



Ezi SOLUTIONS TO TILE FIXING SYSTEM

# 1.4 Ezi STAR FLEX 2in1

PREMIUM GRADE HIGH PERFORMANCE SINGLE COMPONENT FLEXIBLE IMPROVED CEMENT-BASED ADHESIVE FOR INSTALLATION OF CERAMIC TILES, PORCELAIN TILES, MOSAIC TILES & NATURAL STONE SLABS

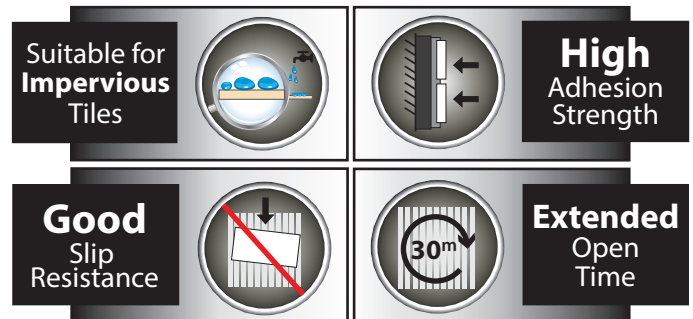


## DESCRIPTION

**Ezi STAR FLEX 2in1** is a grey coloured, water resistant, single component, polymer modified, flexible, improved cement-based adhesive with low vertical slip (T) & extended open time (E) attributes. Suitable for the installation of Ceramic Tiles, Porcelain Tiles, Mosaic Tiles & Natural Stone Slabs; to wall or floor, dry or wet areas; at internal areas.

Conform to the requirements of MS ISO 13007-1 as a Class C2TE Tile Adhesive

## MAIN CHARACTERISTICS



## USAGE

- Installation of a wide range of Ceramic Tiles, Porcelain Tiles Mosaics Tiles; and Natural Stone Slabs such as Marbles or Granites.
- Applicable at trowel bed thickness 3 - 12mm (may vary depending on size of the tiles).
- Suitable for use on a variety of substrates (See Suitable Substrates)
- Suitable for use on wall & floor areas, wet or dry areas at Internal areas

Note:

- For external areas or areas under water immersion (eg. swimming pool) mix **Ezi STAR FLEX 2in1** with an approved Latex Admixture.

## PERFORMANCE

**Ezi STAR FLEX 2in1** offers the following benefits when mixed with Clean Water:

- High Adhesion Strength
- Good Flexural Strength
- High Durability
- Good Slip Resistance
- Extended Open Time
- User Friendly
- Good Workability
- Non Slump Properties
- Avoids Mixing Errors
- Water Resistant Properties
- Minimal Drying Shrinkage

## SUITABLE SUBSTRATES

**Concrete:** Direct fixing on concrete surface may be adopted provided that the substrate is well cured (4 - 6 weeks curing), dry sound, flat &

### PRODUCT INFORMATION

Name	: Ezi STAR FLEX 2in1
Packing	: 20kg & 25 kg
Classification	: MS ISO 13007-1 Class C2 TE
Shelf Life	: 6 months in normal dry ambient condition
Appearance	: Grey & White Fine Powder
Dry Solid Content	: 100%
pH Value	: Alkaline
Toxicity Hazard	: No
Inflamability	: No

### APPLICATION DATA (Tested at approx. 25°C)

Mixing Ratio	: Approx. 1 pbw Water to 3 pbw Powder (Approx. 6 - 7 ltrs Water : 20kg Powder) Approx. 1 pbw Water to 3 pbw Powder (Approx. 6 - 8 ltrs Water : 25kg Powder)
Consistency of Mix	: Non-Slump creamy paste form
Coverage	: Approx. 6.6m <sup>2</sup> per 20kg bag at 3mm trowel bed thickness Approx. 8.0m <sup>2</sup> per 25kg bag at 3mm trowel bed thickness
Towel Bed Thickness	: Recommended at 3 - 12mm (May vary depending on size of tiles)
Open Time	: Approx. 20 - 30 minutes
Adjustability Time	: Approx. 20 minutes
Pot Life	: Approx. 2 - 3 hours
Light Foot Traffic	: 24 hours
Setting Time	: 24 - 48 hours
Application Temperature	: +5°C to normal ambient temperature

### TECHNICAL DATA (Tested at approx. 25°C)

	Results	Requirements
Tensile Adhesion Strength		
After 28 days Air Dry	: 2.40 ± 0.10 N/mm <sup>2</sup>	≥1.00 N/mm <sup>2</sup>
After Water Immersion	: 1.80 ± 0.10 N/mm <sup>2</sup>	≥1.00 N/mm <sup>2</sup>
After Heat Aging	: 1.60 ± 0.10 N/mm <sup>2</sup>	≥1.00 N/mm <sup>2</sup>
Slip Resistant	: 0.1mm	≤0.5mm
Resistant to heat	: 100°C	
Resistant to frost	: -5°C	
Resistant to water	: Good	
Resistant to alkali	: Good	
Resistant to acid	: Poor	
Resistant to oil & solvents	: Fair	

Tested in accordance to the requirements of MS ISO13007-1 Type C2TE

true and free of contaminants eg. dust, grease, laitance or mould release oil. Dampening with water or surface primer may be required prior to tile installation.

**Brick Wall or Hollow Block Wall:** Must be aged for 4 weeks and levelled with a Cement-Sand Rendering Mortar that is cured for 1 - 2 weeks; prior to commencement of tile installation.

