

Mortar and Grout for Masonry

Section revised and reissued by Addendum 3

PART 1 - GENERAL

1.1 Summary

- .1 Section includes:
 - .1 Mortar and grout for masonry work.
 - .2 Pigmented mortar at following masonry assemblies:
 - .1 Brick masonry units.

1.2 Submittals

- .1 Submit required submittals in accordance with Section 01 33 00 and Section 04 05 00.
- .2 Test and evaluation reports:
 - .1 Submit test results confirming compliance of aggregates with CAN/CSA A179-14.

PART 2 - PRODUCTS

2.1 Materials

- .1 Mortar and grout: Comply with CAN/CSA A179-14.
- .2 Portland cement: in accordance with CAN/CSA A3001-13, GU (Type 10). For exposed mortar, maintain uniformity of cement manufacturer and batch for colour uniformity.
- .3 Hydrated lime: in accordance with ASTM C207-18, Type S.
- .4 Sand: in accordance with CAN/CSA A179-14.
- .5 Mortar pigment:
 - .1 Mortar colours shall contain pure, concentrated mineral pigments especially processed for mixing into mortar and in accordance with ASTM C979/C979M-16.
 - .2 Allow for blended mortar pigment colours to match each type of masonry veneer.
 - .1 Colours: to be selected by *Consultant*.
 - .2 Loading (% of cementing material):
 - .1 6% (full-loading).
- .6 Aggregate: Natural sand conforming CAN/CSA A179-14, colour, size and texture to match existing.
- .7 Water: Potable, free of deleterious materials.
- .8 Admixtures for the purpose of acceleration, air entraining admixtures, cementitious materials containing air entraining admixtures, calcium chloride or admixtures containing calcium chloride shall not be used.
- .9 Frozen materials or materials mixed or coated with ice or frost shall not be used.

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2.2 Material Source

- .1 Mortar and grout shall be factory prepared premix including sand and colour. Site mixing of bags and sand will not be accepted. Use mortar and grout as supplied by silo batched systems.
- .2 Maintain uniformity of mortar material manufacturers, mortar materials and source of aggregate throughout the *Work*.

2.3 Mortar Types

- .1 Mortar for foundation walls, pavements, walks, patios and other exterior masonry at or below grade: Type S.
- .2 Mortar for exterior masonry above grade; ready (silo) mixed:
 - .1 Loadbearing: Type S.
 - .2 Non-loadbearing: Type N.
 - .3 Mortar for exterior exposed masonry veneer: Type N, Portland Cement/Lime/Sand mix. Portland cement shall consist of a mixture of white and gray cement in order to obtain a colour to match the existing. Mortar to match the colour and texture of the existing mortar.
- .3 Mortar for interior masonry; ready (silo) mixed:
 - .1 Loadbearing: Type S.
 - .2 Non-loadbearing: Type N.

2.4 Mortar Colour

- .1 Mortar colour; for use as indicated, ready (silo) mixed mortar:
 - .1 Except where pigmented mortar is specified or indicated: Control mortar materials and workmanship to produce uniform grey colour (non-pigmented). Colour to match existing.

2.5 Grout Types

- .1 Grout for masonry: Grout in accordance with CAN/CSA A179-14.
 - .1 Compressive strength in accordance with CAN/CSA A179-14 except where indicated otherwise and except as follows:
 - .1 Beneath bearing plates: 35 MPa.
 - .2 Slump: 200 mm (8") unless otherwise indicated.
 - .2 Grout for hollow metal frames: Fine grout in accordance with CAN/CSA A179-14.
 - .1 Compressive strength: 15 MPa minimum.

PART 3 - EXECUTION

3.1 Masonry Procedures

- .1 Masonry procedures shall be in accordance with Section 04 05 00 as supplemented herein.

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- .2 Comply with CAN/CSA A179-14, except where indicated otherwise.

3.2 Measurement and Mixing

- .1 Mix mortars and grout as specified in CAN/CSA A179-14 and pre-batch at factory. Use only dry aggregate. Test for bulking to determine accurate proportioning.
- .2 Adjust water in mortar mix to suit absorption rates of masonry units.
- .3 Concrete grout: mix as required to achieve specified compressive strength.
- .4 Mix cementitious material and aggregate in a mechanical batch mixer for a minimum of 3 minutes with an optimum amount of water to produce a workable consistency.
- .5 Use and place mortar within 2 hours of the initial mixing. Mortars that have stiffened due to evaporation of water may be tempered by adding water to restore the required consistency.

3.3 Grout

- .1 Place and grout reinforcing and bearing in accordance with Section 04 05 00, CAN/CSA A371-14, and as indicated.

3.4 Field Quality Control

- .1 Field tests and inspections:
 - .1 Provide mortar for strength testing in accordance with CAN/CSA A179-14 and Section 01 45 00.
 - .2 For pigmented mortars, in order to maintain uniformity of mortar pigment throughout the *Work*, make visual inspections of cement shade for each cement delivery and compare against future shipments. Cements exhibiting shade differences such that final colour of pigmented mortar will not be uniform throughout the *Work* or will not match the approved sample, shall be rejected and replaced at no additional cost to the *Owner*.

3.5 Protection

- .1 Provide protection where required at mixing areas to prevent damage attributed to materials of this section.

END OF SECTION