

TILE ADHESIVE

TYPE - 4
VW 355 VEL-STAR

Conforms to
EN 12004 – C2TES1

PREMIUM POLYMER MODIFIED
CEMENTITIOUS TILE JOINT FILLER



TYPE-4

VW-355

GRADE -C2TES1



HIGH STRAIGHT



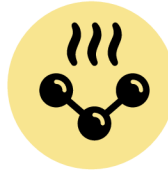
NON SLIPING
ADHESIVE



WATER
ABSORPTION



ONLY
INTERNAL USE



NON
SHRINKING



HIGH FIX

CLASSIFICATION IN COMPLIANCE

Velwiin VW-355 is an improved (2) slip resistant (T) cementitious adhesive (C) with extended open time (E) deformable (S1) of class C2TES1.

DESCRIPTION

Velwiin VW-355 is a high performance, deformable cementitious adhesive for installing ceramic tiles, vitrified tiles, porcelain tiles, large format slabs, granite and natural stone, with extended open time and no vertical slip.

Velwiin VW-355 is particularly suitable for installing large format tiles and slabs; highly thixotropic for installing heavy and large format tiles on vertical surfaces without sagging.

Velwiin VW-355 contains high quality polymers, graded fillers and special additives that provide excellent adhesion, flexibility and durability for professional tile installation.

WHERE TO USE

Velwiin VW-355 is specially developed for high-performance fixing of ceramic and stone materials in demanding applications. It is recommended for the following uses:

Interior and exterior installation of ceramic tiles of all types and sizes, including ceramic, vitrified, porcelain, double-charged, glazed, full body, GVT, PGVT, and large format slabs on floors and walls.

Fixing natural stone materials such as granite, marble, quartz stone, and other dimensionally stable stones. Installation over cement screeds, cement plaster, RCC concrete, block work, AAC blocks, and other cement-based substrates.

Tile-on-tile applications on existing ceramic or vitrified tile surfaces after proper surface preparation.

Installation on waterproofed surfaces using compatible cementitious or polymer-based waterproofing systems. Suitable for balconies, terraces, bathrooms, kitchens, swimming pools, commercial buildings, hospitals, shopping malls, airports, hotels, educational institutes, and other high-traffic areas.

Installation on underfloor heating systems and areas subjected to moderate thermal movement.

Fixing heavy wall tiles and large-size porcelain slabs without vertical slipping. Suitable for both residential and commercial construction projects.

Some application examples

Bonding ceramic, vitrified, porcelain, and large-format tiles on conventional cement-based substrates. Fixing granite and natural stone on floors and walls.

Installing large porcelain slabs in residential and commercial buildings. Tile installation over existing tile surfaces during renovation work.

Installation in wet areas such as bathrooms, toilets, kitchens, balconies, terraces, and swimming pool surroundings.

Heavy-duty floor tile installation in factories, warehouses, showrooms, hospitals, hotels, airports, railway stations, and shopping malls.

Installation on cement screeds, cement plaster, concrete walls, and properly prepared waterproofed substrates. Fixing tiles on vertical surfaces where high slip resistance is required.

TECHNICAL CHARACTERISTICS

Velwiin VW-355 is available as a premium grey or white cement-based powder manufactured using high quality cement, selected graded silica sand, performance polymers and advanced chemical additives.

When mixed with clean water, Velwiin VW-355 forms a smooth, creamy adhesive with excellent workability and outstanding bonding performance.

The product offers the following characteristics:

- Smooth and easy to mix with excellent workability.
- Highly thixotropic formulation that allows heavy and large format tiles to be fixed on vertical surfaces without slipping or sagging.
- Excellent flexibility to accommodate normal substrate movement and thermal expansion. Superior adhesion to cement-based substrates, ceramic tiles, vitrified tiles, porcelain slabs, granite and natural stone.
- Extended open time for comfortable tile positioning and adjustment during installation.
- Excellent non-slip properties for wall applications.
- Low shrinkage after curing, ensuring stable and durable tile installation.
- High compressive and tensile bond strength.
- Suitable for interior and exterior applications.
- Resistant to moisture, weather exposure and normal temperature variations.
- Long-lasting bonding performance for residential, commercial and industrial applications.
- Compatible with underfloor heating systems and waterproofed substrates.
- Provides durable and reliable performance even under heavy service conditions.

TECHNICAL CHARACTERISTICS

RECOMMENDATIONS

Do not use Velwiin VW-355 in the following situations:

On plywood, particle board, MDF, or other timber-based substrates unless they have been properly prepared with an approved system.

