

FROM
Volume Concrete LLC
4230 SE King Rd. #211, Milwaukie, OR 97222 · Family-owned · Greater Portland Metro

October 29, 2026

CDF Pumpable — Controlled Density Fill

This packet covers CDF Pumpable, a controlled density fill (flowable fill / CLSM) designed for approximately 200 psi compressive strength. It is a non-structural, excavatable material for pipe abandonment, trench backfill, void fill, and any application where the material may need to be dug back out. Delivered by barrel truck and placed by line pump.

STRENGTH	SLUMP	W/C	AIR	UNIT WT
~200 psi	8 ± 2"	1.48	None	138 pcf

No air entrainment. Naturally occurring air is typically less than 1.5%. Cement content is 250 lb/cy Type IL from Ash Grove Durkee, Oregon. Water-cement ratio is 1.48. CWT is 2.5.

Attached: CDF Pumpable mix design · Ash Grove Durkee Type IL mill certificate
If this material is tested, send results to billing@volumeconcrete.com.

MIX DESIGN: CDF Pumpable

CDF PUMPABLE — CONTROLLED DENSITY FILL (NO AIR)

Flowable fill / CLSM · Estacada Plant · Line pump

STRENGTH	SLUMP	W/C	UNIT WT	CWT
~200 psi	8 ± 2"	1.48	138 pcf	2.5

MATERIALS · per cubic yard

Material	Source	SG	lbs/yd³	% of Mix
Type IL Cement	Ash Grove · Durkee, Oregon	3.12	250	6.7%
Water	Municipal / ASTM C1602	1.00	370	9.9%
3/8" Aggregate	Estacada Pit	2.65	934	25.0%
Fine Aggregate	Estacada Pit (ASTM C33)	2.52	2,180	58.4%

NOTES

No air entrainment. No water reducer. No accelerator. Total batch weight 3,734 lb/cy. Unit weight 139 pcf (SSD, no air). W/C = 370 / 250 = 1.48. CWT = 2.5.

Non-structural flowable fill. Pipe abandonment and decommissioning, trench backfill, void fill, and any application where the material may need to be excavated later. Designed for approximately 200 psi compressive strength.

DISCLAIMER: This mix is designed to meet the specified compressive strength. Volume Concrete LLC warrants that this material, as batched and delivered, meets the specified design strength when properly placed. Volume Concrete does not warrant in-place strength or long-term performance, as these are dependent on factors outside our control, including placement, weather conditions, and any addition of water or other materials after batching. Delivery beyond the curb line requires a signed waiver. Fresh cementitious material may cause severe skin burns and eye damage. Use PPE. Refer to SDS.

ASH GROVE CEMENT COMPANY



Durkee Plant
33060 Shirttail Creek Rd
Durkee, Oregon 97905
Phone #: (541)-877-2607

Blended Cement Type: IL(10) (HS)

Production Period: April 1, 2026 - April 30, 2026
ASTM C595/C595M
REQUIREMENTS

Date: May 12, 2026

Lot #: DK0526 TIL 10

CHEMICAL		
Item	Spec. Limit	Test Result
Sulfate as SO ₃ (%)	3.0 max ^A	2.9
Loss on ignition (%)	10.0 max	4.6
Equivalent alkali content of portland cement (Na ₂ O _{eq} %) ^E	B	0.62
Limestone (%)	>5 and ≤15	9.6
CaCO ₃ + MgCO ₃ in limestone (%)	70 min	98
Optional information		
Equivalent alkali content of finished cement (Na ₂ O _{eq} %)	B	0.56

PHYSICAL		
Item	Spec. Limit	Test Result
Air content of mortar (volume %)	12 max	4.5
Blaine fineness (m ² /kg)	B	409
Fineness, No. 325 sieve (% retained)	B	1.1
Density (g/cm ³)	B	3.12
Compressive strength (psi)		
1 day	B	2,130
3 days	1,890 min	4,120
7 days	2,900 min	5,840
28 days ^C	3,620 min	7,830
Time of initial setting (Vicat)		
Not less than (minutes)	45	133
Not more than (minutes)	420	
Heat of hydration, C1702/C1702M, (kJ/kg) ^C		
3 days	B	287
Mortar bar expansion, C1038/C1038M, (%) ^C	0.020 max ^D	0.007
Sulfate resistance, C1012/C1012M, (%) ^C		
Expansion at 180 days	0.05 max	0.03

^A Default table maximum may be exceeded if Test Method ASTM C1038/C1038M limit is met.

^B Not applicable.

^C Test results for this production period may not be available and most recent test results provided (some data may be for information only).

^D Required only if percent SO₃ exceeds the limit in Table 1.

^E As per ASTM C1778, Portland Cement is defined as "Clinker + Gypsum" constituents and is to be used for calculating equivalent alkalis in the base cement.



We certify that the above described blended cement, at the time of shipment, meets the chemical and physical requirements of the ASTM C595/C595M Type IL(HS) and AASHTO M240 Blended Hydraulic Cement specifications.

Signature: 
Name: Lucky Mclean

Title: Quality Manager