

PART 1 - GENERAL

1.1 RELATED SECTIONS

- .1 Section 01 33 00 - Submittal Procedures.
- .2 Section 04 05 00 - Common Work Results for Masonry.
- .3 Section 04 05 19 – Masonry Anchorage and Reinforcing.
- .4 Section 04 21 13 – Brick Masonry.
- .5 Section 04 22 00 – Concrete Unit Masonry.

1.2 REFERENCES

- .1 Canadian Standards Association (CSA International).
 - .1 CAN/CSA-A23.1-09/A23.2-09, Concrete Materials and Methods of Concrete Construction/Methods of Tests and Standard Practices For Concrete.
 - .2 CAN/CSA A179-04(R2009), Mortar and Grout for Unit Masonry.

1.3 SUBMITTALS

- .1 Product Data.
 - .1 Submit manufacturer's printed product literature, specifications and data sheet in accordance with Section 01 33 00 - Submittal Procedures.
 - .2 Submit two copies of WHMIS MSDS - Material Safety Data Sheets in accordance with Section 01 33 00 - Submittal Procedures. Indicate VOC's mortar, grout, parging, colour additives and admixtures.
- .2 Samples.
 - .1 Submit two samples of coloured mortar.

1.4 WASTE MANAGEMENT AND DISPOSAL

- .1 Separate and recycle waste materials in accordance with Section 01 74 21 - Construction/Demolition Waste Management and Disposal.
 - .2 Remove from site and dispose of packaging materials at appropriate recycling facilities.
 - .3 Collect and separate for disposal paper, plastic, polystyrene, corrugated cardboard and packaging material in appropriate on-site for recycling in accordance with Waste Management Plan.
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PART 2 - PRODUCTS

2.1 MATERIALS

- .1 Use same brands of materials and source of aggregate for entire project.
- .2 Cement:
 - .1 Portland Cement: to CAN/CSA-A3000.
 - .2 Masonry Cement: to CAN/CSA-A3002 and CAN/CSA A179.
 - .3 Mortar Cement: to CAN/CSA-A3002 and CAN/CSA A179.
 - .4 Packaged Dry Combined Materials for mortar: to CAN/CSA A179, using gray colour cement.
- .3 Aggregate: supplied by one supplier.
 - .1 Fine Aggregate: to CAN/CSA A179, natural sand.
 - .2 Course Aggregate: to CAN/CSA A179.
- .4 Water: clean and potable.

2.2 COLOUR ADDITIVES

- .1 Use colouring admixture not exceeding 10% of cement content by mass, or integrally coloured masonry cement, to produce coloured mortar to match approved sample. Admixtures to be approved prior to use. Use in accordance with the specific manufacturer's recommendations. Mortar colour sample as selected from manufacturer's standard colour range.
- .2 White mortar: use white masonry cement to produce mortar type specified.

2.3 MORTAR MIXES

- .1 Mortar for exterior masonry above grade:
 - .1 Loadbearing: Type S based on proportion specifications.
 - .2 Non-Loadbearing: Type N based on proportion specifications.
- .2 Following applies regardless of mortar types and uses specified above:
 - .1 Mortar for grouted reinforced masonry: Type S based on proportion specifications.

2.4 MORTAR MIXING

- .1 Add mortar colour in accordance with manufacturer's instructions. Provide uniformity of mix and colouration.
 - .2 Use a batch type mixer in accordance with CAN/CSA A179.
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- .3 Re-temper mortar only within two hours of mixing, when water is lost by evaporation.
- .4 Use mortar within 2 hours after mixing at temperatures of 32 degrees C, or 2-1/2 hours at temperatures under 5 degrees C.

2.5 GROUT MIXES

- .1 Lintels: minimum grout mix 10 to 12.5 MPa strength at 28 days or as otherwise indicated on drawings; 200-250 mm slump; mixed in accordance with CAN/CSA A179.
- .2 Grout: minimum compressive strength of 12.5 MPa at 28 days or as otherwise indicated on drawings. Maximum aggregate size and grout slump: CAN/CSA A179.

2.6 GROUT MIXING

- .1 Mix grout ingredients in quantities needed for immediate use in accordance with CAN/CSA A179.
- .2 Add admixtures in accordance with manufacturer's instructions; mix uniformly.
- .3 Do not use calcium chloride or chloride based admixtures.

PART 3 - EXECUTION

3.1 MANUFACTURER'S INSTRUCTIONS

- .1 Compliance: comply with manufacturer's written data, including product technical bulletins, product catalogue installation instructions, product carton installation instructions, and data sheets.

3.2 CONSTRUCTION

- .1 Do masonry mortar and grout work in accordance with CSA A179 except where specified otherwise.
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3.3 MIXING

- .1 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.

3.4 MORTAR PLACEMENT

- .1 Install mortar to manufacturer's instructions.
- .2 Install mortar to requirements of CAN/CSA A179.
- .3 Remove excess mortar from grout spaces.

3.5 GROUT PLACEMENT

- .1 Install grout in accordance with manufacturer's instructions.
- .2 Install grout in accordance with CAN/CSA A179.
- .3 Work grout into masonry cores and cavities to eliminate voids.
- .4 Do not install grout in lifts greater than 400 mm, without consolidating grout by rodding.
- .5 Do not displace reinforcement while placing grout.

3.6 CLEANING

- .1 Upon completion of installation, remove surplus materials, rubbish, tools and equipment barriers.