

PRODUCT DATA SHEET

Edition January 2017

DESCRIPTION

Tech-Mix® Self-Bonding Cement is specially formulated for repairing concrete surfaces. Repairs are resistant to freeze-thaw cycles and de-icing salt. This mortar is designed for horizontal applications requiring less than 25 mm (1") of coverage.

TECHNICAL DATA

Packaging — Bags (20 kg) and pails (5 kg and 10 kg)
 Colour — Grey
 Water required — 2.3 to 2.7 litres (for a 20 kg bag),
 1.1 to 1.4 litres (for a 10 kg pail),
 550 to 700 ml (for 5 kg pail)
 Shelf life — 1 year

USES

- Indoor and outdoor uses
- Restoration, repair and resurfacing of joints, tiles, sidewalks, curbs, parking areas, access ramps, concrete steps, balconies and floors, public pools, loading docks, cracks in bike paths and tennis courts, etc.

INSTRUCTIONS

SURFACE PREPARATION

- Surface to be repaired must be structurally sound, clean, and free of bond inhibiting materials such as oil or dirt. Remove any debris, coatings or damaged concrete.
- Concrete surface to be repaired must be textured.
- Thoroughly wet the surface and keep it saturated with water for 20 minutes. Keep surface saturated longer if very dry or very absorbent.

MIX PREPARATION

- Pour the contents of the bag onto a clean, smooth surface or into a clean wheelbarrow or bucket and mix by hand.
- Add 2.3 to 2.7 litres of clean water per 20 kg of Self-Bonding Cement, then slowly add the powder while continuing to mix.
- If the mixture is too thick, add only a small amount of water at a time. Mix well before adding more water as Self-Bonding Cement contains special additives that require approximately 3 minutes to act.
- Avoid over-diluting.

PRODUCT APPLICATION

- Make sure no water has accumulated in depressions before performing repairs.

FINISHING

- Wait until the concrete has reached initial set (approximately 20 to 40 minutes after application, depending on ambient temperature and the thickness of the repair).
- This product is designed to have a semi-rough finish.

FINISHES

- Rough: use a wood trowel
- Textured: begin by using a steel trowel, followed by a brush or broom
- Smooth: use a steel trowel for interior repairs. For outside repairs use a wood or magnesium trowel.

CURING

- After finishing, wet cure the concrete by covering the surface with wet burlap or spraying it with water so as to keep it damp at all times.
- Keep the surface damp for the entire curing period (approximately 4 hours).

*If wet curing cannot be done, apply a curing agent available at Tech-Mix®.

PRECAUTIONS/RESTRICTIONS

- Store product in a dry area where the temperature is between 15°C and 32°C. Protect from bad weather.
- Do not use product in ambient temperatures under 5°C or above 35°C.
- Do not add any additives, sand or coarse aggregates.
- Always restore floor and tile joints when using product.
- For safety information, refer to the MSDS.

CLEAN-UP

- Clean tools and equipment with water before product hardens.

MECHANICAL PROPERTIES AND PERFORMANCE

SELF-BONDING CEMENT PRODUCTION

One 20 kg (45 lb.) bag covers an approximate surface of:

COMPRESSIVE STRENGTH - ASTM C 109

THICKNESS		SURFACE		1 day	10.1 MPa
mm	inches	m ²	ft ²	3 days	28.5 MPa
3	1/8	3,70	40	7 days	37.4 MPa
6	1/4	1,85	20	28 days	48.0 MPa
12	1/2	0,90	10	BENDING STRENGTH - ASTM C 78	
18	3/4	0,60	6,7	7 days	5.2 MPa
25	1	0,45	5	14 days	6.1 MPa
				28 days	6.7 MPa

One 20 kg bag gives an approximate volume of: 0.011 m³ or 0.38 ft.³

BONDING STRENGTH - ASTM C 1042

SELF-BONDING CEMENT SETTING TIME*

TEMPERATURE	THICKNESS		TIME	7 days	11.3 MPa
30°C	25 mm	1 in.	4 hours	14 days	14.2 MPa
20°C	25 mm	1 in.	6 hours	28 days	14.9 MPa
8°C	25 mm	1 in.	24 hours	RESISTANCE TO FREEZE/THAW CYCLES - ASTM C 666	
				300 cycles	98% durability

RESISTANCE TO DE-ICING SALTS - ASTM C 672

50 cycles 0 rating / no scaling
No mass loss

RESISTANCE TO SULFATES - ASTM C 1012

12 months 0.02% expansion
Minimal, no effect

IMPERMEABILITY - ASTM C 1202

250 coulombs Very weak

* Setting time represents, in this case, the real time required before allowing light foot traffic. This data is provided only as a guide. It shows the relationship between setting time and ambient temperature.

TECH-MIX® GUARANTEE

This product is guaranteed to be of good merchantable quality when used according to the instructions above. This product will be replaced or its purchase price refunded at our discretion if defective in manufacture or packaging. With the exception of the aforementioned replacement or refund, the sale, use or other handling of this product is without any warranty, implicit or explicit, and Tech-Mix® cannot be held responsible for any defects, damages or losses caused by negligence or other errors