

JK Cement LTD.

JK CEMENT
TileMaxX
Premium Adhesives and Grouts



JK Cement LTD.

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**TECHNICAL
DATA SHEET**

About JK Cement

JK Cement is an affiliate of the multi-disciplinary industrial conglomerate, JK Organisation. With over four decades of experience in cement manufacturing, the Company is one of the leading Grey Cement manufacturers in the Country. A pioneer in the White Cement industry, the Company is the 2nd largest producer of white cement and wall putty in India and the 3rd largest white cement manufacturer in the world.

Backed by state-of-the-art technology, access to best quality raw materials and highly skilled manpower, JK Cement has partnered the nation's multi-sectoral infrastructure needs on the strength of its product excellence, customer orientation and technology leadership.

JK CEMENT **TileMaxX** Premium Adhesives and Grouts

Presenting JK Cement TileMaxX - a range of superior polymer modified high strength tile adhesives and grouts. The product range is suitable for all kinds of tile and stone applications on cementitious substrates.

The TileMaxX range includes 3 types of tile adhesives and 2 types of grouts -

JK Cement TileMaxX - 111 Wall & Floor Adhesive - a polymer modified high strength grey cement based tile adhesive, suitable for application of ceramic tiles on walls and floors. It is also suitable for application of vitrified tiles on floors. This product is recommended for all cementitious surfaces.

JK Cement TileMaxX - 222 Premium Multipurpose Adhesive - a grey cement based tile adhesive with enhanced Hi-Bond Polymer, suitable for application of large format tiles in interiors as well as exteriors. It is also suitable for tile on tile application. This product is recommended for all type of cementitious surfaces.

JK Cement TileMaxX - 444 Premium Universal White Adhesive - a high performance polymer modified, white cement based tile adhesive. JK White Cement along with graded filler makes it technologically advanced material which gives high strength, durability and strong adhesion.

JK Cement TileMaxX - Premium Cementitious Grout - a high quality polymer modified, cement based grout with water proofing properties which prevents water seeping down to under layment.

JK Cement TileMaxX - Premium Epoxy Grout - a stain free, three components tile grout, which is specifically designed for application on ceramic tiles, vitrified tiles and stones, where staining is expected.



Technical Data Sheet

JK CEMENT
TileMaxX

111-Wall & Floor Tile Adhesive

With High Performance Additives



JK Cement TileMaxX - 111 Wall and Floor Tile Adhesive is a polymer modified high strength grey cement based tile adhesive, suitable for application of ceramic tiles on walls and floors. It is also suitable for application of vitrified tiles on floors.

Application

This product is designed for fixing ceramic tile on walls and floors and small format semi-vitreous and vitrified tiles on floors.

Substrates

- Concrete Masonry
- Cement Mortar Beds
- Cement Plaster
- Brick Masonry

Key Benefits and Features

- Quick and ready to use
- Better workability
- Superior adhesion
- Suitable for ceramic and vitrified tiles
- For internal walls and floors
- Easy to use and economical
- No curing required

Typical Properties

Colour	Grey
Powder density	1600 - 1700 kg/m ³
Open time	Approx. 20 minutes
Pot life	90 - 120 minutes
Foot traffic/ ready to use	24 hours

Note: Result depends upon weather and site conditions

Tile Installation Method

1) Surface Preparation

- Surface should be structurally sound and free from dirt, oil, grease, loose peeling paint, concrete sealer or curing compound.
- Surface should be moist before application.

2) Mixing and Blending

- Take 5.0 - 5.5 lit. potable water into a clean container.
- Gradually mix 20 kg JK Cement TileMaxX with slow speed mixer to get a uniform lump-free paste in workable consistency.

- Allow paste to settle for 5-10 minutes.
- Mixed paste should be used within 90-120 minutes.

