

# Blocfiller

## Concrete masonry unit grout

### 1- PRODUCT DESCRIPTION

#### 1.1 USE

Blocfiller is a grout based on Portland cement, fine sand and specialized additives allowing rheology control, good adhesion, avoiding segregation and giving expansive properties in fluid phase. It is used as a reinforcement and consolidation grout to fill the voids in masonry walls. Blocfiller was formulated to meet properties of CSA A179-04 standard for a fine grout.

#### 1.2 ADVANTAGES

Blocfiller was specially formulated to provide a fluid grout that will completely fill the cavities of masonry blocks without leaving any air pockets. Its rheology is controlled by high technology additives and not by excess addition of water which would reduce its physical properties. Blocfiller forms a very stable grout without any segregation or bleeding. It also contains an expansive agent that forces the material in the block increasing adhesion and minimizing initial shrinkage.

#### 1.3 LIMITATIONS

1.3.1 Blocfiller should be used exclusively to fill out cavities. Do not use as a bedding mortar.

1.3.2 Any modification of the grout composition is forbidden and automatically cancels the warranty.

1.3.3 Addition of additive and/or admixture of any nature such as set accelerators, retarders, antifreeze agents, waterproofing agents, polymers (latex) or else, is forbidden.

### 2- INSTALLATION

#### 2.1 FIELD CONDITIONS

2.1.1 Make sure the temperature (surface, surrounding and material) is between 5°C (40°F) and 35°C (95°F), during the application and for the following 48 hours.

2.1.2 Masonry wall should have cured for a minimum of 12 hours before starting to fill with grout.

#### 2.2 MIXING

2.2.1 The freshly prepared grout should be used within the next 1 ½ hour following mixing. Any unused grout should be discarded.

#### 2.2.2 MIXING IN SMALL QUANTITY (1 BAG)

2.2.2.1 Pour 5.4 liters (1.2 gallon) of potable water in a clean container of appropriate size (20 liter pail).

2.2.2.2 Slowly add dry ingredients while mixing with a drill equipped with a mixer attachment such as a Jiffiler. Use a variable speed drill with at least 1/2 in capacity.

2.2.2.3 Mix for a minimum of 5 minutes without exceeding 10 minutes. Adjust consistency by adding water without excess.

Note: Do not mix less than 1 bag.

Note: It is strongly recommended to use a slump cone according to ASTM C-143 standard to rapidly measure the consistency and avoid using excess water.

#### 2.2.3 MIXING IN LARGE QUANTITY

2.2.3.1 Use a mortar mixer of appropriate size (mixer should be 3/4 full). Start mixer. Introduce 5.4 liters (1.2 gallon) of potable water per 30 kg bag.

Note: Always mix full units.

2.2.3.2 Slowly add dry ingredients. Follow mixing instructions as per section 2.2.2.3.

#### 2.3 APPLICATION

2.3.1 Blocfiller can be applied by gravity or pumped into place.

2.3.2 Follow installation procedures in section 8.2 of CSA A371-04 standard.

#### 2.4 PROTECTION AND CURING

2.4.1 Protect from freezing (temperature over 5°C, 40°F) and from rain for the first 48 hours.

2.4.2 Protect finished work with plastic sheeting to avoid mortar spots.

#### 2.5 CLEANING

2.5.1 Clean tools with water while mixture is not yet hardened. Once it is hard, only a mechanical cleaning will be efficient.

2.5.2 During application, carefully remove grout spots or spills with an appropriate scrubbing brush with hard bristles (do not use a wire brush).

2.5.3 Consult the element manufacturer or a cleaning specialist before any cleaning step is initiated. It is important to preserve mortar's integrity. Allow a cure of at least 28

days before starting the cleaning step.

### 3- PACKAGING

This product is available in 30 kg (66 lb) paper bags and in bulk bags. A pallet of 30 kg (66 lb) bags contains 63 bags.

### 4- STORAGE

#### 4.1 INTERIOR STORAGE

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

#### 4.2 EXTERIOR STORAGE

Cover bags with a waterproof sheeting. Do not store directly on the ground.

#### 4.3 SHELF LIFE

Shelf life is one year in original, protected and unopened bags.

### 5- FIRST AID

This product contains cement and may cause eye, skin and respiratory system irritation. Wear rubber gloves, safety glasses and approved dust mask. If swallowed, call a Poison Control centre or doctor immediately. Do not induce vomiting. In case of contact with eyes, rinse well with water for 15 minutes. In case of skin contact, rinse well with water. Keep out of reach of children. Consult the safety data sheet for more information.

### 6- TECHNICAL SERVICE

Contact Daubois for more information about application methods or conditions or to obtain the latest version of our technical documents.

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### 7- WARRANTY

Daubois guarantees that this product will perform as specified in this technical data sheet and suits the application for which it was intended. Nonetheless, Daubois does not offer any explicit or implicit warranty since it cannot control application methods and/or field conditions. Under this warranty, Daubois' responsibility is limited to either replace or refund the cost of the product proved defective.

Technical data table

Property	Results <sup>1</sup>	15 MPa	20 MPa	25 MPa
Mixing water		5.4 L (1.2 gal)	5.4 L (1.2 gal)	5.4 L (1.2 gal)
Slump, ASTM C-143		250 to 280 mm (10 to 11 in)	250 to 280 mm (10 to 11 in)	250 to 280 mm (10 to 11 in)
Compressive strength, ASTM C-109	28 days	min. 15 MPa (2175 psi)	min. 20 MPa (2900 psi)	min. 25 MPa (3625 psi)
Pull-off adhesion on concrete block, CSA 23.2-6B	7 days	1.0 MPa (145 psi)	1.6 MPa (232 psi)	1.4 MPa (203 psi)
	28 days	1.1 MPa (160 psi)	1.6 MPa (232 psi)	1.4 MPa (203 psi)
Drying shrinkage, ASTM C-596	28 days	0.13 %	0.15%	0.15%
Flexural strength, ASTM C-348	7 days	3.6 MPa (522 psi)	3.8 MPa (551 psi)	3.7 MPa (537 psi)
	28 days	4.0 MPa (580 psi)	4.2 MPa (609 psi)	4.6 MPa (667 psi)
Expansion, ASTM C-940		0.7 %	1.0 %	0.9 %
Bleeding, ASTM C-940		0 %	0 %	0 %
Specific gravity		1870 kg/m <sup>3</sup> (117 lb/ft <sup>3</sup> )	1970 kg/m <sup>3</sup> (123 lb/ft <sup>3</sup> )	1980 kg/m <sup>3</sup> (124 lb/ft <sup>3</sup> )
Yield per 30 kg (66 lb) bag		0.016 m <sup>3</sup> (0.57 ft <sup>3</sup> )	0.015 m <sup>3</sup> (0.54 ft <sup>3</sup> )	0.015 m <sup>3</sup> (0.54 ft <sup>3</sup> )
Number of 190*190*390 mm (8*8*16 po) blocks 60% filled per 30 kg (66 lb) bag		3 blocks or 6 holes	3 blocks or 6 holes	3 blocks or 6 holes
Number of 240*190*390 mm (10*8*16 po) blocks 60% filled per 30 kg (66 lb) bag		2 blocks or 4 holes	2 blocks or 4 holes	2 blocks or 4 holes

<sup>1</sup> Results obtained in laboratory controlled conditions with a standard sample mixed with 5.4 L of water. These results may vary slightly from one sample to the other and are used as a performance indicator of the grout. These results cannot be used for the acceptance or rejection of a grout bag.