



# 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)

Binder - Recycled ID: B2  
 (Design Type and Design Type ID)  
 WS4qc0411790200  
 (Mix ID)

Aggregate	Producer/Supplier	% USED
#67 Rock	APAC-Central #066 (Pawhuska, OK) P/S # m001505703	24
Man. Sand	APAC-Central #066 (Pawhuska, OK) P/S # m001505703	25
Coarse Scrns.	APAC-Central #066 (Pawhuska, OK) P/S # m001505703	8
Chat Sand	Bingham S & G (Baxter Springs, KS) P/S # m001578009	8
Sand (Unlisted Source)	Pond Creek Dry Back Sand, Grant Co.	10
Fine R.A.P.	Venture Corporation	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 | \_\_\_\_\_  
 (Product Name, Material Code, Producer/Supplier Name, Producer/Supplier Code)

Asphalt Cement: | Asphaltic Cement Type PG 64-22 OK, acem003, Valero (Ardmore, OK), m00352  
 (Material Full Name, Material Code, Producer/Supplier Name, Producer/Supplier Code)

Sieve Size	Producer/Supplier:							Comb. Agg.	% Tol. (±)			
	#67 Rock	Man. Sand	Coarse Scrns.	Chat Sand	Sand (Unlisted Source)	Fine R.A.P.	JMF		Min.	Max.	% Tol. (±)	
3/4 in (19 mm)	100	100	100	100	100	100	100	100	100	100	0	
1/2 in (12.5 mm)	69	100	100	100	100	94	91	91	84	98	7	
3/8 in (9.5 mm)	40	100	100	100	100	87	82	82	75	89	7	
#4 (4.75 mm)	6	96	100	99	100	70	69	69	62	76	7	
#8 (2.36 mm)	2	57	80	72	100	50	49	49	44	54	5	
#16 (1.18 mm)	1	29	51	45	99	35	34	34	30	38	4	
#30 (.600 mm)	1	16	35	24	95	26	25	25	21	29	4	
#50 (.300 mm)	1	8	26	12	50	17	15	15	11	19	4	
#100 (.150 mm)	1	6	20	6	14	12	8	8	5	11	3	
#200 (.075 mm)	0.9	4.4	16.9	5.0	4.5	9.8	6.0	6.0	4.0	8.0	2	
AC Content %						4.9	5.2	5.2	4.8	5.6	0.4	

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

Warm Mix Asphalt (WMA) Additive % 0.4

°F (°C) Required  
 Mix temperature @ discharge from mixer: 265 (129) ± 20 °F (± 10 °C)  
 Optimum roadway compaction temperature: 230 (110)  
 Laboratory mixing temperature: 275 (135)  
 Laboratory compaction temperature: 265 (129)

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

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	% Density		
	# Gyr.	of Gmm	% Density Required
Nini	6	87.5	85.5 - 91.5
Ndes	50		96.0

Tests on Aggregates	Required	Units
Durability Index	76	40 min. %
F.A.A. %U		N/A %
Flat and Elongated	1	10 max. %
Fractured Faces	100/100	85/80 min. %
Insoluble Residue		N/A %
LA Abrasion	24	40 max. %
Micro-Deval	12.3	N/A %
Permeability	10.3	12.5 max. 10 <sup>-5</sup> cm/s
Sand Equivalent	69	40 min. %
Pba	0.31	
IOC	0.02	%
Gse	2.645	
Gsb	2.624	
Specimen Weight	4725	g

Tests on Compressed Mixtures					
%AC	Gmm	% Density Required	% VMA Required	% VFA	% VFA Required
		Design / Field	Design / Field		
4.8	2.454	96.0 / 94.5 - 97.4	14.5 / 14.0		72 - 77
5.3	2.436				
5.8	2.418				

  

Dust Prop.		ITS (PSI) 134.7	N/A min.
1.3	Dust Prop. Req.	TSR 0.89	0.80 / 0.75 min. (Design / Field)
1.2	0.6 - 1.6	Compacted Wt. (lbs/sy/1" thick) = 107.3	@ 5.2 % Asphalt Cement
1.1			4.0 % New Asphalt Cement

Hamburg Rut Test Depth (mm) 3.02 #N/A

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

Comments: \_\_\_\_\_

Last Modified By: Suitor, Kevin ksutor  
 (User Name and User ID)

Date: 1/4/2017  
 (mm/dd/yyyy)