3) Fixing Application

- Apply adhesive uniformly on a substrate to a desired thickness with plain side of notch trowel. Comb with a notch trowel using the notched side.
- Spread as much adhesive paste as it can be tiled within 10 - 15 minutes.
- Non sticky or skinned adhesive should be

removed and replaced with a fresh adhesive.

- Place the tile on a wet sticky adhesive and beat it by using a wooden block or rubber mallet to imbed and adjust it to level.

4) Grouting

- Grouting should be carried out with tile grout after a minimum of 24 hours after the completion of tiling work.
- Grout with TileMaxX Cementitious Grout.
- For stain resistance use TileMaxX Epoxy Grout.

Technical Information

Test specification requirement as per IS 15477 : 2004

S.No.	Test Property	Test Method	Specification	Typical Values
1	Mix Density			1.7 - 1.8 kg/lit.
2	Tensile Adhesion			
	(a) Dry Condition (14 Days Dry)	Annex A (Clause 4.4)	Min. 750 N	810 - 870 N
	(b) Wet Condition (7 Days Dry + 7 Days in Water)	Annex A (Clause 4.4)	Min. 450 N	470 - 600 N
3	Shear Adhesion			
	(a) Dry Conditions (24 Hours)	Annex B (Clause 4.5)	Min. 2.5 KN	3.5 - 4.1 KN
	(b) Dry Conditions (14 Days)	Annex B (Clause 4.5)	Min. 8.00 KN	9.0 - 10.5 KN
	(c) Heat Ageing (7 Days Std + 7 Days Oven)	Annex B (Clause 4.5)	Min. 4.00 KN	4.80 - 6.2 KN
	(d) Wet Conditions (7 Days Std + 7 Days Water)	Annex B (Clause 4.5)	Min. 4.00 KN	4.8 - 5.7 KN

Packing : 20 kg BOPP Bags

Coverage : Approx 50-55*sq.ft per 20 kg bag when applied by notch trowel of size 1/4" x 1/4" (6mm x 6mm) square notched trowel at an average thickness of 3mm.

*Coverage depends upon trowel notch size, type and size of tile and substrate evenness and smoothness.

Shelf Life : 12 months from the Date of Manufacturing.

Note: Actual field performance and results will depend on installation method & site conditions.

Technical Data Sheet



With Enhanced Hi-Bond Polymers



JK Cement TileMaxX 222-Premium Multipurpose Adhesive is a grey cement based tile adhesive with enhanced Hi-Bond Polymer, suitable for application of large format tiles in interiors as well as exteriors. It is also suitable for tile on tile application. This product is recommended for all type of cementitious surfaces.

Application

This product is designed especially for large format vitrified tiles and stones for wall and floor application.

Also, suitable for tile on tile application in exteriors and interiors.

Substrates

- Plastered Surface
- Concrete Surface
- Concrete Masonry
- Brick Masonry
- Existing Vitrified* and Ceramic Surface
- Existing Terrazo*
- Existing Natural Stone*

*Surface should be cleaned and roughened before installation of tiles and stones

Key Benefits and Features

- Superior bonding with all cementitious surface.
- Non-skid adhesion.
- Single component, just add water on site.
- Easy mixing and smooth application.
- Suitable for large format vitrified tiles.
- Bonds with all type of cementitious surfaces.
- Tile on tile application.

Typical Properties

Colour	Grey
Powder density	1550- 1650 kg/m³
Open time	Approx. 20 minutes
Pot life	90 - 120 minutes
Application temperature	5 - 35°C
Adjustability time	Approx. 20 minutes

Note: Result depends upon weather and site conditions

Tile Installation Method

1) Surface Preparation

- Surface should be structurally sound and free from dirt, oil, grease, loose peeling paint, concrete sealer or curing compound.
- Surface should be moist before application
- For tile on tile application, surface should be cleaned and roughened before fixing tiles.

2) Mixing and Blending

- Take 5.0 - 5.5 lit. potable water into a clean container.
- Gradually mix 20 kg JK Cement TileMaxX with slow speed mixer to get a uniform lump-free paste in workable consistency.
- Small quantity can be mixed with hands.
- Allow paste to settle for 5-10 minutes.
- Mixed paste should be used within 90-120 minutes.

