Version: V03.40

Oklahoma Department of Transportation Mix Design Report

Asphalt Concrete, Type S4 (PG 76-28 OK) Mat'l. Code: asco010
(Material Full Name and Material Code)

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

Circle S Paving P/S # m00555
(Producer/Supplier Name and Producer/Supplier Code)

S4pv0261700700
(Mix ID)

Circle S Paving (Clinton, OK) - 200TPH PLANT ID # m00555-01
(Plant Name and Plant ID)

Aggregate	Producer/Supplier	% USED
5/8" Chips	Martin-Marietta (Snyder, OK) P/S # m002323802	22
3/8" Chips	Dolese Co (Cooperton, OK) P/S # m002723801	17
Scrns.	Dolese Co (Cooperton, OK) P/S # m002723801	25
Man. Sand	Martin-Marietta (Snyder, OK) P/S # m002323802	25
Sand (Unlisted Source)	McClemore Sand @ Elk City, OK	11

Asphalt Cement: Asphaltic Cement Type PG 76-28 OK, acem001, HollyFrontier (Catoosa, OK), m01028
(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-

Producer/Supplier:	Martin-Marietta (Snyder, OK) P/S # m002323802	Dolese Co (Cooperton, OK) P/S # m002723801	Dolese Co (Cooperton, OK) P/S # m002723801	Martin-Marietta (Snyder, OK) P/S # m002323802	McClemore Sand @ Elk City, OK								
Sieve Size	5/8" Chips	3/8" Chips	Scrns.	Man. Sand	Sand (Unlisted Source)				Comb. Agg.	JMF	Min.	Max.	% Tol. (±)
3/4 in (19 mm)	100	100	100	100	100				100	100	100	100	0
1/2 in (12.5 mm)	88	100	100	100	100				97	97	90	100	7
3/8 in (9.5 mm)	57	97	100	100	100				90	90	83	97	7
#4 (4.75 mm)	4	12	98	96	99				62	62	55	69	7
#8 (2.36 mm)	1	2	67	67	98				45	45	40	50	5
#16 (1.18 mm)	1	1	44	39	97				32	32	28	36	4
#30 (.600 mm)	1	1	31	22	88				23	23	19	27	4
#50 (.300 mm)	1	1	23	10	40				13	13	9	17	4
#100 (.150 mm)	1	1	18	3	14				7	7	4	10	3
#200 (.075 mm)	1.0	1.0	14.3	1.2	5.6				4.9	4.9	2.9	6.9	2
AC Content %									5.1	5.1	4.7	5.5	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

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

Tests on Compressed Mixtures (@ Design AC)

	# Gyr.	% Density of Gmm	% Density Required
Nini	8	88.2	85.5 - 89.0
Ndes	80		96.0

Tests on Aggregates		Required		Units
Durability Index	80	40	min.	%
F.A.A. %U		N/A		%
Flat and Elongated	0	10	max.	%
Fractured Faces	100/100	98/95	min.	%
Insoluble Residue	54.7	40	min.	%
LA Abrasion	26	40	max.	%
Micro-Deval	9.8	25	max.	%
Permeability	3.8	12.5	max.	10^{-5}cm/s
Sand Equivalent	76	50	min.	%
IOC	0.40			%
Gse	2.669			
Gsb	2.623			
Specimen Weight	4805			g

Tests on Compressed Mixtures

%AC	Gmb	Gmm	% Density of Gmm	% Density Required	% VMA	% VMA Required	% VFA	% VFA Required
4.8	2.354	2.474	95.1	Design / Field	14.6	Design / Field	66.4	
5.3	2.370	2.455	96.5	96.0 / 94.5 - 97.4	14.4	14.5 / 14.0	75.7	72 - 77
5.8	2.387	2.437	97.9		14.3		85.3	

Dust Prop.	Dust Prop. Req.
1.2	0.6 - 1.6
1.0	
0.9	

ITS (PSI) 141.9 75 min.
TSR 0.83 0.80 / 0.75 min. (Design / Field)
Compacted Wt. (lbs/sy/1" thick) = 108.3 @ 5.1 % Asphalt Cement

Hamburg Rut Test Depth (mm) 1.76 12.50 max. @ 20,000 cycles

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

Comments:

Last Modified By: Williams, Bobby Ray bwilli01
(User Name and User ID)

Date: 4/21/2017
(mm/dd/yyyy)