POLYMER-MODIFIED TILE ADHESIVE

LIVO-FLEX

Premium Flexible Tile Adhesive

For interior and exterior floor and wall tile fixing

LIVO-FLEX is a polymer-modified, cement-based tile adhesive for fixing ceramic and vitrified tiles, glass mosaic, precast terrazzo and natural stone on floors and walls, indoors and outdoors. Its extended open time, slip resistance and deformability (S1) suit demanding installations, including wet areas, swimming pools and tile-on-tile work.

INDIAN STANDARD	EUROPEAN STANDARD
IS 15477:2019	**EN 12004**
Type 3T	**Class C2TE S1**

Test results are given on page 2.



LIVO-FLEX · 20 kg bag

KEY FEATURES

01 **High bond strength**
Tensile adhesion of 1.81 N/mm² or better at 28 days, tested to IS 15477:2019.

02 **Deformable (S1)**
Transverse deformation above 2.5 mm to take up minor movement in the substrate.

03 **Extended open time (E)**
Minimum 30 minutes open time, with about 35 minutes of adjustability.

04 **Slip and water resistant (T)**
Non-slip for vertical fixing. Tested after water immersion, heat ageing and freeze–thaw cycles.

RECOMMENDED APPLICATIONS

APPLICATION	SUITABLE FOR	NOTES
Interior floors and walls	Ceramic and vitrified tiles, glass mosaic, precast terrazzo, natural stone	Over concrete and other suitable substrates.
Exterior floors and walls	As above	Provide movement joints as per the project design.
Wet areas	Swimming pools and washrooms	Waterproof the substrate where the design requires.
Tile on tile	Over existing tiles	Existing tiles must be sound, clean and firmly bonded.

APPLICATION PROPERTIES

Colour	Grey and white
Mixing ratio, powder : water	1 : 0.28 (grey) · 1 : 0.32 (white), by weight Approx. 4–5 L of water per 20 kg bag
Mixed density	1.65 – 1.85 kg/litre
Open time	Minimum 30 minutes
Adjustability	Approx. 35 minutes
Pot life	Approx. 120 minutes
Application temperature	5 °C to 35 °C (substrate and material)
Adhesive thickness	Up to 12 mm
VOC content (EPA Method 24)	< 2 g/kg
Setting / trafficable / grouting time	24 hours

PERFORMANCE PROPERTIES

A. EN 12004 and ISO 13007 — Class C2TE S1

TEST PROPERTY	REQUIREMENT	TEST RESULT
Tensile adhesion strength, after 28 days	≥ 1.0 N/mm²	**≥ 1.81 N/mm²**
Tensile adhesion strength after water immersion	≥ 1.0 N/mm²	**≥ 1.1 N/mm²**
Tensile adhesion strength after heat ageing	≥ 1.0 N/mm²	**≥ 1.31 N/mm²**
Tensile adhesion strength after freeze–thaw cycles	≥ 1.0 N/mm²	**≥ 1.2 N/mm²**
Slip resistance (T)	≤ 0.5 mm	**0.18 mm**
Extended open time (E), at 30 minutes	≥ 0.5 N/mm²	**≥ 0.6 N/mm²**
Transverse deformation (S1)	≥ 2.5 mm and < 5 mm	**≥ 2.5 mm**

C = cementitious · 2 = improved · T = reduced slip · E = extended open time · S1 = deformable.

B. IS 15477:2019 — Type 3T

TEST PROPERTY	REQUIREMENT	TEST RESULT
Tensile adhesion, dry condition, after 28 days	≥ 1.5 N/mm²	**≥ 1.81 N/mm²**
Tensile adhesion, wet condition	≥ 1.0 N/mm²	**≥ 1.59 N/mm²**
Shear adhesion, dry condition	≥ 1.5 N/mm²	**≥ 1.97 N/mm²**
Shear adhesion, wet condition	≥ 1.0 N/mm²	**≥ 1.70 N/mm²**
Shear adhesion, heat ageing	≥ 1.0 N/mm²	**≥ 1.98 N/mm²**
Transverse deformation (S1)	≥ 2.5 mm and < 5 mm	**≥ 2.5 mm**

Note. Test results are indicative and follow the test methods in the relevant standards. They may vary with the substrate, site conditions and testing equipment. Field performance depends on installation methods and site conditions.

SURFACE PREPARATION

- The substrate must be level, cured, sound, compact, rigid and dry, and free from dust, oil, paint or any other debonding agent, and from rising damp.
- Surfaces must be plumb and true to within 6 mm in 3 m (10 ft).
- Dampen dry or dusty surfaces with water and sweep off any excess water before applying the adhesive.
- Damp-cure new concrete slabs and allow them to reach 28 days before tiling, to reduce shrinkage movement at the tile bed.
- Provide expansion joints and fill them with a suitable sealant. Do not cover them with adhesive or tile.
- For wet areas and swimming pools, waterproof the substrate as the project design requires.

MIXING AND APPLICATION

1. **Measure.** Pour approx. 4–5 litres of clean water per 20 kg bag into a clean container.
2. **Mix.** Add the powder gradually. Mix by hand trowel or with a slow-speed mixer to a smooth, uniform paste. Control the water ratio when mixing mechanically and do not add excess water.
3. **Mature.** Let the mix stand for 10–15 minutes, then remix before use.
4. **Apply.** Spread with the straight edge of a notched trowel, then comb with the notched side for an even thickness. Use a 6–10 mm notch as the tile requires.
5. **Fix.** Make sure the back of the tile is fully covered. Press the tile in, then tap all four corners and the centre with a rubber hammer or wooden roller to release trapped air and spread the adhesive evenly.
6. **Grout.** Grout after 24 hours, using a suitable cementitious or epoxy tile grout.

COVERAGE & PACK

Approx. 5–6 m² per 20 kg bag at 3 mm thickness, using a 6 × 6 mm notch.

Coverage varies with notch size, tile type and size, and the evenness of the substrate.

Pack size: 20 kg bag

STORAGE & SHELF LIFE

12 months in the sealed original pack.

Store under cover, away from direct sunlight, in damp-proof conditions and protected from extremes of temperature.

HEALTH & SAFETY

Keep out of reach of children. Wear protective clothing, gloves and eye/face protection. After skin contact, wash immediately with plenty of clean water. In case of eye contact, rinse immediately with plenty of clean water and seek medical advice. For professional use only. Refer to the Safety Data Sheet, available on request.

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Information in this data sheet is given in good faith, for guidance only. Site conditions vary; for work outside the stated applications, consult the LIVORA technical team. Always use the latest revision.