3) Fixing Application

- Apply adhesive uniformly to the desired

thickness on a substrate with the plain side of notch trowel. Comb with a notch trowel using the notched side.

- Spread as much adhesive paste as can be tiled with in 10 – 15 minutes.
 - Place the tile on a wet sticky adhesive and beat it by using a wooden block or rubber mallet to imbed and adjust it to level.
 - For large format tiles and stones, back buttering and mechanical clamp for holding the tile is required on vertical surfaces.
 - Non sticky or skinned adhesive should be removed and replaced with a fresh adhesive.
- #### 4) Grouting
- Grouting should be carried out with tile grout after a minimum of 24 hours after the completion of tiling work.
 - Grouting to be done with TileMaxX Cementitious or Epoxy Grout.

Technical Information

Test specification requirement as per IS 15477 : 2004

S.No.	Test Property	Test Method	Specification	Typical Values
1	Mix Density			1.7-1.8 kg/lit.
2	Tensile Adhesion			
	(a) Dry Condition (14 Days Dry)	Annex A (Clause 4.4)	NA	NA
	(b) Wet Condition (7 Days Dry + 7 Days in water)	Annex A (Clause 4.4)	NA	NA
3	Shear Adhesion			
	(a) Dry Conditions (24 Hours)	Annex B (Clause 4.5)	Min. 4.0 KN	4.25 – 5.5 KN
	(b) Dry Conditions (14 Days)	Annex B (Clause 4.5)	Min. 10.0 KN	10.25 – 12 KN
	(c) Heat Ageing (7 Days Std + 7 Days Oven)	Annex B (Clause 4.5)	Min. 5.00 KN	5.25 – 6 KN
	(d) Wet Conditions (7 Days Std + 7 Days Water)	Annex B (Clause 4.5)	Min. 5.00 KN	5.25 – 6.25 KN

Packing : 20 kg BOPP Bags

Coverage : Approx 50-55*sq.ft per 20 kg bag when applied by notch trowel of size 1/4" x 1/4" (6mm x 6mm) square notched trowel at an average thickness of 3mm.

*Coverage depend upon trowel notch size, type and size of tile and substrate evenness and smoothness.

Shelf Life : 12 months from the Date of Manufacturing.

Note: Actual field performance and results will depend on installation method & site conditions.

Technical Data Sheet



With Pro-fix Technology



JK Cement TileMaxX 444-Premium Universal White Adhesive, is a high performance polymer modified, white cement based tile adhesive. JK White Cement along with graded filler makes it technologically advanced material which gives high strength, durability and strong adhesion.

Application

This product is designed especially for marble slabs, large format vitrified tiles, glass mosaic and small and large format natural stone in interior and exterior applications.

It is also suitable for wet areas like swimming pool, kitchen, bathroom and restaurants.

Substrates

- Plastered Surface
- Concrete Surface
- Concrete Masonry
- Brick Masonry
- Existing Vitrified* and Ceramic Surface
- Existing Terrazo*
- Existing Natural Stone*
- AAC Blocks

*Surface should be cleaned and roughened before installation of tiles and stones

Key Benefits and Features

- White colour enhances the beauty of flooring.
- Suitable for marble stones and mosaic tiles.
- Strong adhesion.
- Excellent finishing and levelling.
- Single component, just add water on site.
- Compatible to physical and thermal movement of surfaces.

Typical Properties

Colour	White
Powder density	1550 - 1650 kg/m ³
Application temperature	5 - 35°C
Pot life	90 - 120 minutes
Open time	Approx. 20 minutes
Adjustability time	Approx. 20 minutes

Note: Result depends upon weather and site conditions

Tile Installation Method

1) Surface Preparation

- Surface should be structurally sound and free from dirt, oil, grease, loose peeling paint, concrete sealer or curing compound.
- Surface should be moist before application.
- For tile on tile application, surface should be cleaned and roughened before fixing tiles.

