

GUIDE SPECIFICATION

SECTION 04 05 13 MASONRY MORTAR (STANDARD, AND COLORED)

PART 1 GENERAL

1.01 SUMMARY

- A. Section Includes: Preblended mortar
- B. Related Sections:
 - 1. Division 04 Section: Masonry Units.
 - 2. Section 04210 - Brick Masonry.
 - 3. Section 04211 - Hollow Clay Masonry Units.
 - 4. Section 04220 - Concrete Masonry Units.
 - 5. Section 04300 - Granular Insulation Wall Fill.
 - 6. Section 04510 - Cleaning and Pointing.

1.02 REFERENCES

- A. ASTM
 - 1. ASTM C91 Standard Specification for Masonry Cement.
 - 2. ASTM C144 Standard Specification for Aggregate for Masonry Mortar.
 - 3. ASTM C150 Standard Specification for Portland Cement.
 - 4. ASTM C207 Standard Specification for Hydrated Lime for Masonry Purposes.
 - 5. ASTM C270 Standard Specification for Mortar for Unit Masonry.
 - 6. ASTM C780 Standard Test Method for Preconstruction and Construction Evaluation of Mortars for Plain and Reinforced Unit Masonry.
 - 7. ASTM C979 Standard Specification for Pigments for Integrally Colored Concrete.
 - 8. ASTM C1329 Standard Specification for Mortar Cement.
 - 9. ASTM C1384 Standard Specification for Admixtures for Masonry Mortars.
 - 10. ASTM E514 Standard Test Method for Water Penetration and Leakage Through Masonry.
- B. International Masonry Industry All-Weather Council (IMIAC):
 - 1. Recommended Practices and Guide Specification for Cold Weather Masonry Construction.
 - 2. Recommended Practices and Guide Specification for Hot Weather Masonry Construction.
- C. National Concrete Masonry Association (NCMA):
 - 1. NCMA TEK Bulletin #8-2A Removal of Stains from Concrete Masonry.
 - 2. NCMA TEK Bulletin #8-3A Control and Removal of Efflorescence.
- D. Canadian Standards Association (CSA):
 - 1. CSA A 179 Mortar and Grout for Unit Masonry
 - 2. CSA A 3000 Cementitious Materials Compendium

1.03 SYSTEM DESCRIPTION

- A. Design and Performance Requirements: Provide mortar mixes selected, manufactured, mixed and installed to comply with the following:
1. ASTM C270.
 2. ASTM C780.
 3. CSA A179

1.04 SUBMITTALS

- A. General: Submit listed submittals in accordance with Conditions of the Contract and Division 01 Submittal Procedures Section.
- B. Product Data: Submit manufacturer's product data.
- C. Samples: Submit selection and verification samples of [colored] mortar.
- D. Quality Assurance/Control Submittals: Submit the following:
1. Certificates: Submit manufacturer's certificate that products meet or exceed specified requirements.
 2. Submit test report data substantiating compliance with specified performance requirements.

1.05 QUALITY ASSURANCE

- A. Installer Qualifications: Utilize an installer having demonstrated experience on projects of similar size and complexity.
- B. Mock-Ups:
1. Subject to acceptance by owner, mock-up may be retained as part of finish work.
 2. If mock-up is not retained, remove and properly dispose of mock-up.

1.06 DELIVERY, STORAGE & HANDLING

- A. Delivery and Acceptance Requirements:
1. Deliver material in accordance with Section [01 61 00 - Common Product Requirements] and in accordance with manufacturer's written instructions.
 2. Deliver materials in manufacturer's original packaging, with identification labels intact and in sizes to suit project.
- B. Storage and Handling Requirements:
1. Store materials protected from exposure to harmful weather conditions and at temperature conditions recommended by manufacturer. Do not store in areas where temperature will fall below 40 degrees F. (5-degree Celsius)

1.07 PROJECT/SITE CONDITIONS

- A. Environmental Requirements:
1. Do not build or apply mortar products on frozen substrates.
 - a. Remove and replace unit masonry damaged by frost or by freezing conditions.
 2. Take special care when constructing in extremely hot or cold weather. Comply with the following standards:
 - a. IMIAC Recommended Practices and Guide Specification for Cold Weather Masonry Construction.
 - b. IMIAC Recommended Practices and Guide Specification for Hot Weather Masonry Construction.

