

mach 1

High-performance screed additive for reducing drying time and increasing strength



DESCRIPTION

mach 1 is a liquid additive for the production of semi-dry cementitious screeds. Its effect ensures a significant reduction in drying time. At the same time, the strength of the screed is increased. An integrated processing aid makes it easier to mix, pump, spread, level and smooth the screed.

KEY FEATURES

- Reduced drying time
- Shortened screed heating phase
- No curing under PE needed
- Increased strength
- No fibre or steel reinforcement needed
- Great workability and pumpability

AREAS OF APPLICATION

- For producing bonded, unbonded and floating screeds
- For producing screeds on underfloor heating
- Suitable for wet and outside areas
- Suitable for all floor coverings
- Can be used as a wearing surface

TECHNICAL PROFILE

Working time	90 minutes
Walkable	after 24 hours
Light traffic	after 3 days
Can be heated	after 6 days
Readiness for covering	after 21 days
Strength class	C20-F4
BRE category	B

*Typical properties achieved under construction site conditions at 5–30°C and 40–60% relative humidity with screed thickness of ≤ 60 mm without underfloor heating and ≤ 70 mm screed thickness with underfloor heating.

MIN. SCREED THICKNESS (at 2 kN/m² surface load)

Bonded	25 mm
Unbonded	45 mm
Floating	45 mm
On underfloor heating	45 mm

*Further information regarding thickness at different surface load cases and detailed application instructions are available upon request.

MIX DESIGN: SCREED PUMP (200 litres net)

Strength class	C20-F4
Sand amount	310 kg
Cement amount	40 kg
Dosage	300 ml
W/C ratio	0.5 - 0.7

MIX DESIGN: CUBIC METRE

Strength class	C20-F4
Sand amount	1,550 kg
Cement amount	200 kg
Dosage	1,500 ml
W/C ratio	0.5 - 0.7

UNDERFLOOR HEATING PHASE

Day	6-8	9-14	15-20	21	22
Temperature	25°C	45°C	35°C	25°C	moisture test

MIXING INSTRUCTIONS

1. Fill the screed machine about half full with sand and the total amount of cement.
2. Add **mach 1** to the first mixing water (usually 5-10 litres) and then fill the machine completely.
3. In the meantime, gradually add the required amount of water until a semi-dry or earth-moist consistency is achieved.
4. Mix at least 2 minutes.

BASIC MATERIALS, STANDARDS AND TESTING REGULATIONS

- CEM I or CEM II (A-L, A-LL, B-L, B-LL) following BS EN 197-1
- Aggregates following BS EN 12620
- Preliminary testing and suitability verification required

SAFETY AND CERTIFICATES

- CE certification
- Always observe general work hygiene when using our products.
- Further information on handling **mach 1** can be found in our safety data sheets.

RESIDUAL MOISTURE TEST

- Before laying the floor covering, the residual moisture content of the screed must be measured by the floor layer.
- BS 8203 recommends a maximum relative humidity of 75% before laying floor coverings.

CONSTRUCTION SITE CONDITIONS

- The screed must be protected from drying out too quickly due to draughts, direct sunlight and low humidity.
- The screed must be protected from frost and water during the entire drying time.
- At temperatures below + 5°C, the setting process of the binder (cement) is delayed or completely interrupted.
- The screed surface must not be covered with foil, building materials (e.g. plasterboards) or similar, as this will prevent the screed from drying out, which can lead to incorrect results when determining the moisture content.
- From the 2nd day after screed installation, air exchange must be ensured at least 3 times a day for 20 minutes in order to remove the moisture in a controlled manner.
- Closed windows hinder or prevent the exchange of air and significantly delay drying.

TECHNICAL DATA

- Form: liquid
- Colour: orange
- Density: $1.04 \pm 0.02 \text{ kg/dm}^3$
- Supply form: 10 litres, 20 litres, 1,000 litres
- Storage: store protected from frost, heat and direct sunlight
- Shelf life: at least 12 months (in sealed containers)

Bondera Chemicals GmbH products are sold under warranty against defects in material and manufacturing and are subject to our Terms and Conditions, which are available upon request.

The technical data sheet has been prepared by and for Bondera Chemicals GmbH. Please contact the technical team for further information.

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