



**AGGREGATE SUBMITTAL**  
**Report of Physical Properties**

GRP Material Description: UTBC UDOT 1.5 Report Date: January 12, 2026  
 GRP Material Code: GRAD Reviewed by: Dan McDaniel  
 Source Location/Code: 588 - Morgan Report No. 588GRAD00126

TEST RESULTS				
Standard	PHYSICAL PROPERTIES		Result	Test Source
ASTM C 29 AASHTO T19	Unit Weight	Unit Weight, lbs./cu.ft. =	122.0	
		Voids, % =	24	
		<input checked="" type="checkbox"/> Jigged	R	
ASTM D1557 AASHTO T180	Modified Proctor	Max. density, lbs./cu.ft. =	143.8	
		Optimum Moisture, % =	5.5	
ASTM D698 AASHTO T99	Standard Proctor	Max. density, lbs./cu.ft. =	140.9	
		Optimum Moisture, % =	5.4	
ASTM D4318 AASHTO T89/90	Liquid Limit Plastic Limit Plasticity Index	Liquid Limit =	0	
		Plastic Limit =	0	
		Plasticity Index =	NP	
ASTM C131 AASHTO T96	L.A. Abrasion	Small Coarse Loss, % =		
		Grading/Revolutions, =		
ASTM C535	L.A. Abrasion	Large Coarse Loss, % =	27	
		Grading/Revolutions, =	A/500	
ASTM C 128 AASHTO T84	Fine Specific Gravity & Absorption	Bulk Specific Gravity (dry) =	2.648	
		Bulk Specific Gravity, SSD =	2.680	
		Apparent Specific Gravity =	2.735	
		Absorption, % =	1.2	
ASTM C 127/128 AASHTO T84/85	Coarse/Fine Specific Gravity & Absorption	Bulk Specific Gravity (dry) =		
		Bulk Specific Gravity, SSD =		
		Apparent Specific Gravity =		
		Absorption, % =		
ASTM D2419 AASHTO T176	Sand Equivalent	Sand Equivalent, % =	19	
ASTM C 88 AASHTO T104	Soundness	Coarse Soundness Loss, % =		
		Sodium No. of Cycles =		
	Soundness	Fine Soundness Loss, % =	2	
		Magnesium No. of Cycles =	5	
ASTM C 1252 AASHTO T304	Fine Aggregate Angularity	Uncompacted Voids, % =		
		Method C (as received material)		
ASTM C40 AASHTO T21	Organic Impurities	Coarse Aggregate, % =		
		Fine Aggregate, % =	Lighter Plate #1	
ASTM C142 AASHTO T112	Clay / Friable Particles	Coarse Aggregate, % =		
		Fine Aggregate, % =	0	
ASTM C123 AASHTO T113	Lightweight Pieces	Coarse Aggregate, % =		
		Fine Aggregate, % =		
ASTM D1883 AASHTO T193	CBR	Surcharge = 10 lbs CBR @ 0.1" =	88	
		Swell% = 0.0% CBR @ 0.2" =	109	
ASTM D5821	Fractured Face	1 or 2 Faces =	1 face = 100	
		Fractured Face, % =	2 face = 99	
ASTM D4972 PH = 9.4	Sulfate Content 10.42 PPM	Direct Shear 41.5		
		Organic Content 0.09%		
Resistivity 6780 ohm*cm	AASHTO T291 Chloride Content 49.11 PPM			

SIEVE ANALYSIS		
ASTM C136	AASHTO T27	
Sieve Size	% Passing	Spec.
450 mm (18")		
375 mm (15")		
300 mm (12")		
250 mm (10")		
225 mm (9")		
200 mm (8")		
150 mm (6")		
125 mm (5")		
100 mm (4")		
75.0 mm (3")		
63.0 mm (2-1/2")		
50.0 mm (2")		
37.5 mm (1-1/2")	100	
25.0 mm (1")	90	81-99
19.0 mm (3/4")	81	72-90
12.5 mm (1/2")	65	56-74
9.5 mm (3/8")	55	46-64
6.3 mm (1/4")		
4.75 mm (No.4)	40	33-47
2.36 mm (No.8)	36	
2.00 mm (No.10)	29	
1.18 mm (No.16)	25	20-30
0.600 mm (No.30)	23	
0.425 mm (No.40)	20	
0.300 mm (No.50)	16	
0.180 mm (No.80)		
0.150 mm (No.100)	13	
0.075 mm (No.200)	10.0	7-13
ASTM D422		
Hydrometer =		
ASTM C566 AASHTO T255		
Moisture Content, % =		
ASTM C136 AASHTO T27		
Fineness Modulus (FM) =		
AASHTO M145		
Classification of Soils = A1A		
ASTM D4791 Ratio =		
Flat & Elongated =		