PART 2 PRODUCTS

2.01 PREBLENDED MORTAR MIXES, COLORED MORTAR MIXES AND INTEGRAL WATER REPELLENT MORTAR MIXES

- A. Manufacturer: Basalite Concrete Products ULC
 - 1. Contact: 8650 130th Street, Surrey B.C. V3W 1G1
Phone: (800) 596-3844, (604) 596-3844, Fax: (604) 596-6914
Email: canadasaless@basalite.com , www.basalite.ca
- B. Proprietary Products/Systems: Dry, preblended mortar mixes, including the following:
 - 1. Basalite Mortartek Preblended Mortar Mix:
 - a. Material: Preblended factory mix of Portland cement and hydrated lime or masonry cement or mortar cement and sand aggregate mixtures.
 - b. Mortar Type: Property Mixture [Type M] [Type S] [Type N] [Type O].
 - c. Aggregate Type: Fine/Masonry Sand
 - d. Material Standard for Aggregate: Comply with ASTM C144.and/or CSA A179
 - e. Material Standard for Portland Cement: Comply with ASTM C150. and/or CSA A3000
 - f. Material Standard for Hydrated Lime: Comply with ASTM C207.and/or CSA A3000
 - g. Material Standard for Masonry Cement: Comply with ASTM C91.and/or CSA 3000
 - h. Material Standard for Mortar: Comply with ASTM C270. And/or CSA A179
 - i. Material Standard for Mortar Cement: Comply with ASTM C1329. And/or CSA A3000
 - 2. Basalite Mortartek Preblended Colored Mortar Mix:
 - a. Material Standard for Pigments: Comply with ASTM C979.
 - b. Mortar Color: [_____].
 - 3. Basalite Mortartek with IWR : [refer to specification for Rainbloc®]
 - a. Material Description: Dry preblended mortar mixture incorporating dry Basalite Mortartek Integral Water-Repellent Mortar Admixture.
 - b. Water Penetration of Masonry, ASTM E514: No dampness reported.
 - c. Mortar Type: Property Mixture [Type M] [Type S] [Type N] [Type O].

02.02 PRODUCT SUBSTITUTIONS

- A. Substitutions: No substitutions permitted.

PART 3 EXECUTION

3.01 MANUFACTURER'S INSTRUCTIONS

- A. Comply with manufacturer's product data, including product technical bulletins,
- B. Basalite Mortartek Integral Water-Repellent: [refer to Specifications for Rainbloc®]
 - 1. Installer shall use only concrete masonry units containing compatible integral water repellent CMU admixture for exterior wall construction.
 - 2. Installer shall use only mortar containing integral water repellent mortar admixture
- C. Basalite Mortartek Preblended Mortar Mix:
 - 1. Fill head and bed joints for full thickness of the face shells to provide the greatest resistance to water penetration.

2. Tooling:
 - a. Tool the mortar joints concave or to a V-profile to provide the greatest resistance to water penetration. Do not use raked, flush, extruded, struck, beaded, weathered or other joint profiles due to their reduced water resistance.
 - b. Tool the mortar joints when they are thumbprint hard to provide the greatest resistance to water penetration and to help minimize hairline cracks between the mortar and the CMU.
3. Cover the top of unfinished masonry work to protect it from the weather and to prevent accumulation of water in the cores of the CMU.
4. Cleaning:
 - a. Remove primary efflorescence from masonry walls exposed in the finished work in accordance with manufacturer's recommendations and NCMA TEK Bulletin #8-3A.
 - b. Remove dirt or stains from masonry walls exposed in the finished work in accordance with the manufacturer's recommendations and NCMA TEK Bulletin #8-2A.
 - c. Promptly remove excess wet mortar containing integral water repellent mortar admixture from the face of the masonry as work progresses. Do not use strong acids, overaggressive sandblasting or high-pressure cleaning methods.
 - d. Comply with applicable environmental laws and restrictions.

3.02 EXAMINATION

A. Site Verification of Conditions:

1. Verify that site conditions are acceptable for use of mortar mixes.
2. Do not proceed with use of mortar mixes until unacceptable conditions are corrected.

3.03 CONSTRUCTION

- A. Mix mortar using a mechanical mortar mixer to ensure homogeneity and workability. Hand mixing of the mortar is permitted only with written approval of the Architect/Specifier who will outline hand-mixing procedures.
 1. Observe mixing times of 4–5 minutes, consistent from batch to batch.
- B. Use clean, potable water; add the maximum amount consistent with optimum workability.
 1. Maintain a uniform water/cement ratio.
 2. At the end of the day, thoroughly rinse the mixer to avoid contamination of future mortar batches.
- C. Re-temper mortar by adding additional mixing water only to replace water lost due to evaporation.
 1. Do not re-temper colored mortars.
- D. Discard mortar 2.5 hours after initial mixing.
- E. Tool mortar joints when surface is thumbprint hard.
 1. Keep tooling time consistent.
 2. Do not strike joint too early or too late in order to maintain color consistency.
- F. Cure mortar a minimum of 28 days.
- G. For masonry core fill grout applications, comply with the requirements of ASTM C476.

3.04 CLEANING

A. Cleaning Method:

1. Clean masonry with the least aggressive cleaning solution and technique possible.
2. Comply with cleaning procedure and recommendations of the manufacturers of both the cleaning solution and the unit masonry.
3. Utilize the same cleaning procedure on the sample panel at selection and during construction.

END OF SECTION