Blocfiller 20 MPa

Concrete masonry unit grout

1. PRODUCT DESCRIPTION

1.1. MAIN USE

Blocfiller 20 MPa is a grout based on portland cement, fine sand and specialized additives to control rheology, ensure good adhesion, prevent segregation and provide expansive properties in the fluid phase. It is used as a reinforcement and consolidation grout to fill the voids in masonry walls. Blocfiller 20 MPa is formulated to meet the properties prescribed in CSA A179-14 (2024) for a fine-grained grout.

1.2. ADVANTAGES

1.2.1. Blocfiller 20 MPa is specially formulated to obtain a liquid grout that will completely fill the cells of concrete blocks without leaving any voids (honeycombing). Its rheology is controlled by a judicious choice of additives and not by adding excess water, which would reduce the grout's performance. Blocfiller 20 MPa forms a highly stable grout without segregation or bleeding.

1.2.2. For LEED® v4 certification, Blocfiller 20 MPa contributes to the MR credit Building Product Declaration and Optimization - Procurement of raw materials with recycled content. Please consult our validated Vertima Eco-Declaration environmental data sheets for more details.

1.3. LIMITATIONS

1.3.1. Blocfiller 20 MPa may only be used for filling cavities, not for laying.

1.3.2. Any modification to the composition of the grout is prohibited and automatically voids the warranty.

1.3.3. The addition of additives and/or adjuvants such as gas pedals, retarders, antifreeze agents, waterproofing agents, polymers (latex) or others of any kind is prohibited.

2. INSTALLATION

2.1. CONDITIONS OF USE

2.1.1. Ensure that ambient, surface and product temperatures are between 5 °C (40 °F) and 35 °C (95 °F), during application and for 48 hours thereafter.

2.1.2. The masonry must be sufficiently hardened to prevent the mortar joints from bursting due to consolidation methods or the hydraulic pressure of the grout (generally, the masonry wall must have been built for at least 12 hours before filling begins).

3. MIXING

3.1. Mix the amount that can be applied in 1-1/2 hours following the batch. Do not add water after this time. Discard unused material.

3.2. MIX IN SMALL QUANTITIES (1 BAG)

3.2.1. Pour 5.4 liters (1.2 gallons) of drinking water into a suitable container (20-litre boiler).

3.2.2. Gradually add the dry ingredients, stirring at low speed with an industrial-grade drill fitted with a Jiffler-type agitator. The drill should have a minimum capacity of 1/2" and variable speeds.

3.2.3. Mix for a minimum of 5 minutes, but no more than 10 minutes. If necessary, add water to obtain the desired plasticity.

Note: Never mix less than one bag.

Note: It is strongly recommended to use an ASTM C-143 slump cone to quickly check the consistency of the mix and avoid excess water.

3.3. MIXING IN LARGE QUANTITIES

3.3.1. Use a mortar mixer of appropriate capacity (the mixer must be at least ¾ full). Start the mixer. Pour in the required amount of potable water, i.e. 5.4 liters (1.2 gallons) of water per 30 kg (66 lb) of dry material.

3.3.2. Gradually add the dry material. Continue mixing according to instructions in section 3.2.3.

Note: Always mix complete units.

4. APPLICATION

4.1. Blocfiller 20 MPa can be applied by gravity or pumping. Refer to CSA A23.1-14 article 7.4.2 for pumping.

4.2. Refer to CSA A371-14 section 8.2 for installation.

5. PROTECTION AND CURING

5.1. Protect from frost (temperature above 5 °C, 40 °F) and rain for 48 hours after application.

5.2. Use a tarpaulin to protect finished work from mortar splashes.

6. CLEANING

6.1. Clean equipment with water while the mixture is not yet hardened. Once the mixture has hardened, only mechanical cleaning will be effective.

6.2. Throughout the work, carefully remove grout splashes and stains using a suitable stiff bristle brush (do not use a wire brush).

6.3. Consult the component manufacturer or a cleaning specialist if more thorough cleaning is required. It is important to preserve the integrity of the mortar during cleaning. Allow mortar to harden for a minimum of 28 days before washing.

7. PACKING

This product is packaged in 30 kg (66 lb) paper bags and 1500 kg (3307 lb) supersacks. A pallet of 30 kg (66 lb) bags contains 63 bags.

8. STORAGE

8.1. OUTDOOR STORAGE

Store in a cool, dry place. Avoid placing bags directly on the floor.

8.2. OUTDOOR STORAGE

Cover bags with waterproof film. Do not store directly on the floor.

8.3. LIFETIME

Shelf life is 12 months in unopened, well-protected bags.

9. FIRST AID

WEAR IMPERMEABLE GLOVES, such as nitrile, eye protection, protective clothing and rubber boots. Do not breathe or swallow dust. Wear a NIOSH-approved respirator (mask) such as N95 in poorly ventilated areas, during prolonged or repeated use, or when maximum exposure limits may be exceeded. Do not eat, drink or smoke when using this product. Before handling, read and understand the safety information on this label and on the Material Safety Data Sheet (MSDS) available online at www.daubois.com.

IF EXPOSED: Wash contaminated body and clothing thoroughly and immediately. If in eyes: rinse cautiously with water for several minutes; remove contact lenses, if present, if possible; continue rinsing. In case of inhalation: remove to fresh air and make patient comfortable to breathe. If swallowed, rinse mouth; do not induce vomiting. In case of burns, skin irritation or rash: seek medical advice immediately. Seek immediate medical attention if symptoms are severe or persistent.

10. TECHNICAL SERVICE

Contact Les Produits Daubois Inc. for further information on application methods or conditions, and to obtain the latest version of technical documents.

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11. GUARANTEE

Get the LIMITED WARRANTY on

https://www.daubois.com/fr/produit-garantie.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.

TECHNICAL DATA TABLE

Property	Results[1]	20 MPa
Slump, ASTM C-143	-	250 to 280 mm (10 to 11 in)
Compressive strength, ASTM C-39 CAN/CSA-A179-14: 7 days (min 6.0 MPa) - 28 days (min 10.0 MPa)	7 days 28 days	min. 14 MPa (2030 psi) min. 20 MPa (2900 psi)
Pull-off adhesion on concrete block, CSA 23.2-6B	7 days 28 days	1.6 MPa (232 psi) 1.6 MPa (232 psi)
Flexural strength, ASTM C-348	7 days 28 days	3.8 MPa (521 psi) 4.2 MPa (609 psi)
Shrinkage, ASTM C-348	28 days	0.15 %
Expansion, ASTM C-940	-	1.0%
Bleeding, ASTM C-940	-	0%
Air content, ASTM C-231	-	< 3 %
Density	-	1970 kg/m^3 (123 lb/ft^3)
Yield per 30 kg (66 lb) bag	-	0.015 m^3 (0.54 ft^3)
Number of 190*190*390 mm (8*8*16 in) blocks filled to 60% per 30 kg bag	-	3 blocks or 6 cavities
Number of 240*190*390 mm (10*8*16 in) blocks filled to 60% per 30 kg bag	-	2 blocks or 4 cavities

[1]Laboratory results obtained under controlled conditions (23°C, 50% R.H.) for a standard sample mixed with the prescribed quantity of water. These results may vary slightly from one sample to another and are indicative of grout performance. They cannot be used to accept or reject a bag of grout.

Note: All compressive strength tests must be accompanied by a slump test.