



**STYROZYD ECO**

## TECHNICAL DATA SHEET

### STZ C2TE TILE ADHESIVE

**Improved Cementitious Tile Adhesive with Reduced Slip and Extended Open Time**

**Classification: C2TE according to EN 12004-1:2017**



## PRODUCT DESCRIPTION

**STZ C2TE Tile Adhesive** is a high-performance, polymer-modified cementitious adhesive designed for the thin-bed installation of ceramic tiles, porcelain stoneware, mosaic tiles and other ceramic coverings.

The product is suitable for both interior and exterior applications and has been developed to withstand increased mechanical loads, thermal movement and demanding service conditions.

Its advanced formulation provides excellent adhesion, reduced slip, extended open time and outstanding workability, ensuring reliable installation of ceramic coverings in both residential and commercial applications.

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## Classification

According to **EN 12004-1:2017**, the product is classified as:

- **C2** – Improved cementitious adhesive with enhanced adhesion
- **T** – Reduced slip
- **E** – Extended open time

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## COMPOSITION

The product consists of carefully selected raw materials, including:



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- Portland cement
- Graded quartz sand
- Mineral fillers
- Polymer modifiers

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## **APPLICATIONS**

**STZ C2TE Tile Adhesive** is suitable for bonding:

- Ceramic wall and floor tiles
- Porcelain stoneware
- Porcelain tiles
- Mosaic tiles
- Clinker tiles
- Low water absorption tiles (<0.5%)

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## **Suitable Substrates**

The product is suitable for application on:

- Concrete
- Cement screeds
- Cement-lime renders
- Masonry
- Gypsum plasterboards
- Existing ceramic coverings (tile-on-tile application)

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## **Recommended Applications**

Recommended for:

- Façades
- Terraces
- Balconies



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- Swimming pools
  - Wet areas
  - Underfloor heating systems
  - Interior wall and floor tiling
  - Exterior wall and floor tiling
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- Terraces
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  - Swimming pools
  - Wet areas
  - Underfloor heating systems
  - Interior wall and floor tiling
  - Exterior wall and floor tiling

#### TECHNICAL CHARACTERISTICS & PERFORMANCE

| Essential Characteristic                                               | Performance                 | Test Method              | Harmonised Technical Specification |
|------------------------------------------------------------------------|-----------------------------|--------------------------|------------------------------------|
| Initial tensile adhesion strength                                      | <b>2.0 N/mm<sup>2</sup></b> | EN 1348:2008, Clause 8.2 | EN 12004:2007 + A1:2012*           |
| Tensile adhesion strength after heat ageing                            | <b>2.3 N/mm<sup>2</sup></b> | EN 1348:2008, Clause 8.4 | EN 12004:2007 + A1:2012*           |
| Tensile adhesion strength after water immersion                        | <b>1.8 N/mm<sup>2</sup></b> | EN 1348:2008, Clause 8.3 | EN 12004:2007 + A1:2012*           |
| Tensile adhesion strength after freeze/thaw cycles                     | <b>1.5 N/mm<sup>2</sup></b> | EN 1348:2008, Clause 8.5 | EN 12004:2007 + A1:2012*           |
| Open time – tensile adhesion strength after <b>20 minutes</b>          | <b>1.0 N/mm<sup>2</sup></b> | EN 1346:2008             | EN 12004:2007 + A1:2012*           |
| Extended open time – tensile adhesion strength after <b>30 minutes</b> | <b>0.9 N/mm<sup>2</sup></b> | EN 1346:2008             | EN 12004:2007 + A1:2012*           |
| Slip                                                                   | <b>0.3 mm</b>               | EN 1308:2009             | EN 12004:2007 + A1:2012*           |



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\* If the product is certified according to EN 12004-1:2017, all references to EN 12004:2007 + A1:2012 should be updated accordingly to ensure consistency throughout the Technical Data Sheet.

### PRODUCT DATA

| Property                      | Value                                                      |
|-------------------------------|------------------------------------------------------------|
| Classification                | <b>C2TE</b>                                                |
| Mixing water                  | Approximately 0.32 L/kg                                    |
| Water required per 25 kg bag  | Approximately 8.0 L                                        |
| Pot life                      | Approximately 4 hours                                      |
| Open time                     | ≥ 30 minutes                                               |
| Adjustment time               | Approximately 5 minutes                                    |
| Maximum application thickness | 5 mm                                                       |
| Consumption*                  | Approximately 3.0 kg/m <sup>2</sup> (10 mm notched trowel) |
| Colour                        | Grey                                                       |
| Packaging                     | 25 kg paper bag                                            |

\*Consumption depends on substrate flatness, tile dimensions and the notch size of the trowel.

### PERFORMANCE FEATURES

- Improved adhesion to mineral substrates
- Reduced slip for vertical applications
- Extended open time
- Excellent workability
- Suitable for porcelain stoneware and low water absorption tiles
- Suitable for interior and exterior applications
- Compatible with underfloor heating systems
- Suitable for wet areas and swimming pools
- Frost-resistant after complete curing



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#### **TESTED IN ACCORDANCE WITH**

- EN 12004 – Adhesives for ceramic tiles – Classification and performance requirements
- EN 1346 – Determination of open time
- EN 1348 – Determination of tensile adhesion strength
- EN 1308 – Determination of slip

#### **SUBSTRATE PREPARATION**

The substrate shall be:

- Sound and structurally stable;
- Dry and fully cured;
- Level and even;
- Clean and free from dust;
- Free from grease, oil, wax, paint, release agents and other contaminants;
- Free from loose or poorly bonded material.

