

SECTION 03 34 00
LOW DENSITY CELLULAR CONCRETE FILL (LDCCF)

PART 1 - GENERAL

1.1 SUMMARY

- A. Furnish labor, materials, tools, equipment, and services for Low Density Cellular Concrete Fill (LDCCF), as indicated, in accordance with provisions of Contract Documents.
- B. Work consists of batching, mixing, and placing Low Density Cellular Concrete Fill of density indicated by specifications or as directed by Engineer.
- C. Completely coordinate with work of other trades.

1.2 QUALITY ASSURANCE

- A. ASTM International (ASTM):
 - 1. ASTM C495 Standard Test Method for Compressive Strength of Lightweight Insulating Concrete
 - 2. ASTM C796 Standard Test Method for Foaming Agents for Use in Producing Cellular Concrete Using Preformed Foam
 - 3. ASTM C869 Standard Specification for Foaming Agents Used in Making Preformed Foam for Cellular Concrete
- B. Applicator:
 - 1. Manufacturer trained and approved, experienced, and familiar with requirements and methods for performance of Work.
 - 2. Responsible for developing mix design based on site conditions, batching, mixing, handling, and placing material.

1.3 SUBMITTALS

- A. Product data:
 - 1. Manufacturer's specifications and engineering data required to demonstrate compliance with specified requirements.
 - 2. Product list and approved applicator qualifications.

PART 2 - PRODUCTS

2.1 ACCEPTABLE MANUFACTURERS

- A. Low Density Cellular Concrete Fill:
 - 1. Base:
 - a. Cellular Concrete Solutions
 - 2. Optional:
 - a. Geofill Cellular Concrete
- B. Other manufacturers desiring approval comply with Mayo Clinic Specification Section 01640.

2.2 MATERIALS

- A. Base product: Mearl Geofam Pervious
- B. Portland cement: Comply with ASTM C150, Type I, II, or III.

- C. Expansion material:
 - 1. Cast Density: 30 PCF.
 - 2. Minimum Compressive Strength: 40 PSI.
 - 3. Coefficient of Permeability: 1.0E-1 – 1.0 E-3 cm/sec.
 - 4. Oil Retention: 97 percent, or less.
 - 5. Free draining.
- D. Water: Potable.

PART 3 - EXECUTION

3.1 PRELIMINARY

- A. Examine area and condition under which work is to be preformed.
- B. Do not place in standing water.
- C. Do not place at temperatures lower than 32 DegF or when freezing conditions are expected within 24 HRS.
- D. Verify items to be embedded, if any, are secure.
- E. Correct conditions detrimental to completion of Work.
- F. Do not proceed until satisfactory conditions are established.

3.2 INSTALLATION

- A. Follow approved job site proportioning, mixing, and placing equipment as recommended by manufacturer.
- B. Blend materials according to mix design and convey promptly to location of placement.
 - 1. Avoid excessive handling.
- C. Place in lifts not to exceed 48 IN in depth, or as directed by manufacturer, or underpinning contractor.
- D. Do not backfill or load work until compressive strength of 20 PSI, minimum, is attained.

3.3 TESTING

- A. Wet Density:
 - 1. Check density hourly and adjust mix as required to maintain specified cast density at point of placement.
 - 2. Test compressive strength in accordance with ASTM C495.
 - a. Test four (4) 3"x 6" cylinders for each 100 cubic yards placed.

END OF SECTION