



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)
 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)

Insoluble ID: I1
 (Design Type and Design Type ID)
 WS4qc0591500102
 (Mix ID)

Aggregate	Producer/Supplier	% USED
5/8" Chips	Martin-Marietta (Snyder, OK) P/S # m002323802	24
3/8" Chips	Dolese Co. (Richards Spur, OK) P/S # m002761601	26
Scrs.	Martin-Marietta (Snyder, OK) P/S # m002323802	19
Scrs.	Dolese Co. (Richards Spur, OK) P/S # m002761601	19
Sand (Unlisted Source)	T & G Sand Pit (Snyder, OK)	12
Warm Mix Asphalt (WMA) Technology — TEREX (Foaming Process) qual028 Terex Roadbuilding m00801 (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:					Sand (Unlisted Source)	Comb. Agg.	%			
	Martin-Marietta (Snyder, OK) P/S # m002323802	Dolese Co. (Richards Spur, OK) P/S # m002761601	Martin-Marietta (Snyder, OK) P/S # m002323802	Dolese Co. (Richards Spur, OK) P/S # m002761601	T & G Sand Pit (Snyder, OK)			JMF	Min.	Max.	Tol. (±)
5/8" Chips	100	100	100	100	100	100	100	100	100	0	
3/8" Chips	91	100	100	100	100	98	98	91	100	7	
Scrs.	61	97	100	100	100	90	90	83	97	7	
Scrs.	10	26	97	84	100	56	56	49	63	7	
Sand (Unlisted Source)	3	4	73	55	99	38	38	33	43	5	
3/4 in (19 mm)	2	2	52	35	98	29	29	25	33	4	
1/2 in (12.5 mm)	1	2	37	24	90	23	23	19	27	4	
3/8 in (9.5 mm)	1	2	26	17	44	14	14	10	18	4	
#4 (4.75 mm)	1	1	17	13	7	7	7	4	10	3	
#8 (2.36 mm)	0.1	1.1	10.9	10.5	0.8	4.5	4.5	2.5	6.5	2	
#16 (1.18 mm)						5.3	4.8	4.4	5.2	0.4	
#30 (.600 mm)											
#50 (.300 mm)											
#100 (.150 mm)											
#200 (.075 mm)											
AC Content %											

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

Warm Mix Asphalt (WMA) Additive % 2.0

Mix temperature @ discharge from mixer: 175 (79) ± 20 °F (± 10 °C) **Required**
 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	47.4	30 min. %
LA Abrasion	25	40 max. %
Micro-Deval	14.7	N/A %
Permeability	5.3	12.5 max. 10 ⁻⁵ cm/s
Sand Equivalent	85	40 min. %
Pba	0.67	%
IOC	0.18	%
Gse	2.650	
Gsb	2.604	
Specimen Weight	4700	g

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

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Tests on Compressed Mixtures (@ Design AC)			
	# Gyr.	% Density of Gmm	% Density Required
Nini	6	88.0	85.5 - 91.5
Ndes	50		96.0

Tests on Compressed Mixtures						
%AC	Gmb	Gmm	% Density of Gmm	% Density Required	% VMA	% VMA Required
4.8	2.331	2.458	94.8	Design / Field	14.8	Design / Field
5.3	2.343	2.440	96.0	96.0 / 94.5 - 97.4	14.8	14.5 / 14.0
5.8	2.367	2.422	97.7		14.4	73.0
						72 - 77
						84.0

ITS (PSI) 91 N/A min.
 TSR 0.86 0.80 / 0.75 min. (Design / Field)
 Dust Prop. 1.1 Dust Prop. Req. 0.6 - 1.6
 1.0
 0.9
 Compacted Wt. (lbs/sy/1" thick) = 108.1 @ 5.3 % Asphalt Cement

xx 2nd JMF Revision Hamburg Rut Test Depth (mm) 4.00 12.50 max. @ 10,000 cycles

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

Comments: REVISED (AC) Effective 5/16/16 per contractor's request.
 REVISED (AC) Effective 11/8/16 per contractor's request.

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

Date: 11/8/2016
 (mm/dd/yyyy)