

Blocmix

Block laying mortar

1- PRODUCT DESCRIPTION

1.1 USE

Bloc mix is a mortar based on hydraulic cements and well-graded sand principally used for the installation of block walls in interior or exterior applications. Blocmix 15 MPa was formulated to meet properties in Table 6 of CSA A179-04 standard for a type S mortar. Blocmix 20 MPa and 25 MPa were formulated to meet properties in Table A.3 of CSA A179-04 standard for a type M mortar.

1.2 ADVANTAGES

Use of a calibrated mortar ensures quality of the raw materials used, especially for the sand that is free of any contaminants such as plants. It also provides control of the sand gradation and the final composition of the mortar such as the binder/sand proportions.

1.3 LIMITATIONS

1.3.1 Any modification of the mortar composition is forbidden and automatically cancels the warranty.

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

1.3.3 Only addition of colourants¹ is allowed although not recommended.

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 Never apply mortar on frozen elements.

2.2 MIXING

2.2.1 MIXING IN SMALL QUANTITY (1 BAG)

2.2.1.1 Pour 4.0 litres (0.9 gallon) of potable water in a clean container (20 L pail).

Note: The suggested amount of 4.0 litres of water per bag is a mixing starting point. The mason will then adjust the consistency according to the nature and conditions of the job.

2.2.1.2 Slowly add dry ingredients while mixing with a drill equipped with a mixer attachment such as a Jiffler. Use a drill with at least 1/2 in capacity.

2.2.1.3 Mix for a minimum of 3 minutes and a maximum of 5 minutes. Adjust consistency by adding water without excess.

Note: Never mix less than one bag.

2.2.2 MIXING IN LARGE QUANTITIES

2.2.2.1 Use a mortar mixer of appropriate size (mixer should be 3/4 full). Start mixer. Introduce water; 4.0 litres (0.9 gallon) per 30 kg (66 lb) bag.

Note: Always mix full units

2.2.2.2 Slowly add dry ingredients and follow mixing instructions as per 2.2.1.3.

2.3 APPLICATION

2.3.1 Spread a uniform coat of mortar. Apply mortar on one end of the element and position it. Using a level, set the element in the bedding mortar with small, sharp taps. Fill all the joints. Do not realign elements once they have been in contact with mortar.

Note: Mortar should be used within 1 ½ hour following mixing if temperature is higher or equal to 25°C (77°F). If temperature is lower than 25°C (77°F), use within 2 ½ hours. Discard unused mortar.

2.4 FINISHING

2.4.1 All mortar joints must be finished using a metal or plexiglass tool to provide the required look as well as weather resistance.

2.4.2 Finishing must be done just before the mortar loses its plasticity, when finger pressure barely leaves any traces. It is impossible to set a specific time, it is necessary to rely on the mason's judgment.

2.5 PROTECTION AND CURING

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

2.5.2 In hot weather, protect from sun and wind to avoid rapid water evaporation of mortar.

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

2.6 CLEANING

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

2.6.2 During application, remove mortar spots with jute (burlap).

2.6.3 Consult the element manufacturer or a cleaning specialist before any cleaning step is initiated. It is important to preserve mortar's integrity. Let the mortar dry for 28 days prior to initiate cleaning. Avoid high pressure washing and sandblasting.

¹ The quality and quantity of colorant used should respect ASTM C-979 standard

3- PACKAGING

This product is available in 30 kg (66 lb) paper bags and in bulk bags. A pallet of 30 kg 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, 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 the product proved defective.

Technical data

Characteristic	Results ¹	15 MPa ²	20 MPa ³	25 MPa ³
Compressive strength, ASTM C-109	7 days	min. 10 MPa (1450 psi)	min. 14 MPa (2030 psi)	min. 18 MPa (2610 psi)
	28 days	min. 15 MPa (2175 psi)	min. 20 MPa (2900 psi)	min. 25 MPa (3625 psi)
Water vapor transmission, ASTM E-96		12 perms	9 perms	11 perms
Water absorption, ASTM C-1403	24 hours	6.2 %	3.7 %	4.0 %
Pull-off adhesion, CSA 23.2-6B	28 days	1.16 MPa (168 psi)	1.31 MPa (190 psi)	1.64 MPa (238 psi)
Shrinkage, ASTM C-596	28 days	0.17 %	0.13 %	0.14 %
Freeze/thaw resistance, ASTM C-666M ⁴		> 100 cycles	> 150 cycles	> 150 cycles
Flexural strength, ASTM C-348	28 days	4.5 MPa (653 psi)	5.3 MPa (769 psi)	5.4 MPa (783 psi)
Specific gravity		1700 kg/m ³ (106 lb/ft ³)	1740 kg/m ³ (109 lb/ft ³)	1740 kg/m ³ (109 lb/ft ³)
Yield of a 30 kg (66 lb) bag		0.018 m ³ (0.62 ft ³)	0.017 m ³ (0.60 ft ³)	0.017 m ³ (0.60 ft ³)
Approximate number of 190*190*390 mm (8*8*16 in) blocks layed per bag		12	12	12

¹ Results obtained in laboratory controlled conditions with a standard sample mixed to a flow of 100 to 115%. These results may vary slightly from one sample to the other and are used as a performance indicator of the mortar. These results cannot be used for the acceptance or rejection of a mortar bag.

² Blocmix 15 MPa is formulated to meet CSA A179-04 properties prescribed in Table 6 for a type S mortar.

³ Blocmix 20 MPa and 25 MPa are formulated to meet CSA A179-04 properties prescribed in Table A.3 for a type M mortar.

⁴ Test executed according to Procedure A of ASTM C-666M standard.