



Oklahoma Department of Transportation Mix Design Report

Asphalt Concrete, Type S4 (PG 70-28 OK) Mat'l. Code: asco011

Insoluble ID: I1

(Material Full Name and Material Code)

(Design Type and Design Type ID)

T & G Const Co P/S # m00566

WS4qc0591600300

(Producer/Supplier Name and Producer/Supplier Code)

(Mix ID)

T & G Const Co #1 (Lawton, OK) - 400TPH PLANT ID # m00566-01

(Plant Name and Plant ID)

Aggregate	Producer/Supplier	% USED
5/8" Chips	Martin-Marietta (Snyder, OK) P/S # m002323802	26
3/8" Chips	Dolese Co. (Richards Spur, OK) P/S # m002761601	20
C-33 Scrns.	Martin-Marietta (Snyder, OK) P/S # m002323802	15
Scrns.	Dolese Co. (Richards Spur, OK) P/S # m002761601	25
Sand (Unlisted Source)	T & G Sand Pit (Headrick, Ok.	14
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 70-28 OK, acem002, Valero (Ardmore, OK), m00352 (Material Full Name, Material Code, Producer/Supplier Name, Producer/Supplier Code)		

Sieve Size	Producer/Supplier:						Comb. Agg.	Requirements			% Tol. (±)
	5/8" Chips	3/8" Chips	C-33 Scrns.	Scrns.	Sand (Unlisted Source)			JMF	Min.	Max.	
3/4 in (19 mm)	100	100	100	100	100	100	100	100	100	0	
1/2 in (12.5 mm)	93	100	100	100	100	98	98	91	100	7	
3/8 in (9.5 mm)	61	96	100	100	100	89	89	82	96	7	
#4 (4.75 mm)	10	25	97	84	100	57	57	50	64	7	
#8 (2.36 mm)	3	3	75	55	99	40	40	35	45	5	
#16 (1.18 mm)	2	2	46	35	98	30	30	26	34	4	
#30 (.600 mm)	1	1	24	24	90	23	23	19	27	4	
#50 (.300 mm)	1	1	9	17	44	12	12	8	16	4	
#100 (.150 mm)	1	1	3	13	7	5	5	2	8	3	
#200 (.075 mm)	0.6	1.0	1.0	10.5	0.8	3.2	3.2	1.2	5.2	2	
AC Content %						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 %

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 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	7	88.4	85.5 - 90.5
Ndes	65		96.0

Tests on Aggregates	Required	Units
Durability Index	79	40 min. %
F.A.A. %U	N/A	%
Flat and Elongated	1	10 max. %
Fractured Faces	100/100	95/90 min. %
Insoluble Residue	50.6	40 min. %
LA Abrasion	25	40 max. %
Micro-Deval		N/A %
Permeability	0.3	12.5 max. 10 ⁻⁵ cm/s
Sand Equivalent	82	45 min. %
Pba	0.59	
IOC	0.19	%
Gse	2.659	
Gsb	2.618	
Specimen Weight	4725	g

Tests on Compressed Mixtures								
%AC	Gmb	Gmm	% Density of Gmm	% Density Required	% VMA	% VMA Required	% VFA	% VFA Required
4.8	2.333	2.466	94.6	Design / Field	15.2	Design / Field	64.5	72 - 77
5.3	2.360	2.447	96.4	96.0 / 94.5 - 97.4	14.6	14.5 / 14.0	75.3	
5.8	2.384	2.429	98.1		14.2		86.6	

Dust Prop.	0.8	Dust Prop. Req. 0.6 - 1.6	ITS (PSI)	78.1	N/A min.
	0.7		TSR	0.92	0.80 / 0.75 min. (Design / Field)
	0.6		Compacted Wt. (lbs/sy/1" thick) = 107.8 @ 5.2 % Asphalt Cement		

Hamburg Rut Test Depth (mm) 5.76 12.50 max. @ 15,000 cycles

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

Comments:

Last Modified By:

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(User Name and User ID)

Date: 6/27/2017
(mm/dd/yyyy)