2) Mixing and Blending

- Take 5.0 - 5.5 lit. potable water into a clean container.
- Gradually mix 20 kg JK Cement TileMaxX with slow speed mixer to get a uniform lump-free paste in workable consistency.
- Small quantity can be mixed with hands.
- Allow paste to settle for 5-10 minutes.
- Mixed paste should be used within 90-120 minutes.

3) Fixing Application

- Apply adhesive uniformly to the desired

thickness on a substrate with the plain side of notch trowel. Comb with a notch trowel using the notched side.

- Spread as much adhesive paste as can be tiled with in 10 - 15 minutes.
 - Place the tile on a wet sticky adhesive and beat it by using a wooden block or rubber mallet to embed and adjust it to level.
 - For large format tiles and stones, back buttering and mechanical clamp for holding the tile is required on vertical surfaces.
 - Non sticky or skinned adhesive should be removed and replaced with a fresh adhesive.
- #### 4) Grouting
- Grouting should be carried out with tile grout after a minimum of 24 hours after the completion of tiling work.
 - Grouting to be done with TileMaxX Cementitious or Epoxy Grout.

Technical Information

Test specification requirement as per IS 15477 : 2004

S.No.	Test Property	Test Method	Specification	Typical Values
1	Mix Density	NA	NA	1.7-1.8 kg/lit.
2	Tensile Adhesion			
(a)	Dry Condition (14 Days Dry)	Annex A (Clause 4.4)	NA	NA
(b)	Wet Condition (7 Days Dry + 7 Days in water)	Annex A (Clause 4.4)	NA	NA
3	Shear Adhesion			
(a)	Dry Conditions (24 Hours)	Annex B (Clause 4.5)	Min. 4.0 KN	4.05 - 6 KN
(b)	Dry Conditions (14 Days)	Annex B (Clause 4.5)	Min. 10.0 KN	11.25 - 12.5 KN
(c)	Heat Ageing (7 Days Std + 7 Days Oven)	Annex B (Clause 4.5)	Min. 5.00 KN	5.5 - 6.5 KN
(d)	Wet Conditions (7 Days Std + 7 Days Water)	Annex B (Clause 4.5)	Min. 5.00 KN	5.5 - 6.5 KN

Packing : 20 kg BOPP Bags

Coverage : Approx 50-55*sq.ft per 20 kg bag when applied by notch trowel of size 1/4" x 1/4" (6mm x 6mm) square notched trowel at an average thickness of 3mm.

*Coverage depend upon trowel notch size, type and size of tile and substrate evenness and smoothness.

Shelf Life : 12 months from the Date of Manufacturing.

Note: Actual field performance and results will depend on installation method & site conditions.

Technical Data Sheet



Colour-lock Technology



JK Cement TileMaxX Premium Cementitious Grout is high quality polymer modified, cement based grout with water proofing properties which prevents water seeping down to under layment.

Application Area

Un-sanded grout is used for filling narrow joints upto 6 mm for ceramic, vitrified tiles, porcelain tiles, mosaic marble natural & artificial stone and granite.

It is suitable for wall and floor applications in interior and exterior for dry areas.

Key Benefits and Features

- Water repellent
- Non shrinking
- Excellent flexibility
- Self-cured
- Easy application
- Non-toxic
- Available in standard colours

Working Properties

Colour	As per shade card
Powder density	1000 - 1100 kg/m ³
Mix density	2.35 to 2.45 kg/ltr.
Pot life	Approx. 1 hour

Note: Result depends upon weather and site conditions

Application Method

1) Surface Preparation

- Surface must be cleaned and free from dirt. Remove excess tile adhesive with a wire brush or by an air blower.
- Surface must be cleaned and free from dirt with use of wet sponge.

