Fortatop

Thixotropic high early strength repair mortar

1. DESCRIPTION

1.1. FORTATOP is a light gray coloured, fibre-reinforced and polymer-modified powder mix, producing by simple addition of water a fast-hardening thixotropic repair mortar with high mechanical properties and excellent durability. FORTATOP contains a corrosion inhibitor which adds additional protection to the existing reinforcing steel. It is specially formulated to allow the repair of horizontal, vertical and overhanging surfaces. The texture of FORTATOP allows building in thickness without sagging.

1.2. FORTATOP is a type R repair mortar approved in the list of materials relating to concrete, tested by the pavement laboratory of the Ministry of Transport, Sustainable Mobility and Transport Electrification of Quebec (MTMDET).

2. USE

2.1. FORTATOP is ideal for resurfacing and repairing concrete in industrial, commercial, institutional and residential applications. It can be applied up to a thickness of 2 in (50 mm) in a single coat. FORTATOP can be used indoors and outdoors. The consistency of FORTATOP is very thick to allow horizontal, vertical and even overhead application.

3. RECOMENDED SUBSTRATES

3.1. FORTATOP should only be applied to a fully cured concrete surface (minimum of 28 days).

4. LIMITATIONS

4.1. Ensure that ambient and surface temperatures are between 5°C (40°F) and 35°C (95°F) during application and for a period of 48 hours following application. Do not apply in direct sunlight or in the presence of strong winds. Make sure you have the necessary manpower to be able to apply the amount of Fortatop prepared within 15 minutes.

5. SURFACE PREPARATION

5.1. It is important that all surfaces are clean and free of dust, paint, wax, oil, grease, sealant, curing agents, mold release agents, anti-grafitti or any other material that may prevent adhesion. Ideally, the surface roughness should have asperities of a minimum of 6 mm (CSP 6-9). The surface must be Saturated Surface Dry (SSS). The presence of surface water must be eliminated before applying FORTATOP.

6. MIX

6.1. Measure the amount of water needed, see table 1, depending on the format used. Always mix a full container/bag. In a clean container, add a small quantity of FORTATOP while mixing, at medium speed, using a drill fitted with a stirrer to mix the entire volume.

Gradually add all of the solid material while continuously mixing to obtain a homogeneous paste. Adjust the consistency if desired, avoiding excess water. The mixture will look like a material that is too dry during the first 2 minutes, it will reach the final fluidity (15% water in relation to the dry mass) after 2 to 3 minutes of continuous mixing. During mixing, scrape the surface of the container and make sure to obtain a homogeneous mixture without lumps. The FORTATOP 3 Kg (6.6 lbs), 15 Kg (33.0 lbs) and 20 Kg (44 lbs) container is no longer childproof when opened. Mix the entire container or bag, if not, mix the powder well before you start mixing. Avoid over-mixing so as not to create excess air.

7. APPLICATION

7.1. Push a thin layer of mortar onto the substrate using a trowel to create a mechanical bond. Immediately apply the required thickness of mortar up to a maximum of 2 inches (50 mm). A second 2 inch (50 mm) coat may be applied after the first coat has set. In this case, the finish of the first layer must be rough. It is recommended to use a 6mm (1/4 in) notched trowel for this purpose.

8. FINISHING

8.1. Finishing can be done from the start of the initial set using a wooden trowel, sponge or broom to obtain a rough finish. Use a trowel, preferably magnesium or steel, to obtain a smooth finish. To obtain an exposed aggregate finish, contact one of our technical customer service representatives at 1-800-561-2664.

9. PROTECTION AND CURING

9.1. Protect from rain during the first 24 hours, avoid direct exposure to sunlight, take the necessary measures when applying FORTATOP in high wind conditions. Initial set may vary depending on temperature, water content used, relative humidity, sunlight, wind, etc.

9.2. After initial set, apply plastic wrap over the repair without touching the surface to reduce the risk of cracking. After final set (60-90 minutes), it is strongly recommended to cure for 24 hours using damp jute.

10. CLEANING

10.1. Clean tools immediately with water before the mixture hardens. When the mortar has hardened, only mechanical cleaning will be effective.

11. STORAGE

11.1. Store in a cool, dry place. Shelf life is one year in original, unopened containers. Discard any product that has been contaminated by water, moisture or contains hard lumps.

12. FIRST AID

12.1. This product may cause eye, skin and respiratory tract irritation. If swallowed, call a poison control center or doctor immediately. Do not induce vomiting. In case of eye contact, flush with water for a minimum of 15 minutes. In case of skin contact, rinse well with water. In case of contact with clothing, remove it. If inhaled, remove exposed person to fresh air. Consult the safety data sheet for more details.

13. TECHNICAL SERVICES

13.1. Contact Les Produits Daubois Inc. for further information on application methods or conditions as well as to obtain the most recent version of the technical documents.

Tel: 1-800-561-2664, (514) 328-1253

Fax: (514) 328-7694

Les Produits Daubois Inc.

6155, boul. des Grandes-Prairies, Saint-Léonard, Qc H1P 1A5, Canada

13.2. http://www.daubois.com

14. GARANTEE

You can obtain the terms of the applicable LIMITED WARRANTY at

14.1. https://www.daubois.com/en/product-warranty.php Or send a written request to Les Produits Daubois Inc., Five Concourse Parkway, Atlanta, GA 30328, USA . ®Quikrete Canada Holdings, Limited. Manufactured by or under the authority of Les Produits Daubois Inc. ©2022 Quikrete International, Inc.

Table 1 - Description

Format	Packaging	Amount of Water Mixing (15%)		Consumption for 25 mm (1 inch) thickness		Protection system against children before opening the package
		(liter)	gallon (US)	(m^2)	(ft^2)	
3 Kg	Pail	0,45	0,119	0,061	0,66	Yes
15 Kg	Pail	2,25	0,594	0,35	3,77	Yes
20 Kg	Sac	3	0,793	0,42	4,52	No

Table 2 – Technical Description

Characteristics	Norm	Schedule	Results [1]
Handling	-	-	15-20 minutes
Air Content	CSA A23.2-4C	-	8.0%
Volumic Mass	CSA A23.2-6C	-	2076 kg/m^3 (129,6 lb/ft^3)
Compressive Strength	ASTM C109	24 hours	> 22,0 Mpa (>3190 psi)
		7 hours	35,0 Mpa (5076 psi)
		28 hours	45 Mpa (6527 psi)
Flexural modulus of rupture	ASTM C348	7 Days	9,6 Mpa (1392 psi)
		28 Days	8,5 Mpa (1233 psi)
Oblique shear adhesion	ASTM C882	24 hours	14,8 Mpa (2646 psi)
		7 Days	19,2 Mpa (2785 psi)
		28 Days	21,4 Mpa (3104 psi)
Tensile adhesion 2 [2]	CSA A23.2-6B	28 Days	2,2 Mpa (319 psi)
Absorption	ASTM C642	28 Days	6.50%
Length Variation	ASTM C157	28 Days (air)	-0.17%
		28 Days (Water)	0.06%
Spalling loss	ASTM C672	49 cycles	0,02 kg/m^2 (0,47 lb/ft^2)
Durability factor for freeze and thaw cycles	ASTM C666	300 cycles	97.7
Permeability to chloride ions	ASTM C1202	28 Days	802 Coulombs