

## Denver Approved CLSM (Controlled Low Strength Material) for Narrow Trench & Pit backfill. Mix Approval List for 2023

City & County Denver - DOTI - ROWS - Construction Engineering and Inspections, Materials Group

Specifications in MGPEC Item 19 ( mgpec.org) and summarized in Denver Transportation Standards & Details, 2017 version.

Last update was: 10/27/2023

All placements of sand/aggregate flowfill shall be placed at slumps (ASTM C43) of 7 to 10 inches, to allow material to flow and fill voids  
 All placements of flyash based flashfill shall be placed with (ASTM D6103) spreads of 8 inch minimum, or one lift slumps (modified C143) of 7 to 10 inch.  
 Designs are good for two years

Supplier	Mix Number	CLSM Type (Flowfill or Flashfill)	PE S/S Submittal Date	early day psi	7 day psi	28 day psi	RE (Removability Modulus or Indx), need <=1.50 for Flyash based	Notes
On Demand Concrete	QSFF100S	FlowFill	4/4/2023		73	118	1.47	
On Demand Concrete	QSFF2500S	Flowfill Temp Trench Cap	1/8/2023		2805	4,150		place thin, later remove for permanent
On Demand Concrete	QSFF080S	FlowFill	3/11/2021		33	80	1.21	
On Demand Concrete	CDF100C	FlowFill	2/14/2023		59	111	1.5	
On Demand Concrete	QSCAP1500S	FlowFill	3/1/2021		1060	2,580		place thin, later remove for permanent
<b>Metro Mix (Aggregate Industries)</b>								
Martin Marietta	FF0325	FlowFill	6/23/2021			80	1.28	
Martin Marietta	FF1700	FlowFill	6/23/2021			90	1.4	
Flashfill Services	W-100-02	Temp Trench Cap	3/29/2023	720 psi @ 4 hr, 900 psi @ 1 day	930	1050		place thin, later remove for permanent
Flashfill Services	CXIL-40-80	FlashFill	4/27/2023	40 psi @ 1 day	100	140		
Flashfill Services	W-50-50	FlashFill	3/28/2023	40 @ 4 hr, 70 @ 1 day	110	150		
<b>Burnco</b>								
Brannan Ready Mix	500907R	Flow Fill	3/21/2021		37	73	1.38	
<b>Ready Mixed (Brannan)</b>								
Alpha-Omega	alphafillplus	FlowFill	7/14/2020	n/a	70	79	1.4	fast setting
Aggregate Industries	9008000	FlowFill	8/12/2020		n/a	70	n/a	