Highly absorbent substrates should be primed with a suitable primer prior to adhesive application.

Any irregularities shall be repaired before installation.

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#### **Suitable Substrates**

**STZ C2TE Tile Adhesive** is suitable for application on:

- Concrete
- Cement screeds
- Cement-lime renders
- Masonry
- Gypsum plasterboards
- Existing ceramic coverings (tile-on-tile application)

The substrate shall comply with the relevant installation requirements for ceramic tiling.

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## **MIXING**

Pour approximately 8.0 litres of clean water into a suitable mixing container for one 25 kg bag of dry adhesive.

Gradually add the powder while continuously mixing with a low-speed electric mixer (approximately 400–600 rpm).

Mix for approximately 3 minutes until a smooth, homogeneous and lump-free mortar is obtained.

Allow the mortar to mature for approximately 5 minutes, then remix briefly before application.

Use clean water only.

Do not add cement, sand or other additives.

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## **Mixing Ratio**

- 25 kg dry adhesive
- Approximately 8.0 litres of clean water

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## **Pot Life**

The prepared adhesive remains workable for approximately 4 hours under standard conditions of 23°C and 50% relative humidity.

Higher temperatures, direct sunlight and wind reduce the pot life.

Lower temperatures and higher humidity extend the working time.

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## **Recommendations**

For optimum performance:

- Prepare only the quantity of adhesive that can be used within the pot life.
- Always use clean mixing equipment and clean water.
- Do not retemper mortar that has already started to harden by adding water.
- Protect freshly mixed adhesive from direct sunlight during application.

## **APPLICATION**

Apply a thin contact layer of adhesive onto the prepared substrate using the smooth edge of the trowel.

Immediately comb the adhesive with an appropriately sized notched trowel, holding the trowel at an angle of approximately 45° to the substrate.

Place the tiles into the fresh adhesive bed while it is still within the specified open time. Press the tiles firmly into the adhesive using a slight sliding movement to ensure complete wetting of the tile back and optimum adhesive transfer.

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## **Minimum Adhesive Coverage**

- Interior applications: minimum 65% adhesive coverage.
- Exterior applications and swimming pools: minimum 90% adhesive coverage.

For large-format porcelain tiles, natural stone and heavy-duty applications, full adhesive coverage (100%) is recommended using the back-buttering method.

Remove excess adhesive from joints and tile surfaces before the material hardens.

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## **RECOMMENDED TOOLS**

- Low-speed electric mixer
- Clean mixing bucket
- Stainless steel finishing trowel



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- Notched trowel
- Tile levelling system (where required)
- Rubber mallet
- Spirit level
- Damp sponge

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#### **Recommended Notched Trowel Sizes**

| <b>Notch Size</b>      | <b>Recommended Application</b>              |
|------------------------|---------------------------------------------|
| <b>4 × 4 × 4 mm</b>    | Small-format ceramic tiles                  |
| <b>6 × 6 × 6 mm</b>    | Standard ceramic wall and floor tiles       |
| <b>10 × 10 × 10 mm</b> | Porcelain stoneware and profiled-back tiles |

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#### **GENERAL RECOMMENDATIONS**

Carry out the installation in accordance with applicable construction standards, tile manufacturer recommendations and good tiling practice.

Do not apply the product:

- below +5°C;
- above +30°C;
- onto frozen substrates;
- in direct sunlight;
- during rainfall;
- under strong wind conditions.

Protect the freshly installed tiles from rain, frost, direct sunlight and rapid drying until the adhesive has fully cured.

Low temperatures and high relative humidity will extend the curing time.

High temperatures, wind and low relative humidity will reduce the open time and accelerate curing.

Use clean water only.



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Do not add cement, sand or any other additives to the prepared mortar.

If a surface skin has formed on the adhesive before tile installation, remove the affected adhesive and apply a fresh layer.

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### CLEANING

Clean tools and equipment with clean water immediately after use.

Hardened material can only be removed mechanically.

### SHELF LIFE

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

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### STORAGE CONDITIONS

Store the product:

- in dry and well-ventilated premises;
- on wooden pallets;
- in the original, tightly sealed packaging;
- protected from moisture and adverse weather conditions.

Do not expose the product to frost or excessive humidity during storage.

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### PACKAGING

25 kg paper bags

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**STYROZYD ECO**

**MANUFACTURER**

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**IMPORTANT NOTICE**

The information contained in this Technical Data Sheet is based on laboratory testing, practical experience and the current state of technical knowledge.

The stated technical values are typical values obtained under controlled laboratory conditions and may vary depending on ambient temperature, relative humidity, substrate characteristics, application method and site conditions.

Before application, the user shall verify that the product is suitable for the intended use and that the substrate is properly prepared in accordance with the relevant installation requirements.

The installer is responsible for ensuring that the product is applied in accordance with the manufacturer's recommendations, applicable European and national standards, the tile manufacturer's installation instructions and good tiling practice.

This Technical Data Sheet provides technical guidance regarding the product and its application. It does not release the user from the responsibility of carrying out preliminary tests where required by specific project conditions.

The manufacturer reserves the right to modify product specifications without prior notice as part of its continuous product development programme.