



# Oklahoma Department of Transportation Mix Design Report

Asphalt Concrete, Type S3 (PG 64-22 OK) Mat'l. Code: asco009  
 (Material Full Name and Material Code)  
 T & G Const Co P/S # m00566  
 (Producer/Supplier Name and Producer/Supplier Code)  
 T & G Const Co #1 (Lawton, OK) - 400TPH PLANT ID # m00566-01  
 (Plant Name and Plant ID)

Binder ID: B1  
 (Design Type and Design Type ID)  
 WS3qc0591300500  
 (Mix ID)

Aggregate	Producer/Supplier	% USED
#67 Rock	Dolese Co. (Richards Spur, OK) P/S # m002761601	30
3/8" Chips	Dolese Co. (Richards Spur, OK) P/S # m002761601	10
Scrns.	Dolese Co. (Richards Spur, OK) P/S # m002761601	30
Stone Sand	Dolese Co. (Richards Spur, OK) P/S # m002761601	15
Sand (Unlisted Source)	T & G Sand Pit (Snyder, OK)	15

  

Warm Mix Asphalt (WMA) Technology	TEREX (Foaming Process) qual028 Terex Roadbuilding m00801 (Product Name, Material Code, Producer/Supplier Name, Producer/Supplier Code)
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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)
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Sieve Size	Producer/Supplier:					Sand (Unlisted Source)	Comb. Agg.	%			Tol. (±)
	Dolese Co. (Richards Spur, OK) P/S # m002761601	Dolese Co. (Richards Spur, OK) P/S # m002761601	Dolese Co. (Richards Spur, OK) P/S # m002761601	Dolese Co. (Richards Spur, OK) P/S # m002761601	T & G Sand Pit (Snyder, OK)			JMF	Min.	Max.	
#67 Rock	100	100	100	100	100	100	100	100	100	0	
3/8" Chips	94	100	100	100	100	98	98	91	100	7	
Scrns.	57	100	100	100	100	87	90	83	97	7	
Stone Sand	31	94	100	100	100	79	83	76	90	7	
1 in (25 mm)	5	17	89	94	100	59	59	52	66	7	
3/4 in (19 mm)	2	4	51	60	99	40	39	34	44	5	
1/2 in (12.5 mm)	2	2	31	32	98	30	28	24	32	4	
3/8 in (9.5 mm)	2	2	21	17	90	23	22	18	26	4	
#4 (4.75 mm)	2	2	16	9	48	14	13	9	17	4	
#8 (2.36 mm)	1	1	12	5	8	6	6	3	9	3	
#16 (1.18 mm)	1	1	12	5	8	6	6	3	9	3	
#30 (.600 mm)	2	2	16	9	48	14	13	9	17	4	
#50 (.300 mm)	1	1	12	5	8	6	6	3	9	3	
#100 (.150 mm)	1.3	1.3	10.2	3.4	0.8	4.2	4.2	2.2	6.2	2	
#200 (.075 mm)						5.3	4.9	4.5	5.3	0.4	
AC Content %											

Warm Mix Asphalt (WMA) Additive % 2.0

°F (°C) **Required**  
 Mix temperature @ discharge from mixer: 275 (135) ± 20 °F (± 10 °C)  
 Optimum roadway compaction temperature: 260 (127)  
 Laboratory mixing temperature: 325 (163)  
 Laboratory compaction temperature: 300 (149)

Tests on Aggregates	Required	Units
Durability Index	79	40 min. %
F.A.A. %U	N/A	%
Flat and Elongated	0	10 max. %
Fractured Faces	100/100	85/80 min. %
Insoluble Residue	N/A	%
LA Abrasion	25	40 max. %
Micro-Deval	N/A	%
Permeability	7.6	12.5 max. 10 <sup>-5</sup> cm/s
Sand Equivalent	83	40 min. %
Pba	0.86	
IOC	0.32	%
Gse	2.690	
Gsb	2.630	
Specimen Weight	4745	g

<b>Tests on Asphalt Cement</b>	<b>Found</b>
Specific Gravity @ 77 ° F	1.0100

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Tests on Compressed Mixtures (@ Design AC)			
	# Gyr.	% Density of Gmm	% Density Required
Nini	6	87.7	85.5 - 91.5
Ndes	50		96.0

Tests on Compressed Mixtures							
%AC	Gmb	Gmm	% Density		% VMA	% VMA Required	% VFA
			of Gmm	% Density Required			
4.3	2.368	2.510	94.3	Design / Field	13.8	Design / Field	58.7
4.8	2.367	2.491	95.0	96.0 / 94.5 - 97.4	14.3	13.5 / 13.0	65.0
5.3	2.372	2.472	96.0		14.6		70 - 75

**Dust Prop.**  
 1.2 **Dust Prop. Req.** 0.6 - 1.6  
 1.1  
 0.9

**ITS (PSI)** 94.1 N/A min.  
**TSR** 0.80 0.80 / 0.75 min. (Design / Field)  
 Compacted Wt. (lbs/sy/1" thick) = 109.4 @ 5.3 % Asphalt Cement

x 1st JMF Revision

**Hamburg Rut Test Depth (mm)** 10.94 12.50 max. @ 10,000 cycles

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

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

**Last Modified By:** Schratwieser, Edward P. eschratw  
 (User Name and User ID)

**Date:** 12/1/2015  
 (mm/dd/yyyy)