**Autoclaved Aerated Concrete Blocks (AAC):** Must be aged for 4 weeks and surface must be flat & true and free of contaminants; prior to commencement of tile installation.

**Cement-Sand Render & Screed:** Allow new Cement-Sand Render or Screed to cure for at least 1 - 3 weeks; prior to commencement of tile installation. The rendering or screeding mortar mix ratio should ideally be at least 1 part of Cement to 3 - 4 parts of Sand.

**Existing Tiles:** Existing tile surface must be dry, sound & free of contaminants. Hollow tiles should be removed and made good before installing new tiles with **Ezi STAR FLEX 2in1** + EziMix STAR AD-1.

**Existing Vinyl Tiles:** Existing Vinyl Tile surface must be dry, sound & free of contaminants. Hollow Vinyl Tiles should be removed and made good before installing new ceramic tiles with **Ezi STAR FLEX 2in1** + EziMix STAR AD-1. Prime surface of existing vinyl tile with EziMix SBR Bond; prior to installation of new ceramic tiles.

**Building Boards:** For example Plywood, Chipboard or Cement Fiber Board; must be adequately erected & braced to provide a rigid and sound substrate that is free of deflection or movement. Prime surface of Building Boards with EziMix SBR Bond; prior to installing tiles with **Ezi STAR FLEX 2in1** + EziMix STAR AD-1.

**Timber Floor Boards:** It must be rigid & sound and strengthened by overlaying it with a 15mm thick marine grade plywood screw fixed to the joist at 300mm centers. Prime surface of overlaying plywood with EziMix SBR Bond; prior to installing tiles with **Ezi STAR FLEX 2in1** + EziMix STAR AD-1.

Note:

- Not suitable for use on substrates with high degree of shrinkage or excessive movement or to install moisture sensitive materials.
- Not recommended to tile over metal, painted wall or skim coat plastered surfaces.
- For installation to demanding substrates or areas it is recommended to mix **Ezi STAR FLEX 2in1** with an approved Latex Admixture to replace gauging water.
- Do not adulterate the Adhesive with additional cement or sand.

## INSTALLATION PROCESS

### (1) Substrate Preparation

- Substrates must be well cured, dry, sound, flat & true and free of contaminants eg. dust, grease, laitance, mould release oil etc.
- Substrate Curing Period before commencement of tile installation; Concrete Wall (4 - 6 weeks); AAC Block Walls (4 weeks); Cement-Sand Render (1 - 2 weeks); and Cement-Sand Screed (2 - 3 weeks)

Note:

- For substrate with high degree of surface water suction or substrates that is exposed to heat for prolong periods; lightly dampen its surface with water; prior to commencement of tile installation.

### (2) Mixing

- Mix **Ezi STAR FLEX 2in1** with Clean Water (or Latex Admixture) as per the recommended mixing dosage until a smooth, creamy non-slump paste is achieved. Mechanical mixing is recommended.

### (3) Applying Adhesive Mortar

- Apply the adhesive mortar onto the substrate at trowel bed thickness of between 3 - 12mm (may vary depending on the size of the tiles to be installed); using an appropriate notched trowel.
- For large format tiles it is advisable to skim a thin coat of adhesive (approx. 3mm thick) to the tile back; prior to placing it onto the trowelled adhesive bed and tamping it into position.

- Spread to no more than 1m<sup>2</sup> at a time; ensuring tiles are installed within the adhesive bed open time; to prevent "skin over".

Note:

- The open time of Tile Adhesive can be drastically reduced under unfavourable conditions such as extremely hot weather, strong wind, high temperature and highly absorbent substrates.

### (4) Installing Tiles

- Ceramic Tiles must be fixed dry. Do not soak Ceramic Tiles in water.
- Ensure that the tile back is free of contaminants prior to installation.
- It is good practice to firmly press or tamp tiles onto trowelled adhesive bed followed by slight sliding action to ensure solid bed fixing and good transfer of adhesive to the tile back; and minimizes hollow sections.
- Tiles must be promptly fixed onto the adhesive bed within its recommended open time; to prevent installing tiles onto adhesive bed that had "Skin Overed"
- Where the adhesive bed had Skin-Overed; apply fresh adhesive and re-trowel to break the skin.
- Allocate tile joints of approx. 3mm wide between tiles; when installing tiles.
- Any residual adhesive in the tile joints or tile surface must be removed before it hardens.
- Tiles installed with **Ezi STAR FLEX 2in1** must be protected from traffic, water or rain for at least 24 - 48 hours.

### (5) Grouting

- Grouting of tile joints should only commence after 24 hours (preferably longer).
- Fill and compact tile joints with Ezi GROUT FINE; incorporating Clean Water or Latex Admixture depending on the service condition.
- Allow grout to set for at least 24 - 48 hours (preferably longer); before the tile installation is subjected to normal service condition.

## MATERIAL SAFETY INFORMATION

A non-toxic, cement-based product which is considered non-hazardous in normal usage. Avoid inhalation, ingestion, skin and eyes contact. For more details, please refer to Ezi Material Safety Data Sheet.

When working with this product, recommended to follow the safety precaution below.



WEAR DUST MASK



WEAR SAFETY GOGGLES



WEAR HAND GLOVES



WEAR SAFETY SHOES



KEEP AWAY FROM CHILDREN

## COMPANY INFORMATION

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