On metal surfaces, rubber, PVC, vinyl, linoleum, or similar non-cementitious materials.

For moisture-sensitive natural stones or marble that may stain, warp, or discolor after installation.

On unstable or weak substrates that are subject to excessive movement, vibration, or structural deflection.

Over dusty, contaminated, painted, oily, waxed, or poorly bonded surfaces without proper surface preparation.

Where the tiled surface is required to be opened for foot traffic immediately after installation.

On frozen substrates or when the ambient or substrate temperature is below +5°C or above +35°C during installation.

Do not add cement, sand, lime, gypsum, or any other foreign material to the adhesive.

Never mix the product with anything other than clean potable water.

Do not use the adhesive after it has exceeded its pot life or has started to harden.

APPLICATION PROCEDURE

Preparing the Substrate

The substrate should be sound, fully cured, clean and structurally stable before application. Remove all loose particles, dust, grease, oil, paint, curing compounds, wax, laitance, or any contaminants that may reduce adhesion.

All cement-based surfaces should be properly cured and free from excessive shrinkage before tile installation.

Highly absorbent substrates should be lightly dampened with clean water before applying the adhesive. Standing water should not be present on the surface.

Uneven surfaces should be repaired or levelled before tile fixing wherever necessary.

Concrete, cement plaster, screed and other cementitious substrates must be sufficiently dry and capable of supporting the expected service loads.

Gypsum boards and other special substrates should be rigid, dry and properly primed using a suitable primer before tile installation.

PREPARING THE MIX

Pour the required quantity of clean potable water into a clean mixing container. Gradually add Velwiin VW-355 powder while continuously mixing with a low-speed electric mixer (approximately 300–500 rpm) until a smooth, homogeneous and lump-free paste is obtained.

Allow the mixed adhesive to stand for approximately 5 minutes, then remix briefly before use. This ensures complete activation of the polymers and additives.

The prepared adhesive remains workable for approximately 3–4 hours under normal conditions at 23°C and 50% Relative Humidity. Higher temperatures may reduce the pot life.

APPLYING THE MIX

Apply Velwiin VW-355 onto the prepared substrate using a suitable notched trowel. Select the notch size according to the tile dimensions and substrate condition to achieve full adhesive coverage.

First spread a thin contact layer using the straight edge of the trowel while applying firm pressure to the substrate. Immediately comb the adhesive using the notched edge to obtain uniform ribs.

For large-format tiles, porcelain slabs, natural stone, exterior installations, heavy traffic areas, or wet locations, it is recommended to apply adhesive on both the substrate and the back of the tile (double spreading/back buttering) to achieve maximum contact and bonding strength.

Install the tiles while the adhesive remains fresh and within its open time.

INSTALLING THE TILES

It is generally not necessary to soak the tiles before installation. However, if the backs of the tiles are excessively dusty, they should be cleaned with water and allowed to dry before fixing.

Place the tiles firmly into the freshly combed adhesive and press them evenly to ensure complete contact between the tile and the adhesive bed. Proper pressure should be applied to eliminate air pockets and achieve maximum bond strength. Under normal conditions (23°C and 50% Relative Humidity), the adhesive provides an open time of approximately 30 minutes. However, factors such as high temperature, direct sunlight, strong winds, or highly absorbent substrates may significantly reduce this period.

Before fixing each tile, always ensure that the adhesive surface has not formed a dry skin. If skinning occurs, simply re-comb the adhesive using the notched trowel. Do not re-wet the adhesive with water, as this may reduce its bonding performance.

Tile alignment and adjustment should be completed within approximately 30–45 minutes after installation.

Freshly installed tiles should be protected from rain, running water, frost, vibration, heavy impact, and direct sunlight for at least 24 hours after installation to ensure proper curing and optimum performance.

GROUTING AND SEALING

Wall joints may be grouted after approximately 6–8 hours, while floor joints should be grouted after 24 hours, depending on site conditions and temperature. Use a high-quality cementitious or epoxy grout suitable for the joint width and service conditions. Expansion and movement joints should never be filled with cement grout and must be sealed using an appropriate flexible sealant.

Ensure that all tile joints are clean, dry and free from adhesive residue before commencing the grouting process.

SET TO LIGHT FOOT TRAFFIC

Floors installed with Velwiin VW-355 may be opened to light foot traffic after approximately 24 hours, depending on ambient temperature and curing conditions.

POLISHING

Where polishing is required, the tiled surface may be polished only after the adhesive has completely cured. Under normal site conditions, polishing is recommended after approximately 14 days of installation to achieve optimum bond strength and long-term performance.

