

Special Specification 8015

Flowable Backfill (Materials Only)



1. DESCRIPTION

Furnish flowable backfill material.

2. MATERIALS

Use materials from prequalified sources listed on the Department website. Use materials from non-listed sources only when tested and approved before use. Allow 30 calendar days for the Engineer to sample, test, and report results for non-listed sources. Do not combine approved material with unapproved material.

- 2.1. **Cement.** Furnish cement in accordance with [DMS-4600](#), "Hydraulic Cement."
- 2.2. **Fly Ash.** Furnish fly ash in accordance with [DMS-4610](#), "Fly Ash."
- 2.3. **Chemical Admixtures.** Furnish chemical admixtures in accordance with [DMS-4640](#), "Chemical Admixtures for Concrete." Use specialty type admixtures to enhance the flowability, reduce shrinkage, and reduce segregation by maintaining solids in suspension when necessary. Use and proportion all admixtures in accordance with the manufacturer's recommendations.
- 2.4. **Fine Aggregate.** Provide fine aggregate that will stay in suspension in the mortar to the extent required for proper flow and that meets the gradation requirements and in accordance of Table 1.

Table 1
Aggregate Gradation Chart

Sieve Size	Percent Passing
3/4"	100
#200	0-30

Test fine aggregate gradation in accordance with [Tex-401-A](#).

Plasticity Index (PI) must not exceed 6 when tested in accordance with [Tex-106-E](#).

- 2.5. **Mixing Water.** Use mixing water in accordance with Item 421, "Hydraulic Cement Concrete."
- 2.6. **Mix Design and Properties.** Submit a mix design for approval.
- 2.7. Furnish a mix meeting the requirements and in accordance of Table 2 unless otherwise shown on the plans.

Table 2
Flowable Fill Mix Design Requirements

Property	Excavatable	Non-Excavatable	Test Method
28-day Compressive Strength, ¹ psi	80 to 200	> 200	ASTM D4832
Consistency, ² Min diameter, in.	8		ASTM D6103
Unit Weight, pcf	90 to 125	100 to 145	ASTM D6023
Air Content, %	10 to 30	5 to 15	ASTM D6023

1. Average of two specimens.
2. Mixture must not segregate.

Mix the flowable fill using a central-mixed concrete plant, ready-mix concrete truck, pug mill, or other approved method.

The Engineer will sample and test in accordance to Table 2.

3. MEASUREMENT

This Item will be measured by the cubic yard of material.

4. PAYMENT

Material (Site Delivery). Payment will be made for the materials furnished in accordance with this Item and measured as provided under "Measurement" at the unit price bid for "Flowable Backfill." This price is full compensation for furnishing materials, sampling, loading, hauling, delivery of materials to the site specified in the plans, labor for measuring, and for equipment, labor, tools, and incidentals. Locations will be shown on the plans.