Blocmix 20 MPa

Block laying mortar

1. PRODUCT DESCRIPTION

1.1. MAIN USE

Blocmix 20 MPa is a cementitious and sand-based mortar that meets the specifications of CSA A179-14 (2024). For indoor and outdoor use, it is mainly used for laying (grouting) concrete blocks. Blocmix 20 MPa is formulated to meet the properties prescribed in Table A.3 of CSA A179-14 (2024) for a type M laying mortar.

1.2. ADVANTAGES

1.3. The use of a pre-bagged and calibrated mortar, whose sand particle size distribution and final mortar composition (particularly the proportions of the various binders) are controlled, ensures the consistency of the properties listed in this technical data sheet. As stipulated in CSA A179-14 (2024), the sand is calibrated and free of harmful quantities of saline, alkaline, organic, or other materials.

1.4. Blocmix 20 MPa contributes to LEED®v4 certification under the MR credit Declaring and Optimizing Building Products—Procurement of Raw Materials with Recycled Content. Please refer to our Vertima Eco-Declaration validated environmental data sheets for more details.

1.5. LIMITATIONS

1.5.1. Blocmix 20 MPa must be used exclusively for laying blocks; do not use as grout. To fill cavities, use Blocfiller or Éconofill.

1.5.2. Any modification to the composition of the mortar is prohibited and automatically voids its warranty.

1.5.3. The addition of additives and/or admixtures such as accelerators, retarders, antifreeze agents, waterproofing agents, polymers (latex) or other substances, regardless of their nature, is prohibited.

1.5.4. Only the addition of colorant is permitted, but not recommended.

1.5.5. The final choice of color for the entire project should be based on the results obtained after creating a sample (standard).

2. INSTALLATION

2.1. CONDITIONS OF USE

2.1.1. Ensure that the ambient temperature, surface temperature, masonry temperature, and Blocmix 20 MPa temperature are between 5°C (41°F) and 32°C (90°F) during application and for 48 hours thereafter.

2.1.2. Never apply mortar to frozen elements.

2.2. SURFACE PREPARATION

No surface preparation required.

3. MIXING

3.1. MIXING SMALL QUANTITIES (1 BAG)

3.1.1. Pour 4.0 liters (0.9 gallons) of potable water into a suitable container (i.e., 20.0-liter 4.4-gallon bucket).

Note: This amount of water is a starting point for mixing. The texture of the mortar is then adjusted by the mason according to the nature of the work and the ambient conditions, while complying with the mortar spreading specifications prescribed by CSA A179-14 (2024).

3.1.2. Gradually add the dry ingredients while mixing at low speed using an industrial-grade drill equipped with a Jiffler-type agitator. The drill must have a minimum capacity of ½ in. and variable speeds.

3.1.3. Mix for 3 to 5 minutes (CSA A179-14 (2024) standard). If necessary, add water to achieve the desired consistency.

Note: Never mix less than one bag and always mix full bags.

3.2. MIXING IN LARGE QUANTITIES

3.2.1. Use a mortar mixer with the appropriate capacity (the mixer must be filled to at least ¾ capacity). Start the mixer. Pour in the required amount of potable water, i.e., 4.0 liters (0.9 gallons) of water per 30 kg (66 lb).

3.2.2. Gradually add the dry ingredients.

3.2.3. Mix for 3 to 5 minutes (CSA A179-14 (2024)). If necessary, add water to achieve the desired consistency.

4. APPLICATION

Spread the mortar in an even layer. Apply mortar to the end of the unit and set it in place. Using a level or line, tap the unit into place in the mortar bed with short, sharp taps. Fill all joints. Do not realign masonry units once they are in contact with the mortar.

Note 1: Adding water on site after the initial mixing is not recommended.

Note 2: Mortar must be applied within 1½ hours after mixing if the ambient temperature is 25°C (77°F) or higher, and within 2½ hours if the temperature is below 25°C (77°F). Mortar not used after this period must be discarded.

5. FINISHING

5.1. To improve their appearance, all joints must be finished (compacted and smoothed) with the appropriate tools (metal, Plexiglas, etc.).

5.2. Smoothing must always be carried out by compaction as soon as the mortar loses its plasticity, i.e., as soon as a finger mark remains visible. It is impossible to specify a precise time for finishing the joint; here, the mason's judgment must be relied upon.

