



Oklahoma Department of Transportation Mix Design Report

Asphalt Concrete, Type S4 (PG 64-22 OK) Mat'l. Code: asco012
 (Material Full Name and Material Code)
 Venture Corporation P/S # m00719
 (Producer/Supplier Name and Producer/Supplier Code)
 Venture Corporation- Portable PLANT ID # m00719-01
 (Plant Name and Plant ID)

Insoluble ID: I1
 (Design Type and Design Type ID)
 WS4qc0411701501
 (Mix ID)

Aggregate	Producer/Supplier	% USED
5/8" Chips	Martin-Marietta (Mill Creek, OK) P/S # m002303502	30
'D' Rock	Martin-Marietta (Mill Creek, OK) P/S # m002303502	10
Scrns.	Martin-Marietta (Mill Creek, OK) P/S # m002303502	12
Man. Sand	Martin Marietta Mill Creek Limestone P/S # m005253504	33
Sand (Unlisted Source)	Larry Hutchinson Sand	15
Warm Mix Asphalt (WMA) Technology: EVOTHERM (Chem. Add.) qual028 Ingevity m00941 (Product Name, Material Code, Producer/Supplier Name, Producer/Supplier Code)		
Asphalt Additive, Anti-Strip: AD-HERE HP-PLUS addi003 ARR-MAZ Products, LP (Winter Haven, FL) m00070 (Product Name, Material Code, Producer/Supplier Name, Producer/Supplier Code)		
Asphalt Cement: Asphaltic Cement Type PG 64-22 OK, acem003, Coastal Energy (Clinton, OK), m01042 (Material Full Name, Material Code, Producer/Supplier Name, Producer/Supplier Code)		

Sieve Size	Producer/Supplier:						Comb. Agg.	%			
	5/8" Chips	'D' Rock	Scrns.	Man. Sand	Sand (Unlisted Source)			JMF	Min.	Max.	Tol. (±)
3/4 in (19 mm)	100	100	100	100	100	100	100	100	100	0	
1/2 in (12.5 mm)	73	100	100	100	100	92	92	85	99	7	
3/8 in (9.5 mm)	43	92	100	100	100	82	82	75	89	7	
#4 (4.75 mm)	4	33	86	100	100	63	63	56	70	7	
#8 (2.36 mm)	3	4	62	95	100	55	55	50	60	5	
#16 (1.18 mm)	2	3	42	55	100	39	39	35	43	4	
#30 (.600 mm)	1	3	33	37	96	31	31	27	35	4	
#50 (.300 mm)	1	2	22	18	71	20	20	16	24	4	
#100 (.150 mm)	1	2	13	11	22	9	9	6	12	3	
#200 (.075 mm)	1.0	1.5	8.5	5.0	5.0	3.9	3.9	1.9	5.9	2	
AC Content %							5.7	5.6	5.2	6.0	0.4
Asphalt Additive, Anti-Strip %							0.5				
Warm Mix Asphalt (WMA) Additive %							0.4				

Requires Form 93-E0 signed by the Department for production use. -Oklahoma D.O.T. Materials-

°F (°C) Required
 Mix temperature @ discharge from mixer: 275 (135) ± 20 °F (± 10 °C)
 Optimum roadway compaction temperature: 230 (110)
 Laboratory mixing temperature: 275 (135)
 Laboratory compaction temperature: 260 (127)

Tests on Aggregates	Required	Units
Durability Index	90	40 min. %
F.A.A. %U	N/A	%
Flat and Elongated	0	10 max. %
Fractured Faces	100/100	85/80 min. %
Insoluble Residue	96.2	30 min. %
LA Abrasion	31	40 max. %
Micro-Deval	12.6	N/A %
Permeability	10.3	12.5 max. 10 ⁻⁵ cm/s
Sand Equivalent	82	40 min. %
Pba	0.15	%
IOC	0.04	%
Gse	2.691	
Gsb	2.680	
Specimen Weight	4750	g

Tests on Asphalt Cement	Found
Specific Gravity @ 77 ° F	1.0100

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Tests on Compressed Mixtures (@ Design AC)			
	% Density		
	# Gyr.	of Gmm	% Density Required
Nini	6	89.7	85.5 - 91.5
Ndes	50		96.0

Tests on Compressed Mixtures								
%AC	Gmb	Gmm	% Density		% VMA	% VMA Required		% VFA
			of Gmm	% Density Required		Design / Field	Design / Field	
5.0	2.339	2.484	94.2	Design / Field	17.1	Design / Field	66.1	% VFA Required
5.5	2.349	2.465	95.3	96.0 / 94.5 - 97.4	17.2	14.5 / 14.0	72.7	72 - 77
6.0	2.362	2.447	96.5		17.2		79.7	

Dust Prop.
 0.8 **Dust Prop. Req.** 0.6 - 1.6
 0.7
 0.7

ITS (PSI) 129.5 N/A min.
TSR 0.87 0.80 / 0.75 min. (Design / Field)
 Compacted Wt. (lbs/sy/1" thick) = 108.3 @ 5.7 % Asphalt Cement

x 1st JMF Revision

Hamburg Rut Test Depth (mm) 2.92 12.50 max. @ 10,000 cycles

MEETS SPECIFICATION REQUIREMENTS PER SPECIAL PROVISION 708-26(a-f) 09

Comments: Revised JMF by contractor: Effective 4/12/2018

Last Modified By: McComack, Hunter J. hmccomac **Date:** 4/25/2018
 (User Name and User ID) (mm/dd/yyyy)