2) Mixing

- Add 2.5-3 parts of powder to 1 part of water

to make a homogeneous paste.

- Allow to slake for 5-10 minutes and remix.

3) Fixing Application

- Moist the surface with sponge and spread the paste with a sharp, firm rubber grout float.
- Fill the grout into the joints till it is completely filled.

- Diagonal strokes will help to pack the joints with paste.
- Apply to the tile joints with a squeegee, spatula or putty blade.

4) Cleaning

- Primary Cleaning - Remove excess grout from the face of tile with the edge of the rubber float.

- Hold the float at 90-degree angle and pull it at 45 degree diagonally across the joints to avoid pulling of material.

- Secondary cleaning can be done with a damp sponge to clean surface and allow it to dry.

- Do not allow grout to harden on the face of the tile. Clean promptly. Porous tiles will need to be sealed prior to grouting.

Technical Information

ANSI A 118.3 -1999, EN 13888, ISO 13007 Part-3: 2005

S.No.	Test Property	Test Method	Specification	Results
1	Colour	NA	As per shade card*	NA
2	Water Demand	NA	32 to 33 %	NA
3	Abrasion Test	ISO-13007 Part 4:2005	≤ 2000 mm ³	1400 - 1500 mm ³
4	Flexural Strength	ISO-13007 Part 4:2005	≥ 2.5 N/mm ²	7.6 - 9.5 N/mm ²
5	Compressive Strength	ISO-13007 Part 4:2005	≥ 15 N/mm ²	22 - 24.2 N/mm ²
6	Shrinkage	ISO-13007 Part 4:2005	≤ 3 mm/M	1.8 - 2.2 mm/M
7	Water Absorption After 30 minutes After 240 minutes	ISO-13007 Part 4:2005 ISO-13007 Part 4:2005	≤ 5 gm ≤ 10 gm	2.5 - 3 gm 5.5 - 6 gm

*Actual shade may not match 100 % with that in shade card. Shade card is for indication purpose.

Packing : 1 kg X 10 pouches in a carton

Coverage : Coverage depends on size of tile, joint depth and width. Consumption can be calculated by formula given below:

$$\text{Consumption in kg / m}^2 = \frac{(\text{length of tile} + \text{width of tile}) \times \text{depth of joint} \times \text{width of joint} \times \text{density}}{(\text{length of tile} + \text{width of joint}) \times (\text{width of tile} + \text{width of joint})}$$

All dimension are in mm

Precaution :

- Not suitable for the places where high chemical impact or stain resistance is required.
- Not suitable in industrial environment. In such cases, use TileMaxX Premium Epoxy grout.
- Chemical/acid should not be used for cleaning purpose.

Storage and shelf life : Properly stored factory sealed pouch have a shelf life of 12 months from the date of manufacturing. High humidity will reduce the shelf-life of product.

Note: Actual field performance and results will depend on installation method & site conditions.

Technical Data Sheet

JK CEMENT
TileMaxX
Premium Epoxy Grout

Colour-lock+ Technology



JK Cement TileMaxX Premium Epoxy Grout is a stain free, three components tile grout, which is specifically designed for application on ceramic tiles, vitrified tiles and stones, where staining is expected.

Application Area

- Used for filling the joints up to 12 mm between ceramic tile, vitrified tile and stone.
- Industrial application and high traffic areas.
- Institutional areas like cafeterias, school, hospitals and operation theaters.
- Wet areas like bath room, kitchens, sterilization rooms, swimming pools and restaurants etc.

Key Benefits and Features

- Colour fast
- Stain free
- Long pot life
- High strength
- Abrasion resistant
- Shrinkage free
- Resistance to chemicals
- Easy to apply and water cleanable

Typical Properties

Colour	Available in standard colours
Pot life	40 - 60 minutes
Cleanability time	> 80 Minutes
Resin density	1.14 - 1.20
Hardener density	0.93 - 0.98
Powder density	950 - 1100kg/m ³

Application Method

1) Surface Preparation

- Before starting grouting remove the spacers and debris from the grouting joints.
- Surface must be cleaned and should be

free from dirt, dust, foreign matter and standing water.

