

BUMA-MOTA®

BUMAFILL 90

Ultra-high strength non-shrink cementitious grout, grade 90

Rapid strength development

Ultra-high final strength

Excellent impermeability to water

Non-corrosive



PRODUCT DESCRIPTION

BuMaFill 90 is a preblended non-shrink, cementitious grout based on high strength cement, graded aggregates, silicafume with an expansive agent formulated by BUMATECH research laboratories. With a special blend of shrinkage - reducing and superplasticizer/ water-reducing agent, **BuMaFill 90** compensates for shrinkage in both the plastic and hardened states, and develops early flexural and compressive strength.

USES

- For structural grouting of column base plates, machine base plates, anchor rods, bearing plates, precast wall panel, curtain walls
- Multiple fluidity allows easy of placement : Ram in place as a dry pack, trowel apply as a medium flow, pour or pump as a high flow
- For grouting method of concrete repair.
- Filling of rigid joints between elements in concrete and precast concrete structures.
- Anchoring of mechanical equipment
- Grouting of machine baseplates, bridge bearings
- Concrete repair

PACKAGING: 25 kg/bag

COVERAGE

25 kg of **BuMaFill 90** can yield 13 - 14 liters of grout.

SHELF LIFE

Factory sealed containers of this product are guaranteed to be of first quality for one (1) year* if stored off the ground in a dry area.

* High humidity will reduce the shelf life of bagged product.

LIMITATIONS

- DO NOT add cement or any additives to **BuMaFill 90**
- Minimum applications thickness : 10mm
- Recommended thickness of **BuMaFill 90** in one pour is 10mm to 100mm. If the application thickness exceeds 100 mm, special procedure must be taken to anticipate temperature rise. Iced water, add coarse aggregate to the mix (max. 50% by powder weight), or both of them may be used to eliminate temperature rise
- In the case of addition with coarse aggregate, it is advised to conduct trial mix to check influence of coarse aggregate addition on grout workability and strength. 5 to 8mm size aggregate is found to be the most suitable size for this addition.
- Keep the materials and substrate temperature lower than 30°C
- Do not take internally. Avoid breathing dust. Wear a respirator in dusty areas.
- Keep out of reach of children

INSTALLATION

Surface preparation

- All surfaces should be between 4°C and 30°C. Surface must be structurally sound, clean and free of all dirt, oil, grease, paint, concrete sealers or curing compounds.
- Soak the sides of the cavity to be filled with water. Before pouring, remove all excess water. To facilitate the elimination of unabsorbed water, use compressed air if necessary.

Mixing ratio

Application method	Mixing water
Trowellable	2.50 – 2.75 liter/bag
Flow	3.00 – 3.50 liter/bag
Fluid	3.75 – 4.00 liter/bag

Mixing

- Put appropriate quantity of water (depend on the required consistency) into a mixing vessel.
- Add slowly powder to water while mixing. Use a low-speed mixer (about 600-900 rpm). Mix thoroughly until mixture becomes a smooth, homogenous. Let mixture stand ("slake") for 5-10 minutes, remix.

Application

- Within 30 minutes after mixing, place grout into forms one side to avoid air entrapment. Do not vibrate. Use a suitable head box of 150 – 200mm and maintain the grout head at all times to ensure a continuous flow. Gentle tapping or pulling loops of wire from one side may assist the flow of the mortar under difficult working conditions.

Cleaning

- Due to high adhesion strength of this product (even on metals), tools should be washed before mixture becomes harden
- Once mixture setting, cleaning can only be carried out by mechanical method

SAFETY PRECAUTIONS

- In case of contact with the eyes, rinse with running water (10-15min)
- Wear protective gloves, clothing, eye and face protection.

DISCLAIMER

- Technical details and recommendations contained in this product datasheet correspond to the best of our knowledge and experiences at the time of printing
- These detail offered for user's consideration and evaluation. It is the responsibility of the user to conduct their own tests to validate the suitability of the products for their requests
- Technical details and recommendations can be changed by site condition and workmanship of applicators.

- As we have no control over site conditions and the execution of the work, we accept no liability for any loss or damage which may rise as a result thereof. We also reserve the right to update the information at any time without prior notice to you to reflect our ongoing research and development program
- The newest technical data sheet will be supplied upon user request

TECHNICAL SERVICES/ AVAILABILITY

Information is available by calling

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PRODUCT PERFORMANCE PROPERTIES

Test	Test Method	Result
Flow - Initial - After 30 minutes	TCVN 9024 - 2012	≥ 200 mm ≥ 180 mm
Bleeding		0%
Compressive strength at: - 1 day - 3 days - 7 days - 28 days	ASTM C349 – 14	≥ 40.0 MPa ≥ 55.0 MPa ≥ 75.0 MPa ≥ 90.0 MPa
Flexural Strength at 28 days	ASTM C348 – 14	≥ 14.0 MPa
Adhesive strength on concrete substrate	ASTM D7234 – 12	≥ 1.5 MPa
Changes in height	ASTM C596 – 18	≥ 0%
Initial setting time (27°C, RH ≥ 50%)	ASTM C807 - 13	4 – 8 hours

Specifications subject to change without notification. Results shown are typical but reflect test procedures used. Actual field performance will depend on installation methods and site conditions