 L per 25 kg bag
Application temperature	+5°C to +35°C
Service temperature	-20°C to +70°C
Working time at 23°C	Approx. 60 minutes
Open time	30 minutes
Slip resistance	≤0.5 mm
Tensile adhesion strength	≥1.0 N/mm ²
Mixed yield	Approx. 18 L per 25 kg bag
Coverage at 3 mm	Approx. 7.5 m ² per 25 kg bag
Packaging	25 kg kraft bag
Shelf life	12 months
Classification	C2TE improved cementitious tile adhesive
Open time - EN 12004-2	≥0.5 N/mm ² after 30 minutes
Initial tensile adhesion	≥1.0 N/mm ² after dry storage
Water-immersion adhesion	≥1.0 N/mm ² after conditioning
Heat-ageing adhesion	≥1.0 N/mm ² after conditioning
Freeze-thaw adhesion	≥1.0 N/mm ² after conditioning
Slip - EN 12004-2	≤0.5 mm
Reaction to fire - EN 13501-1	Class A1
Coverage	Approx. 7.5 m ² /bag at 3 mm

Properties are based on laboratory-controlled testing at 23±2°C and 50±5% relative humidity using the stated water addition. Site results may vary with water content, temperature,

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substrate, tile type, tile dimensions, bed thickness, and protection conditions.

APPLICATION INSTRUCTIONS

SURFACE PREPARATION

General requirements

The substrate shall be sound, dimensionally stable, clean, and free from dust, laitance, oil, grease, paint, curing compounds, release agents, loose particles, and other materials that may impair adhesion. Remove contamination by suitable mechanical means.

Repairs and levelling

Repair cracks, cavities, and weak areas with an appropriate CasTech repair material. Allow repairs and new cementitious substrates to cure adequately before tile fixing. Uneven surfaces shall be levelled before adhesive application; the adhesive shall not be used to correct excessive substrate irregularity.

Absorbent cementitious surfaces

Lightly dampen highly absorbent concrete, render, or screed with clean water before application. Remove all standing water; the substrate shall be in a saturated-surface-dry condition. Do not apply onto surfaces exposed to running water.

Existing tiles and smooth surfaces

Existing ceramic, terrazzo, marble, or other dense surfaces shall be mechanically roughened and thoroughly cleaned. Confirm bond by a representative site trial. Use a suitable CasTech primer or bonding system where required by the substrate condition and approved method statement.

Boards and gypsum-based substrates

Boards shall be rigid, securely fixed, and suitable for tiling. Gypsum-based or highly absorbent substrates require a compatible approved primer and shall be protected from moisture in accordance with the board and waterproofing-system requirements.

MIXING

Use a clean container and a slow-speed heavy-duty drill fitted with a suitable mixing paddle. Measure 5.0–6.0 litres of clean potable water for each 25 kg bag, depending on the required workable consistency and site conditions.

Add the powder gradually to the water while mixing continuously. Mix until a smooth, homogeneous, and lump-free mortar is obtained. Allow the mix to stand for approximately 3 minutes, then remix for about 2 minutes before application.

Do not add cement, sand, other materials, or water beyond the recommended range. Mix only the quantity that can be used within the working time. Do not retemper material that has

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started to stiffen or set.

APPLICATION

Adhesive spreading

Apply the adhesive onto the prepared substrate using the flat side of a trowel to produce a contact layer, then comb immediately with a correctly selected notched trowel. Spread only an area that can be tiled within the stated open time.

Tile fixing

Press tiles firmly into the fresh adhesive with a slight sliding or twisting action to collapse the ribs and achieve uniform bedding. Periodically remove a tile to verify transfer and coverage. Back-butter medium- and large-format tiles and use the combined method for exterior work, wet areas, floors, heavy tiles, or tiles with deep rear profiles.

Adjustment and open time

Complete tile positioning while the adhesive remains fresh. If a surface skin has formed, remove the adhesive and apply fresh material; do not re-wet or remix the skinned mortar. Do not re-wet or remix the skinned mortar. Clean dusty tile backs before fixing.

PROTECTION AND JOINT FILLING

Bedding coverage

Provide full and continuous adhesive contact in wet, external, floor, heavily trafficked, and large-format applications. Avoid voids behind tiles. Select the trowel notch, back-buttering method, and bed thickness according to tile dimensions, tile-back profile, substrate flatness, and project requirements.

Movement and perimeter joints

Do not bridge structural, movement, control, or isolation joints with adhesive or tiles. Continue the joints through the tiled finish and seal them using an approved flexible joint-sealant system. Provide perimeter and intermediate movement joints as required by the project design.

Protect freshly installed tiles from rain, direct sunlight, strong wind, frost, vibration, impact, and premature traffic for at least 48 hours or until adequate strength has developed. Do not water-cure the adhesive or expose the installation to service conditions prematurely.

As a general guide, wall joints may be filled after approximately 8 hours and floor joints after approximately 24 hours at 23°C. Cooler conditions, dense tiles, low-

absorption substrates, or thick adhesive beds will extend these periods. Follow the selected grout and project requirements.

CLEANING

Remove fresh adhesive from tile faces and joints with a damp sponge or clean water before it hardens. Clean tools and equipment immediately after use. Hardened material can only be removed mechanically.

COVERAGE

Approximate mixed yield is 18 litres per 25 kg bag. Typical coverage is approximately 7.5 m² per 25 kg bag at a uniform 3 mm bed thickness. Actual consumption depends on substrate profile, tile-back profile, trowel notch, bedding coverage, and wastage.

PACKAGING

- 25 kg moisture-resistant kraft bag

SHELF LIFE

12 months from the date of manufacture when stored unopened in the original packaging under the recommended conditions.

STORAGE

Store under cover in a cool, dry, and shaded warehouse, off the ground, and protected from moisture, direct sunlight, and extreme temperature or humidity. Keep bags sealed until use and follow stock rotation.

LIMITATIONS

- For natural stone susceptible to staining, moisture sensitivity, or dimensional movement, complete a compatibility trial and use a purpose-designed adhesive where required.
- Very large or heavy tiles, facade applications, immersed conditions, heated floors, and deformable substrates require technical assessment and may require a deformable CasTech adhesive system.
- Do not use directly over gypsum, timber, metal, plastics, bituminous surfaces, waterproofing membranes, or existing coatings unless the complete compatible substrate and primer system has been technically approved.

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- Installation performance depends on substrate preparation, adhesive contact, tile properties, joint design, weather, and workmanship.

HEALTH AND SAFETY

CasTech Tile C2TE contains cement and becomes alkaline when mixed with water. Avoid inhalation of dust and contact with eyes, skin, mouth, and foodstuffs. Wear protective gloves, safety goggles, suitable clothing, and a dust mask during mixing and application.

In case of eye contact, rinse immediately with plenty of clean water and seek medical attention. Wash affected skin with soap and water. If swallowed, do not induce vomiting; seek immediate medical advice. Keep away from children and animals.

Do not reuse empty packaging. Dispose of product residue and packaging in accordance with applicable local regulations. Refer to the latest Safety Data Sheet (SDS)

before use.

TECHNICAL SUPPORT

CasTech provides on-site assistance and consulting services on projects when requested. Technical data sheets on other CasTech products and guidance on their use are available on request.

TEST REFERENCES

- EN 12004 - classification and performance requirements for ceramic-tile adhesives
- EN 12004-2 - test methods for open time, tensile adhesion, and slip
- EN 13501-1 - fire classification of construction products

Test references identify the methods associated with the former product data and do not, by themselves, constitute third-party certification. Project-specific compliance shall be confirmed against the approved specification and supporting test documentation.