

**MANUFACTURER'S SPECIFICATIONS**  
**Section 03330 – LIME CONCRETE**

ST. ASTIER NATURAL HYDRAULIC LIME CONCRETE

**PART 1 – GENERAL**

1.01 General

- A. This section describes the requirements for floors and slabs on grade.

1.02 Products furnished but not installed under this section

- A. [Section 03100 – Concrete Formwork: placement of [joint device] [joint device anchors] in formwork.]

1.03 Related sections

- A. Section [ \_\_\_\_\_ - \_\_\_\_\_ ]: Sidewalks, curbs and gutters.
- B. Section 03100 – Concrete Formwork: Formwork and Accessories.
- C. Section 03200 – Concrete Reinforcement.
- D. Section 03346 – Concrete Floor Finishing.
- E. Section 03370 – Concrete Curing.
- F. Section 05800 – Expansion Control.
- G. Section 09415 – Exterior-Interior LimeStone Mortar Le Décor LimeFloor

1.04 References

- A. ASTM C 33 – Concrete Aggregate.
- B. ASTM C141/C141M - Standard Specification for Hydrated Hydraulic Lime for Structural Purposes.
- C. European Standard

1. EN 459-1 Building Lime – Part 1: Definitions, Specifications and Conformity Criteria
2. EN 459-2 Building Lime – Part 2: Test Methods
3. EN 459-3 Building Lime – Part 3: Conformity Evaluation

1.05 Quality Insurance

- A. Perform work in accordance with ACI 301.

1.06 Submittals

- A. Submit under provisions of Section [01300] [ \_\_\_\_\_ ].
- B. Submit manufacturer's installation instructions.

1.07 Project Record Documents

- A. Accurately record actual locations of embedded utilities and components that are concealed from view.

1.08 Field Samples

- A. Sample Panel: Sufficient size to indicate special treatment or finish required.
- B. Locate [where directed] [ \_\_\_\_\_ ].
- C. Accepted sample panel is considered basis of quality for the finished work. Keep sample panel exposed to view for duration of concrete work.
- D. Accepted panel may [not] remain as part of the Work.

**PART 2 - PRODUCTS**

2.01 Concrete Materials

- A. Lime: St. Astier Natural Hydraulic Lime: NHL 5.
- B. Fine and Coarse Aggregate: ASTM [C33] [C330].
- C. Water: clean and not detrimental to concrete.

- D. Glass Fiber Reinforcement: [ASTM C948] [ \_\_\_\_\_ ]; [ \_\_\_\_\_ ] manufactured by [ \_\_\_\_\_ ].

2.02 Joint Devices and Filler Materials

- A. [Construction Joint Devices: Integral [galvanized steel] [extruded plastic]; [ \_\_\_\_\_ ] inch ([ \_\_\_\_\_ ] mm) thick , formed to tongue and groove profile, [with removable top strip exposing sealant through, ] knockout holes spaced at [6] [ \_\_\_\_\_ ] inches ( [150] [ \_\_\_\_\_ ] mm), ribbed steel spikes with tongue to fit top screed edge; [ \_\_\_\_\_ ] manufactured by [ \_\_\_\_\_ ].]
- B. [Expansion [and Contraction] Joint Devices: ASTM B221 [ \_\_\_\_\_ ] alloy, extruded aluminum; resilient [elastomeric] [vinyl] [neoprene] filler strip with a Shore A hardness of [35] [ \_\_\_\_\_ ] to permit plus or minus [25] [ \_\_\_\_\_ ] percent joint movement with full recovery.]

2.03 Concrete Mixes

- A. Mix in accordance with manufacturer’s recommendations.
- B. Select proportions for concrete in accordance with manufacturer’s instructions.
- C. Provide concrete to the following mix design:

Unit	Measurement
Compressive Strength (28 days)	1,000 psi (7 mpa)
Compressive Strength (6 months)	2,400 psi (17 mpa)
[Glass fiber reinforcement	[ _____ ] percent by volume]
Water/Lime Ratio	3-1/2 Gallon by 66 lbs of lime

**PART 3 – EXECUTION**

3.01 Inspection

- A. Verify site conditions under provisions of Section [01039] [ \_\_\_\_\_ ].
- B. Verify requirements for concrete cover over reinforcement. (1-1/2 inch minimum)

- C. Verify that anchors, seats, plates, reinforcement and other items to be cast into concrete are accurately placed, positioned securely, and will not cause hardship in placing concrete.

### 3.02 Placing Concrete

- A. Place concrete in accordance with manufacturer's instructions.
- B. Notify Architect/Engineer minimum 24 hours prior to commencement of operations.
- C. Ensure reinforcement, inserts, embedded parts, formed joint fillers [, joint devices] and [ \_\_\_\_ ] are not disturbed during concrete placement.
- D. Separate slabs on grade from vertical surfaces with [ \_\_\_\_ ] inch ([ \_\_\_\_ ] mm) thick joint filler.
- E. Install joint devices in accordance with manufacturer's instructions.
- F. Install joint device anchors. Maintain correct position at allow joint cover flush with floor finish.
- G. Maintain records of concrete placement. Record date, location, quantity, air temperature, and test samples taken.
- H. Place concrete continuously between predetermined expansion, control, and construction joints.
- I. [Do not interrupt successive placement; do not permit cold joints to occur.]
- J. Place floor slabs in [checkerboard] [ \_\_\_\_\_ ] pattern indicated.
- K. Screed [floors] [and] [slabs on grade] level, maintaining surface flatness of maximum [1/4] [ \_\_\_\_ ] inch in 10 ft. ([3] [ \_\_\_\_ ] mm / 3 m).

### 3.03 Concrete Finishing

- A. [Finish concrete floor surfaces to requirements of Section \_\_\_\_\_. ]
- B. [Wood float surfaces which will receive [quarry tile] [ceramic tile] [ \_\_\_\_ ] with full bed setting system.]

- C. Steel trowel surfaces which are scheduled to be exposed.
- D. In areas with floor drains, maintain floor elevation at walls; pitch surfaces uniformly to drains [at  $1/8$   $1/4$  [ \_\_\_ ] inch per foot ([10] [20] [ \_\_\_ ] mm per m) nominal] [as indicated on Drawings].

#### 3.04 Curing and Protection

- A. Immediately after placement, protect concrete from premature drying, excessively hot or cold temperatures, and mechanical injury.
- B. Maintain concrete with minimal moisture loss at relatively constant temperature for period necessary for hydration of lime and hardening of concrete.
- C. Cure concrete floor surfaces according to manufacturer's instructions.
- D. Spraying: Spray water over floor slab areas and maintain wet for [7] [ \_\_\_ ] days.

#### 3.05 Schedule