6. PROTECTION AND CURING

6.1. PRECAUTIONS

6.1.1. Protect structures from the elements using a waterproof tarp to limit water content as required by CSA A371-14.

6.1.2. Protect finished work from mortar splashes using waterproof tarps.

6.1.3. Protect and cover surrounding areas and objects (windows, openings, metal flashings, spandrels, and other products sensitive to alkaline products).

6.1.4. After this period, it is recommended to maintain protection against the elements for 5 days.

6.2. COLD WEATHER CONDITIONS

6.2.1. Protect from frost below 5°C (41°F) and from rain for the first 48 hours after installation.

6.2.2. It is recommended to keep newly completed work protected from the weather for a period of 5 days during periods when there is a high risk of frost.

6.3. HOT WEATHER CONDITIONS

6.3.1. Protect from sun and wind to prevent the mortar from drying too quickly.

6.3.2. Unless otherwise specified by the masonry unit manufacturer, ensure that the units are dry.

7. CLEANING

7.1. Clean equipment with water while the mixture is still soft. Once the mixture has hardened, only mechanical cleaning will be effective.

7.2. Throughout the work, after setting, carefully remove splashes using burlap and/or a wooden trowel. Remove stains using a non-metallic brush and water.

7.3. Consult the manufacturer of the element and the technical data sheets for cleaning products when more thorough cleaning is required. Ideally, masonry mortar should be allowed to cure for at least 28 days before washing. However, it is recommended that you consult the manufacturer's recommendations for cleaning products to ensure that they are compatible with masonry elements. Avoid using high-pressure cleaning or abrasive techniques such as sandblasting, glass beads, or other methods. Always test a sample and wait 3 days before proceeding.

8. PACKAGING

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

9. STORAGE

9.1. INDOOR STORAGE

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

9.2. OUTDOOR STORAGE

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

9.3. SHELF LIFE

The shelf life is 12 months in unopened and well-protected bags.

10. FIRST AID

WEAR WATERPROOF GLOVES, such as nitrile, eye protection, protective clothing, and rubber boots. Do not breathe dust or swallow it. 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 and easy to do. Continue rinsing. If inhaled: Remove person to fresh air and keep comfortable for breathing. If swallowed: rinse mouth; do NOT induce vomiting. If skin burns, irritation, or rash occurs: get medical attention immediately. Get medical attention right away if symptoms are severe or persistent.

11. TECHNICAL SERVICE

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

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12. WARRANTY

Get the applicable LIMITED WARRANTY on

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

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13. CAUTION

13.1. Color variations may be observed in the final result even if the mortar used has been pre-colored at the factory and complies with the requested specifications. These variations are mainly caused by various application situations such as:

- Delay before finishing (smoothing joints).
- Variable moisture content of the elements.
- Lack of protection during application and work stoppages/interruptions.
- Inappropriate or excessive washing.

13.2. The final choice of color for the entire project should be based on the result obtained after creating the sample (standard).

TECHNICAL DATA TABLE

Characteristic	Deadline	Results [1] (20 MPa)
Compressive strength, ASTM C-109	7 days	min.[2] 14.0 MPa (2031 psi)
	28 days	min.[2] 20.0 MPa (2901 psi)
Average values	7 days	17.0 MPa (2466 psi)
	28 days	24.0 MPa (3481 psi)
Water vapor transmission, ASTM E-96	_	9 perms
Water absorption, ASTM C-1403	24 hours	3.7
Tensile adhesion on H15 concrete block, CSA 23.2-6B	28 days	1.31 MPa (190 psi)
Drying shrinkage, ASTM C-596	28 days	0.13
Freeze/thaw resistance, ASTM C-666M 3	_	> 150 cycles
Flexural strength, ASTM C-348	28 days	5.3 MPa (769 psi)
Density	_	1740 kg/m³ (109 lb/ft³)
Yield per 30 kg (66 lb) bag	_	0.017 m³ (0.60 ft³)
Approximate number of 190 x 190 x 390 mm blocks (8 * 8 * 16 in) laid per bag	_	12

[1] Results obtained in the laboratory, at 23°C, > 90% RH, for a standard sample, mixed with the amount of water specified in the technical data sheet to obtain a spread of 110 ± 5%. These results may vary from one sample to another and are indicative of the mortar's performance. They cannot be used to accept or reject the use of the product.

[2] Blocmix 20 MPa is formulated to meet the specifications prescribed in Table A.3 of CSA A179-14 (2024) for Type M mortar.

[3] Test performed according to Procedure A of ASTM C-666M.