



January 30, 2023

Kleinfelder Project No: 20233587.001A

Holcim Lightweight Aggregates - Utelite Plant
6375 Three Mile Canyon Road
Coalville, UT 84017

ATTENTION: Mr. Jeff Barrick

SUBJECT: Qualifications Testing of Utelite Crushed Fines Lightweight Aggregate

Dear Mr. Barrick:

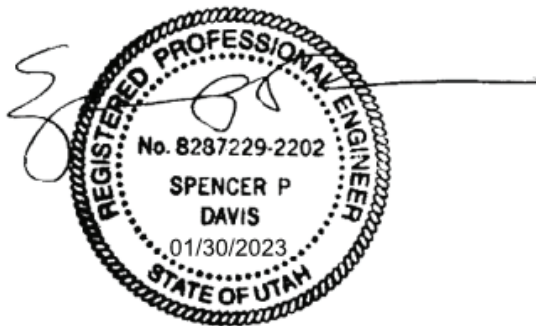
Kleinfelder has performed testing, per your request, to verify the conformance of Utelite Crushed Fines Lightweight Aggregate with ASTM C330-17 "Standard Specification for Lightweight Aggregates for Structural Concrete".

Upon review of the results, the Utelite Crushed Fines Lightweight Aggregates meet C330-17 test requirements for the Calendar Year 2023.

See the following results.

Respectfully Submitted,

KLEINFELDER



Spencer Davis, PE
Principal Geotechnical Engineer

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REPORT of AGGREGATE PHYSICAL PROPERTIES

Project: Holcim Lightweight Aggregates - Utelite Plant

Project No: 20233587.001A

Report Date: 1/27/2023

Client: Holcim - SWR, Inc.

Sampled by: Utelite Plant

Material: Fine Aggregate

Tested by : B. Tripp

Source: Utelite Plant

Reviewed by: K. Lobato

Aggregate Physical Properties

SIEVE ANALYSIS		
ASTM C136	AASHTO T27	
Sieve Size	Accum. % Passing	Specifications
9.5 mm (3/8")	100	100
4.75mm (No. 4)	98	85-100
2.36 mm (No. 8)	80	---
2.00 mm (No. 10)	---	---
1.18mm (No.16)	46	40-80
0.600 mm (No.30)	22	---
0.425mm (No. 40)	---	---
0.300mm (No. 50)	12	10-35
0.150mm (No.100)	7	5-25
0.075mm (No. 200)	3.8	---

TEST RESULTS			
Standard	CHEMICAL and PHYSICAL PROPERTIES	Results	Specification
ASTM C40	Organic Impurities	Color Comparison=	Lighter than Standard
ASTM C641	Staining Index	Stain Index=	20
ASTM C114	Loss on Ignition	Loss, %=	0.14
ASTM C142	Clay Lumps and Friable Particles	Fine Aggregate, %=	0.22
ASTM C29	Bulk Density: Dry Loose Condition	Unit Weight, lbs./cu.ft=	63
ASTM C29	Bulk Density: Saturated Loose Condition	Unit Weight, lbs./cu.ft=	71
ACI 211.2-98	Absorption of Lightweight Fine Aggregate	*Absorption, %=	18.4
ACI 211.2-98	Relative Density of Fine Aggregate (SSD)	Relative Density, (SSD)=	1.835
ASTM C88	Soundness of Aggregtes (Reagent Grade Sodium Sulfate)	Soundness Loss, %=	4
ASTM C88	Soundness of Aggregates (Reagent Magnesium)	Soundness Loss, %=	6

*Absorption is calculated using a minimum soak time of 72-hours