Version: V03.50

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)

Caswell Contracting Inc. P/S # m00551
(Producer/Supplier Name and Producer/Supplier Code)

S4pv0441801000
(Mix ID)

Caswell Contracting (Elk City, OK) - 350TPH PLANT ID # m00551-02
(Plant Name and Plant ID)

Aggregate	Producer/Supplier	% USED
5/8" Chips	Martin-Marietta (Snyder, OK) P/S # m002323802	45
Man. Sand	Martin-Marietta (Snyder, OK) P/S # m002323802	10
Scrns.	Martin-Marietta (Snyder, OK) P/S # m002323802	35
Sand (Unlisted Source)	McLemore Sand (Elk City, OK)	10

Asphalt Cement: Asphaltic Cement Type PG 76-28 OK, acem001, Coastal Energy (Clinton, OK), m01042
(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	Martin-Marietta (Snyder, OK) P/S # m002323802	Martin-Marietta (Snyder, OK) P/S # m002323802	McLemore Sand (Elk City, OK)									
Sieve Size	5/8" Chips	Man. Sand	Scrns.	Sand (Unlisted Source)					Comb. Agg.	JMF	Min.	Max.	% Tol. (±)
3/4 in (19 mm)	100	100	100	100					100	**100**	100	100	0
1/2 in (12.5 mm)	88	100	100	100					95	**95**	88	100	7
3/8 in (9.5 mm)	57	100	100	100					81	**81**	74	88	7
#4 (4.75 mm)	7	95	98	100					57	**57**	50	64	7
#8 (2.36 mm)	1	70	73	99					43	**43**	38	48	5
#16 (1.18 mm)	1	44	43	98					30	**30**	26	34	4
#30 (.600 mm)	1	26	30	87					22	**22**	18	26	4
#50 (.300 mm)	1	13	23	37					14	**14**	10	18	4
#100 (.150 mm)	1	5	17	14					8	**8**	5	11	3
#200 (.075 mm)	0.3	2.6	10.3	5.6					4.6	**4.6**	2.6	6.6	2
AC Content %									4.9	**4.9**	4.5	5.3	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
Nini	8	88.5	85.5 - 89.0
Ndes	80		96.0

Tests on Aggregates		Required		Units
Contabro		N/A		%
Durability Index	89	40	min.	%
F.A.A. %U		N/A		%
Flat and Elongated	3	10	max.	%
Fractured Faces	100/100	98/95	min.	%
Insoluble Residue	99	40	min.	%
LA Abrasion	20	40	max.	%
Micro-Deval	3.1	25	max.	%
Permeability	12.3	12.5	max.	10^{-5}cm/s
Sand Equivalent	81	50	min.	%
IOC	0.06			%
Gse	2.632			
Gsb	2.607			
Specimen Weight	4720			g

Tests on Compressed Mixtures

%AC	Gmb	Gmm	% Density of Gmm	% Density Required Design / Field	% VMA	% VMA Required Design / Field	% VFA	% VFA Required
4.5	2.332	2.455	95.0		14.6		65.8	
5.0	2.345	2.436	96.3	96.0 / 94.5 - 97.4	14.5	14.5 / 14.0	74.5	72 - 77
5.5	2.360	2.418	97.6		14.5		83.4	

Dust Prop.	Dust Prop. Req.
1.1	0.6 - 1.6
1.0	
0.9	

ITS (PSI) 126.5 75 min.
TSR 0.88 0.80 / 0.75 min. (Design / Field)
Compacted Wt. (lbs/sy/1" thick) = 107.3 @ 4.9 % Asphalt Cement

Hamburg Rut Test Depth (mm) 1.42 12.50 max. @ 20,000 cycles

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

Comments:

Last Modified By: Smith, Jerry D. jsmith
(User Name and User ID)

Date: 7/11/2018
(mm/dd/yyyy)