

# ASTM C330 TESTING OF FINE AGGREGATE



Geotechnical & Environmental Sciences Consultants

Client: Nevada Ready Mix  
611 East Bonanza Road  
Las Vegas, Nevada 89106

Attn: Elu Chavez

Date Tested: 2/13/2024

Sampled By: NRM

Material Description: Lightweight Fine Aggregate

Supplier: Holcim Lightweight Aggregates

Project No: 303368005

Source: Utelite Plant

Lab No: LSV-00318

Location: Utelite Plant

Sieve Analysis ASTM C136			Test Results	Spec.
			Specific Gravity - ACI 211.2-98	
			Bulk Specific Gravity	1.525 --
			Bulk Specific Gravity (SSD)	1.886 --
			Absorption, %	19.4 --
			Damp Loose Unit Weight - ASTM C29, PCF	60.0 --
			Dry Loose Unit Weight - ASTM C29, PCF	48.3 70 Max
			Clay Lumps and Friable Particles - ASTM C142, %	0.27 2.0 Max
			Staining Index - ASTM C641	0 < 60
			Loss on Ignition - ASTM C114, %	3.1 < 5%
			Organic Impurities - ASTM C40	<1 Innocuous < 3
			Sodium Sulfate Soundness - ASTM C88, Weighted % Loss	4 12% Max
3/8"	100	100		
# 4	96	85-100	Potential Alkali Silica Reactivity (ASR)	
# 8	73		ASTM C1260	< 0.1 Innocuous < 0.1
# 16	43	40-80		
# 30	23			
# 50	14	10-35		
# 100	9	5-25		
# 200	5.2		Comments: _____	
FM	3.43		_____	

Report By: T. ERBELE

Reviewed By:



February 29, 2024

Mr. Trent Erbele  
Ninyo & Moore  
6700 Paradise Rd. Suite E  
Las Vegas, NV 89119

Phone:  
Email: [terbele@ninyoandmoore.com](mailto:terbele@ninyoandmoore.com)

Subject: **Utelite Lightweight Aggregate**  
**ASTM C641 Iron Staining Testing**  
**Client Project No: 303368005**  
**SGS TEC Services Laboratory No: 24-380**

Mr. Erbele:

SGS, Testing Engineering and Consulting Services (SGS, TEC Services) is an AASHTO R18, ANS/ISO/IEC 17025:2017, and an Army Corps of Engineers accredited laboratory. SGS, TEC Services is pleased to present this report of our testing of on the aggregate samples obtained by Ninyo & Moore. One sample of coarse aggregate and one sample of fine aggregate were received in February of 2024 and identified as Utelite medium lightweight aggregate and Utelite fine lightweight aggregate.

### **Iron Staining**

The staining testing was tested in accordance with ASTM C641-17 *Standard Test Method for Iron Staining Materials in Lightweight Concrete Aggregates*. This test method covers the testing of lightweight concrete aggregates to evaluate the potential degree of staining from iron compounds. The visual classification method was performed at the end of the test procedure in order to evaluate the extent and intensity of the stains on the filter paper. The stain index listed in ASTM C641 ranges from 0 (no stain) to 100 (very heavy stain). ASTM C331-17 states that an aggregate producing a stain index of 60 or higher shall be rejected when the deposited stain is found upon chemical analysis to contain an iron content, expressed as Fe<sub>2</sub>O<sub>3</sub> equal to or greater than 1.5 mg/200 g of sample.

The fine aggregate showed no staining indicating a stain index of 0.  
The coarse aggregate showed no staining indicating a stain index of 0.

We appreciate the opportunity of providing our services to you. If you have any questions pertaining to this report or need any additional information, please do not hesitate to call us.

Sincerely,

**SGS, TEC SERVICES, INC.**



Caleb Howard  
Project Manager



Steven Maloof  
Laboratory Principle/Sr. Project Manager

# Ninyo & Moore

Geotechnical & Environmental Sciences Consultants

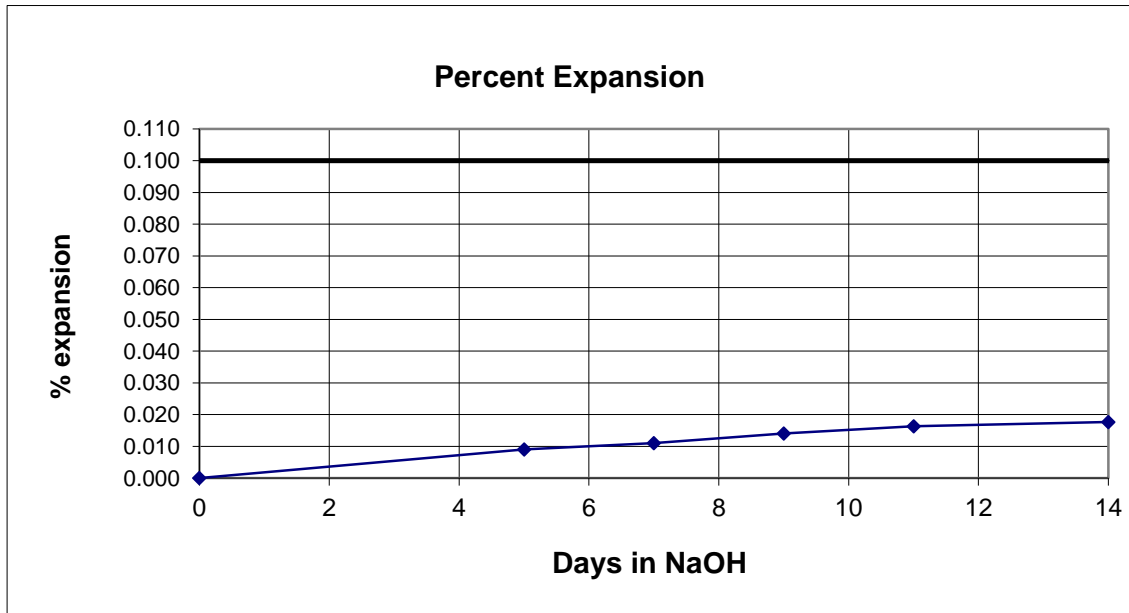
## Report of Potential Alkali Reactivity of Aggregates (Mortar - Bar Method) ASTM C1260

Project:	NEVADA READY MIX	Las Vegas, Nevada	JOB #	303368005	
Mix:	---	Sampled By:	Client	Date:	12/3/2023
Aggregate:	FINE AGGREGATE	Batched By:	TEE	Date:	2/20/2024
Lab #:	LSV-00318	Client Lab #:	-----	PO#:	-----
Sample Source: HOLCIM - UTELITE LIGHTWEIGHT AGGREGATES					
Fly Ash Replacement, % = 0.0			Water/Cement Ratio = 0.47		

Notes:

Days	Percent Expansion			
	Bar 1	Bar 2	Bar 3	Average
0	0.000	0.000	0.000	0.000
5	0.008	0.009	0.010	0.009
7	0.011	0.011	0.011	0.011
9	0.014	0.014	0.014	0.014
11	0.016	0.016	0.017	0.016
14	0.018	0.017	0.018	0.018

Reviewed By: \_\_\_\_\_



**INNOCUOUS:**

< .10%

**INNOCUOUS &  
DELETERIOUS:**

.10% - .20%

**POTENTIALLY DELETERIOUS:**

> .20%