

PART 1 - GENERAL

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| <u>1.1 RELATED REQUIREMENTS</u> | .1 | Replacing Brick - Section 04 03 31. |
| | .2 | Masonry Anchorage and Reinforcing - Section 04 05 19. |
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| <u>1.2 REFERENCES</u> | .1 | Canadian Standards Association (CSA International) |
| | .1 | CAN/CSA-A179-14, Mortar and Grout for Unit Masonry. |
| | .2 | CAN/CSA-A371-14, Masonry Construction for Buildings. |
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| <u>1.3 ACTION AND INFORMATIONAL SUBMITTALS</u> | .1 | Product Data: |
| | .1 | Provide submittals in accordance with Section 01 33 00. |
| | .2 | Provide manufacturer's printed product literature, specifications and datasheets. Include product characteristics, performance criteria, and limitations. |
| | .3 | Provide two copies of Workplace Hazardous Materials Information System (WHMIS) - Material Safety Data Sheets (MSDS) in accordance with Section 01 33 00. |
| | .2 | Samples: |
| | .1 | Samples: provide unit samples in accordance with Section 04 03 31, supplemented as follows: |
| | .1 | Provide two samples of mortar. |
| | .2 | Provide confirmation of source or product data sheet, prior to mixing or preparation of mortars, to Departmental Representative. |
| | .3 | Manufacturer's Instructions: |
| | .1 | Provide manufacturer's installation instructions. |
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| <u>1.4 QUALITY ASSURANCE</u> | .1 | Test Reports: certified test reports including sand gradation tests in accordance with CAN/CSA- A179 showing compliance with specified performance characteristics and physical properties, and in accordance with Section 04 03 31. |
| | .2 | Certificates: product certificates signed by |

manufacturer certifying materials comply with specified performance characteristics and criteria and physical requirements.

- .3 Pre-Installation Meetings: conduct pre-installation meeting to verify project requirements, manufacturer's installation instructions and manufacturer's warranty requirements.

- .4 Mock-ups:

- .1 Construct mock-ups in accordance with Section 04 03 31.

1.5 DELIVERY, STORAGE, AND HANDLING

- .1 Deliver, store and handle masonry mortar materials in accordance with Section 01 33 00, supplemented as follows:

- .1 Deliver prepackaged, dry-blended mortar mix to project site in labelled plastic-lined bags each bearing name and address of manufacturer, production codes or batch numbers, and colour or formula numbers.

- .2 Maintain mortar and packaged materials clean, dry, and protected against dampness, freezing, traffic and contamination by foreign materials.

1.6 SITE CONDITIONS

- .1 Ambient Conditions: maintain materials and surrounding air temperature to:

- .1 Minimum 10 degrees C prior to, during, and 48 hours after completion of masonry work.

- .2 Maximum 32 degrees C prior to, during, and 48 hours after completion of masonry work.

- .2 Weather Requirements: CAN/CSA-A371.

PART 2 - PRODUCTS

2.1 MATERIALS

- .1 Use same brands of materials and source of aggregate for entire project.

- .2 Cement:

- .1 Masonry Cement: to CAN/CSA-A3002 and CAN/CSA-A179, Type S.

- .2 Packaged Dry Combined Materials for mortar: to CAN/CSA-A179, Type S.

- .3 Aggregate: supplied by one supplier.

- .1 Fine Aggregate: to CAN/CSA-A179.
- .2 Course Aggregate: to CAN/CSA-A179.
- .4 Water: clean and potable.

2.4 MORTAR MIXES

- .1 Mortar for exterior masonry above grade:
 - .1 Loadbearing: type S

2.5 MORTAR MIXING

- .1 Use pre-blended, pre-coloured mortar prepackaged under controlled factory conditions. Ingredients batching limitations to be within 1% accuracy.
- .2 Mix mortar ingredients in accordance with CAN/CSA-A179 in quantities needed for immediate use.
- .3 Maintain sand uniformly damp immediately before mixing process.
- .4 Do not use anti-freeze compounds including calcium chloride or chloride based compounds.
- .5 Do not add air entraining admixture to mortar mix.
- .6 Use a batch type mixer in accordance with CAN/CSA-A179.
- .7 Re-temper mortar only within two hours of mixing, when water is lost by evaporation.
- .8 Use mortar within 2 hours after mixing at temperatures of 32°C, or 2-1/2 hours at temperatures under 10 °C.

2.8 MIX TESTS

- .1 Testing Mortar Mix:
 - .1 Test mortar to requirements of Section 01 33 00 and in accordance with CAN/CSA-A179, for mortar based on property specification. Test prior to construction and during construction for:
 - .1 Compressive strength.
 - .2 Consistency.
 - .3 Mortar aggregate ratio.
 - .4 Sand/cement ratio.
 - .5 Water content and water/cement ratio.
 - .6 Air content.
 - .7 Splitting tensile strength.

PART 3 - EXECUTION

<u>3.3 MANUFACTURER'S INSTRUCTIONS</u>	.1	Compliance: comply with manufacturer's written data, including product technical bulletins, product catalogue installation instructions, product carton installation instructions, and data sheets.
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<u>3.4 CONSTRUCTION</u>	.1	Do masonry mortar work in accordance with CAN/CSA-A179 except where specified otherwise.
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<u>3.5 MIXING</u>	.1	All pointing mortar can be mixed using a regular paddle mixer. Only electric motor mixers are permissible. Mixers run on hydrocarbons are not permitted, due to fumes. Mixing by hand must be pre-approved by the Departmental Representative.
	.2	Clean all mixing boards and mechanical mixing machine between batches.
	.3	Mortar must be weaker than the units it is binding.
	.4	Contractor to appoint one individual to mix mortar, for duration of project. In the event that this individual must be changed, mortar mixing must cease until the new individual is trained, and mortar mix is tested.

<u>3.6 MORTAR PLACEMENT</u>	.1	Install mortar to manufacturer's instructions.
	.2	Install mortar to requirements of CAN/CSA-A179.
	.3	Install mortar to requirements of Section 04 03 31.

<u>3.8 FIELD QUALITY CONTROL</u>	.1	Site Tests, Inspection: in accordance with Section 01 33 00 supplemented as follows: .1 Test and evaluate mortar prior to construction and during construction in accordance with CAN/CSA-A179.
	.2	Manufacturer's Field Services: in accordance with

Section 01 33 00.

3.9 CLEANING

- .1 Upon completion of installation, remove surplus materials, rubbish, tools and equipment barriers.
- .2 Remove droppings and splashings using clean sponge and water.
- .3 Clean masonry with low pressure clean water and soft natural bristle brush.

3.10 PROTECTION OF COMPLETED WORK

- .1 Cover completed and partially completed work not enclosed or sheltered with waterproof covering at end of each work day. Anchor securely in position.