



# Oklahoma Department of Transportation Mix Design Report

Asphalt Concrete, Type S3 (PG 64-22 OK) Mat'l. Code: asco009

Binder - Recycled ID: B2

(Material Full Name and Material Code)  
 Venture Corporation P/S # m00719

(Design Type and Design Type ID)

(Producer/Supplier Name and Producer/Supplier Code)

WS3qc0411800101  
 (Mix ID)

Venture Corporation #5- Portable PLANT ID # m00719-01  
 (Plant Name and Plant ID)

Aggregate	Producer/Supplier	% USED
#67 Rock	Martin Marietta Mill Creek Limestone P/S # m005253504	23
'D' Rock	Martin-Marietta (Mill Creek, OK) P/S # m002303502	22
Man. Sand	Martin-Marietta (Mill Creek, OK) P/S # m002303502	10
Man. Sand	Martin Marietta Mill Creek Limestone P/S # m005253504	10
Sand (Unlisted Source)	Larry Hutchinson Sand	10
Fine R.A.P.	Contractor / Project Site P/S # Contractor	25
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.	% Tol. (±)			
	#67 Rock	'D' Rock	Man. Sand	Man. Sand	Sand (Unlisted Source)	Fine R.A.P.	JMF		Min.	Max.	%	
1 in (25 mm)	100	100	100	100	100	100	100	100	100	100	0	
3/4 in (19 mm)	94	100	100	100	100	100	99	99	92	100	7	
1/2 in (12.5 mm)	51	100	100	100	100	100	98	88	81	95	7	
3/8 in (9.5 mm)	26	95	100	100	100	100	94	80	73	87	7	
#4 (4.75 mm)	4	42	99	100	100	100	74	59	52	66	7	
#8 (2.36 mm)	3	12	82	87	100	100	57	44	39	49	5	
#16 (1.18 mm)	2	7	56	63	100	100	46	35	31	39	4	
#30 (.600 mm)	2	4	33	46	95	100	35	27	23	31	4	
#50 (.300 mm)	2	3	15	30	56	100	22	17	13	21	4	
#100 (.150 mm)	2	2	6	17	13	100	14	8	5	11	3	
#200 (.075 mm)	1.9	1.8	4.4	6.6	4.7	100	9.9	4.9	2.9	6.9	2	
AC Content %								4.7	5.0	4.6	5.4	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-

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
Contabro	90.0	N/A
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	41.6	N/A %
LA Abrasion	31	40 max. %
Micro-Deval	12.6	N/A %
Permeability	10.6	12.5 max. 10 <sup>-5</sup> cm/s
Sand Equivalent	84	40 min. %
Pba	0.14	
IOC	0.09	%
Gse	2.721	
Gsb	2.711	
Specimen Weight	4800	g

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

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	% Density		
	# Gyr.	of Gmm	% Density Required
Nini	6	89.8	85.5 - 91.5
Ndes	50		96.0

Tests on Compressed Mixtures							
%AC	Gmb	Gmm	% Density		% VMA	% VMA Required	% VFA
			of Gmm	% Density Required			
4.2	2.401	2.540	94.5	Design / Field	15.2	Design / Field	63.8 % VFA Required
4.7	2.403	2.520	95.4	96.0 / 94.5 - 97.4	15.5	13.5 / 13.0	70.3 70 - 75
5.2	2.416	2.501	96.6		15.5		78.1

ITS (PSI) 93.9 N/A min.  
 TSR 0.85 0.80 / 0.75 min. (Design / Field)  
 Compacted Wt. (lbs/sy/1" thick) = 110.4 @ 4.7 % Asphalt Cement  
 3.3 % New Asphalt Cement

x 1st JMF Revision

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

Comments: Revised JMF by Contractor: Effective 5/14/18

Last Modified By: Vivanco, David dvivanco  
 (User Name and User ID)

Date: 5/14/2018  
 (mm/dd/yyyy)