Version: V03.40

Oklahoma Department of Transportation Mix Design Report

Asphalt Concrete, RIL (PG 76-28 E) Mat'l. Code: asco043
(Material Full Name and Material Code)

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

T & G Const Co P/S # m00566
(Producer/Supplier Name and Producer/Supplier Code)

RIqc0591300100
(Mix ID)

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

Aggregate	Producer/Supplier	% USED
3/8" Chips	Dolese Co. (Richards Spur, OK) P/S # m002761601	35
Scrns.	Dolese Co. (Richards Spur, OK) P/S # m002761601	25
C-33 Scrns.	Martin-Marietta (Snyder, OK) P/S # m002323802	25
Sand (Unlisted Source)	T & G Sand Pit (Snyder Ok.)	15

Asphalt Cement: Asphaltic Cement Type PG 76-28 E, acem008, Lion Oil (Muskogee, OK), m00332
(Material Full Name, Material Code, Producer/Supplier Name, Producer/Supplier Code)

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

Sieve Size	Producer/Supplier: Dolese Co. (Richards Spur, OK) P/S # m002761601 — 3/8" Chips	Dolese Co. (Richards Spur, OK) P/S # m002761601 — Scrns.	Martin-Marietta (Snyder, OK) P/S # m00232802 — C-33 Scrns.	T & G Sand Pit (Snyder Ok.) — Sand (Unlisted Source)					Comb. Agg.	JMF	Min.	Max.	% Tol. (±)
1/2 in (12.5 mm)	100	100	100	100					100	**100**	100	100	0
3/8 in (9.5 mm)	94	100	100	100					98	**98**	91	100	7
#4 (4.75 mm)	17	89	98	100					68	**68**	61	75	7
#8 (2.36 mm)	4	51	72	99					47	**47**	42	52	5
#16 (1.18 mm)	4	31	45	98					35	**35**	31	39	4
#30 (.600 mm)	2	21	25	90					26	**26**	22	30	4
#50 (.300 mm)	2	16	14	48					15	**15**	11	19	4
#100 (.150 mm)	1	12	5	8					6	**6**	3	9	3
#200 (.075 mm)	1.3	10.2	2.4	0.8					3.7	**3.7**	1.7	5.7	2
AC Content %									6.1	**6.1**	5.7	6.5	0.4

	°F (°C)	Required
Mix temperature @ discharge from mixer:	325 (163)	± 20 °F (± 10 °C)
Optimum roadway compaction temperature:	305 (152)	
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
Ndes	50		97.0

Tests on Aggregates		Required		Units
Durability Index	76	40	min.	%
F.A.A. %U	45	N/A		%
Flat and Elongated	0	10	max.	%
Fractured Faces	100/100	98/95	min.	%
Insoluble Residue		N/A		%
LA Abrasion	26	40	max.	%
Micro-Deval	12.7	25	max.	%
Permeability	4	12.5	max.	10^{-5}cm/s
Sand Equivalent	81	50	min.	%
IOC	0.35			%
Gse	2.667			
Gsb	2.617			
Specimen Weight	4740			g

Tests on Compressed Mixtures

%AC	Gmb	Gmm	% Density of Gmm	% Density Required	% VMA	% VMA Required	% VFA
5.4	2.332	2.450	95.2	Design / Field	15.7	Design / Field	69.4
5.9	2.345	2.432	96.4	97.0 / 95.5 - 98.4	15.7	15.0 / 14.5	77.1
6.4	2.369	2.414	98.1		15.3		87.6

Dust Prop.
0.8
0.7
0.6

Dust Prop. Req. 0.4 - 1.9

ITS (PSI) 91.1 N/A min.
TSR 0.88 0.80 / 0.75 min. (Design / Field)
Compacted Wt. (lbs/sy/1" thick) = 107.8 @ 6.1 % Asphalt Cement

Hamburg Rut Test Depth (mm) 12.11 12.50 max. @ 20,000 cycles

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

Comments:

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(User Name and User ID)

Date: 6/25/2013
(mm/dd/yyyy)