

# MORTAR AND GROUT

for Masonry Section 04 06 00



## PART 1 – GENERAL

### 1.1 Related Work

1. Masonry procedures: Section [04050].

### 1.2 References

1. CSA A179-14 Mortar and Grout for Unit Masonry.

### 1.3 Quality Assurance

1. Provide mortar for strength testing in accordance with CSA A179-14.

### 1.4 Submittals

1. Submit technical data sheets on all mortars and grouts as specified.

### 1.5 Site Conditions

1. During cold weather, lower than 5°C, when danger of freezing exists, heat all masonry materials using methods accepted in the industry, in conformance to CSA-A371, and approved by the Consultant.

## PART 2 – PRODUCTS

### 2.1 Materials

1. Mortar and Grout CSA A179-14.
2. Portland Limestone Cement, Type GUL, as specified in CSA A3001-13.
3. Masonry Cement: as specified in CSA A3002-13.
4. Hydrated Lime, ASTM C207, Type 'S'.
5. Sand conforming to CSA A179-14.
6. Water: drinkable and conform to CSA A179-14. It should be exempt from acids, alkalis, oils and organics maters.

### 2.2 Material Source

1. Use same brand of materials for the various types of mortar used throughout the project.

### 2.3 Mortar Types

**NOTE: ALL MORTAR AND GROUT TO BE FACTORY BLENDED SILO PREMIXED BULK OR BAGS.**

1. Mortar for exterior masonry veneer above grade shall be a pre-blended silo/bag mix, Type 'N', 1-1-6, Portland/lime/sand, based on property specification, Maxi-Mix or acceptable alternative.
2. Mortar for all load bearing walls and below grade shall be a pre-blended silo/bag mix, Type 'S', based on the property specification, CSA A179-14, Maxi-Mix or acceptable alternative.
3. Mortar for all non-load bearing walls shall be a pre-blended silo/bag mix, Type 'N', based on the property specification, CSA A179-14, Maxi-Mix or acceptable alternative.

**SPEC NOTE:** If architect is considering using a coloured mortar on the project, include the following subsection.

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### 2.4 Mortar Colour

1. All coloured mortar shall be pre-blended silo/bags at the factory.
2. Colouring pigments shall be in accordance with ASTM C979/C979M. Final colour to be selected by consultant. Allow for loading rate of 6%, (full loading).
3. Acceptable manufacturers; Solomon (SGS), Venator, Interstar Pigments.

### 2.5 Grout Types

1. Block-fill Masonry Grout: CSA-A179-14 Table 7, 20 Mpa, per property specification, unless indicated otherwise on Structural Drawings. Provide a high slump grout on the order of 275 mm.
2. Use coarse grout where required, in spaces 50 mm (2") or more in least horizontal dimension.
3. Use fine grout in spaces less than 50 mm (2") in horizontal dimension.

## PART 3 – EXECUTION

### 3.1 Mixing

1. Do masonry mortar and grout work in accordance with CSA A179-14.
2. Mixing shall be executed with a clean mechanical mixer, or built-in auger mixer, with silo, devoid of dried mortar, rust traces and other contaminants. Do not use salt or antifreezes to thaw the equipment. Mortar shall be mixed manually only if there is no other potential alternative and if the Architect has given prior approval.
3. Follow manufacturer's instructions for proper mixing.
4. All mortar must be used within 2½ hours from initial mixing.
5. Ensure water added to grout is of consistency/fluidity for proper placement on basis of 275 mm slump.
6. Water: drinkable and conform to CSA A179-14. It should be exempt from acids, alkalis, oils and organics materials.

### 3.2 Colour Uniformity

1. In order to ensure the finished product's colour uniformity, the Contractor shall:
  - ① Use water originating from the same source and use the same brand of binders and colouring agents throughout the entire project.
  - ② Avoid adding water on site in order to modify mortar's workability or for tempering.
  - ③ Always execute joint tooling within the same delay after laying of mortar.
  - ④ Tooling of exterior brick and stone mortar joints shall occur at thumbprint hardness, (when the pressure of a thumb leaves only a subtle trace). Masonry contractor must adjust tooling time according to temperature and unit absorption, always performing joint tooling at the same degree of hardness.
  - ⑤ Clean mixer thoroughly if it was recently used for a different mixture, white cement or sand, colour agents, etc.

### 3.3 Cleaning

1. Clean masonry assembly of masonry stains in accordance with manufacturer's instructions.
2. Ensure coloured mortar has sufficiently cured before cleaning.
3. Use masonry cleaner approved by pigment manufacturer, masonry unit manufacturer and architect.
4. Apply cleaner in accordance with cleaner manufacturer's instructions.