READY FOR USE

The tiled surface is normally ready for full service after approximately 14 days, depending on site conditions, substrate type, temperature and humidity. Heavy loading or exposure to water should only be allowed after the adhesive has fully cured.

CLEANING

Clean all tools, mixing equipment and containers with clean water immediately after use while the adhesive is still fresh. Any adhesive residue on the tile surface should be removed with a damp sponge or cloth before it hardens. Once cured, the adhesive can only be removed mechanically.

TECHNICAL DATA

Property	Value
Product Type	Polymer Modified Cementitious Tile Adhesive
Appearance	Fine Powder
Colour	Grey / White
Bulk Density	Approx. 1.40 – 1.50 g/cm³
Dry Solid Content	100%

COMPOSITION AND PROPERTIES OF MIXTURE (At +23°C and 50% R.H.)

Property	Value
Mixing Ratio	Approx. 5.5 – 6.0 Ltr of clean water per 20 kg bag
Mix Consistency	Smooth, Creamy & Thixotropic
Density of Mixed Adhesive	Approx. 1.55 kg/L
pH Value	>12
Pot Life	Approx. 3–4 Hours
Application Temperature	+5°C to +35°C
Open Time	Minimum 30 Minutes
Adjustability Time	Approx. 30–45 Minutes
Wall Grouting Time	After 6–8 Hours
Floor Grouting Time	After 24 Hours
Light Foot Traffic	After 24 Hours
Ready for Full Service	Approx. 14 Days

FINAL PERFORMANCE

Property	Typical Value
Initial Tensile Adhesion Strength	$\geq 1.0 \text{ N/mm}^2$
Tensile Adhesion After Heat Ageing	$\geq 1.0 \text{ N/mm}^2$
Tensile Adhesion After Water Immersion	$\geq 1.0 \text{ N/mm}^2$
Tensile Adhesion After Freeze / Thaw Cycles	$\geq 1.0 \text{ N/mm}^2$
Slip Resistance	$\leq 0.5 \text{ mm}$
Deformability	S1
Temperature Resistance	-30°C to $+90^\circ\text{C}$
Water Resistance	Excellent
Weather Resistance	Excellent
Alkali Resistance	Excellent
Oil Resistance	Excellent
Solvent Resistance	Excellent

FINAL PERFORMANCE

The approximate consumption of Velwiin VW-355 depends on the substrate condition, tile size, trowel notch size and application method.

For Ceramic, Vitrified & Porcelain Tiles

- **Approx. 1.2 – 1.5 kg/m² per 1 mm bed thickness.**

Approximate Coverage (20 kg Bag)

Trowel Size	Approx. Consumption	Approx. Coverage
6 × 6 mm	3.0 – 3.5 kg/m ²	5.5 – 6.5 m ²
8 × 8 mm	4.0 – 4.5 kg/m ²	4.0 – 5.0 m ²
10 × 10 mm	5.0 – 5.5 kg/m ²	3.0 – 4.0 m ²
12 × 12 mm	6.0 – 7.0 kg/m ²	2.5 – 3.0 m ²

Actual consumption may vary depending on substrate levelness, tile profile and installation method.

PACKAGING

Velwiin VW-355 is supplied in:

- 20 kg BOPP Laminated Bag
- Available Colours: Grey & White

STORAGE

Store the product in a cool, dry and covered place away from direct sunlight and moisture.

Keep bags tightly sealed and stored on wooden pallets in their original unopened packaging.

Under proper storage conditions, Velwiin VW-355 has a shelf life of 12 months from the date of manufacture.

SAFETY INSTRUCTIONS FOR PREPARATION AND APPLICATION

Wear suitable protective gloves, safety goggles and a dust mask while handling the product.

Avoid contact with eyes, skin and prolonged inhalation of dust.

In case of contact with eyes, rinse immediately with plenty of clean water and seek medical advice.

Keep out of reach of children.

Refer to the latest Safety Data Sheet (SDS) for detailed safety information before use.

WARNING

The information contained in this Technical Data Sheet is based on our present knowledge, laboratory testing and practical experience. However, because site conditions, substrate quality and methods of application are beyond our control, the user must verify the suitability of the product for the intended application before use.

Velwiin Chemicals reserves the right to modify product specifications without prior notice as part of its continuous product improvement programme.

Manufactured By : Velwiin Chemicals

Laxmi Industrial Estate, Near Laxmi Weighing Bridge,
Khokhra Hanuman Road, Bela, Morbi, Gujarat, India -
363642.

Mobile : +91 99097 75135

Email : velwiinchemicals@gmail.com

Website : www.velwiin.com