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**Concrete Mix: 5000 High Early Strength**

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**Material Specification**

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**Document History**

Version	Date	Revision Comments
1	July 23, 2024	Initial Release.



## Item Version History

Warehouse Catalog #	Asset Suite #	Version	Date
038-86269	86269	1	7/23/2024



## 1. Introduction

This is a general specification that concrete mix: 5000 high early strength to be used on the distribution system in Puerto Rico. Further information will be provided by LUMA Energy at the time of order placement and will provide information on site specific conditions, quantity, and other requirements. This document includes the general electrical and mechanical characteristics of the equipment/material.

## 2. Special Requirements

Samples shall be furnished as requested by LUMA Energy. Vendors that have supplied this equipment/material to LUMA on previous orders will not have to furnish samples at bid opening. The equipment/material will be received at the LUMA's general warehouse (011) at Palo Seco, Puerto Rico. Shipping will include transportation and unloading at the indicated warehouse.

## 3. Literature

Descriptive and technical literature must be supplied by the vendor at time of bidding. This literature may include, but is not limited to details of material, drawings, documented testing, and instructions for use and installation. Failure to submit documents on time will cause bidder disqualification. If required by LUMA, final drawings shall be submitted by the vendor before the manufacturing and shipping process for approval.

## 4. Compatible with

For compatible manufacturers and models, see Table 1. These models are examples of the equipment/material described in this document and do not represent a preference. LUMA will evaluate equally any models not listed here during any acquisition event.

## 5. Markings

- 5.1. Containers shall be marked outside with LUMA Energy's purchase order and item number.
- 5.2. Packaging labels and tags shall be waterproof.

## 6. Packaging

All equipment/material shall be packaged and marked in such a way as to facilitate handling and protection from damage and that the receiving warehouse can readily identify it and send it, in one complete unit, to a field location without opening crates or boxes to sort items and/or parts.

## 7. Number per package (Logistics)

As requested by LUMA.

## 8. Acceptance criteria

- 8.1. Product shall be manufactured in accordance with the latest issue below (section 8.2). When conflicts occur between purchaser's specifications and the latest issue below, the purchaser's specification shall prevail.
- 8.2. Latest applicable codes, standards, and other regulations:
  - a. ASTM C39 – Standard Test Method for Compressive Strength of Cylindrical Concrete Specimens.
  - b. ASTM C138 – Standard Test Method for Density (Unit Weight), Yield, and Air Content (Gravimetric) of Concrete.
  - c. ASTM C143 – Standard Test Method for Slump of Hydraulic-Cement Concrete.
  - d. ASTM C387 – Standard Specification for Packaged, Dry, Combined Materials for Concrete and High Strength Mortar.
- 8.3. If any other standard different from the ones indicated in this document are used, the supplier must provide information showing compatibility with the required ones.

## 9. Description

- 9.1. Concrete Mix is suitable for any concrete use requiring high early strength and rapid strength gains.
- 9.2. Concrete Mix early strength gain makes it ideal for colder weather applications.
- 9.3. It has a walk-on time of 10 to 12 hours. Can be used for any application requiring concrete in a minimum thickness of 2 in (50 mm), such as slabs, footings, steps, columns, walls, and patios.
- 9.4. Must exceed the compressive strength requirements per ASTM C39 that are:
  - a. 3,500 PSI (24.1 MPa) at seven (7) days.
  - b. 5,000 PSI (34.5 MPa) at twenty-eight (28) days.

## 10. Inspection

The acceptance of any equipment/material shall in no way relieve the vendor from his responsibility to meet all the requirements of this specification, and it would not prevent subsequent rejection if such equipment/materials were found later to be defective.

## 11. Proposal Information

11.1. Submitted proposals must include:

- a. Technical information, tests, and drawings.
- b. Table of Compliance completed by the bidder with reference. (See Appendix 1)

## 12. Table 1: Warehouse and Asset Suite Identification Number

Warehouse Number	Asset Suite	Compatible Manufacturer
038-86269	86269	Quikrete

— End of Specification —



## Appendix



## Appendix 1: Table of Compliance

Line	Criteria	Description	Pass/Fail (P/F)	Comments
1	Specification	The Proponent complies with the corresponding specification document. (4350.341)		
2	Industry Standards	The Proponent complies with the industry standards established in the specification document. (ASTM)		
3	Standard package	As requested by LUMA.		
4	Compressive Strength Requirements	3,500 PSI (24.1 MPa) at seven (7) days		
		5,000 PSI (34.5 MPa) at twenty-eight (28) days		

**NOTE: This table is only a checklist for reference. The compliance shall be with the complete document. Marking a PASS in the table won't be accepted as a compliance without the technical information required to certify it.**











# 4350.341 Quikrete 5000 High Early Strength Concrete Mix (7-23-2024)

Final Audit Report

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