2) Mixing

- Mix the pack as per required volume as shown in the table :

Mixing	Pack - A Hardener	Pack - B Resin	Pack - C (Filler)
kg.	gm/ml	gm/ml	gm
5	350/368	900/776	3750
4	280/295	720/621	3000
3	210/221	540/466	2250
2	140/147	360/310	1500
1	70/74	180/155	750
0.5	35/37	90/78	375

- Mix the component Pack-A Hardener & Pack-B Resin for 2-3 minutes with pallet knife and then add Pack-C (Filler)

- Mix till homogenous paste is formed
- Do not add water to mix

3) Fixing Application

- TileMaxX Epoxy Grout should be applied

directly to the joints by using pallet knife/ plastic spatula.

- Spread the paste with sharp, firm rubber grout float.
 - Remove all surface material by using a float diagonal to joints.
 - Ensure that joints get filled properly and no grouts should be left on top of the surface.
- #### 4) Cleaning and Curing
- Wipe off excess materials by using rubber float diagonally to the joints from the face of the tile before it gets harden.
 - Secondary cleaning can be done with a damp sponge.
 - Allow to cure for 12 hours for light physical moments.
 - Full curing will be achieved in seven days of application.

Technical Information

Applicable Standard ANSI A118.3-199 & EN 13888, ISO 13007-Part-3

S.No.	Test Property	Test Method	Specification	Results
1	Mix density		-	1.7 - 1.8
2	Shrinkage	ISO 13007 part-4 : 2005	≤ 1.5 mm/m	1.0 - 1.3
3	Water absorption after 240 minutes	ISO 13007 part-4 : 2005	≤ 0.1 gm	0.05 - 0.06 gm
4	Abrasion value loss in volume	ISO 13007 part-4 : 2005	≤ 250 mm ³	210 - 225 mm ³
5	Compressive strength @ 28 days	ISO 13007 part-4 : 2005	≥ 45 N/mm ²	70 - 73 N/mm ²
6	Flexural strength @ 28 days	ISO 13007 part-4 : 2005	≥ 30 N/mm ²	30 - 33.5 N/mm ²

Packing : Pack - A and B is in bucket and Pack - C is filler carton with standard colours

PACK-A	Hardener	350 gm
PACK-B	Resin	900 gm
PACK-C	Filler	3750 gm

Grout Coverage : Coverage depends on the depth and width of joint. Calculate by consumption formula

$$\text{Grout Consumption in kg/m}^2 = \frac{(\text{length of tile} + \text{width of tile}) \times \text{depth of joint} \times \text{width of joint} \times \text{density}}{(\text{length of tile} + \text{width of joint}) \times (\text{width of tile} + \text{width of joint})}$$

*All the dimension taken in mm

Storage and Shelf life :

Original unopened packaging stored in dry condition has a shelf life of 24 months from the date of manufacturing. Storage above 35 degree and high humidity above 65% will reduce the shelf-life of product.

Precautions During Use :

During cold weather, protect finished work from traffic until fully cured. Avoid contact with eyes and prolonged contact with skin as it may cause irritation. In case of contact, flush thoroughly with water. Avoid breathing dust, wear a mask during application. Keep out of children's reach.

Limitations of Usage

- Light colours may darken slightly from direct UV exposure.
- Stain resistance is achieved in 10 days at 21° C.

Note: Actual field performance and results will depend on installation method & site conditions.

JK Cement LTD.

From the makers of



JK CEMENT **TileMaxX**

Premium Adhesives and Grouts

SUPERIOR BONDING Everlasting Beauty

111-Wall & Floor
Tile Adhesive



444-Premium Universal
White Adhesive



222-Premium
Multipurpose Adhesive



Premium Epoxy
Grout



Premium
Cementitious Grout

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