Version: V03.40

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)

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

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

S4pv0111390301
(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	35
C-33 Scrns.	Martin-Marietta (Snyder, OK) P/S # m002323802	20
Scrns.	Dolese Co (Cooperton, OK) P/S # m002723801	30
Sand (Unlisted Source)	McLemore Pit (Elk City, OK)	15

Asphalt Cement: Asphaltic Cement Type PG 64-22 OK, acem003, 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	Dolese Co (Cooperton, OK) P/S # m002723801	McLemore Pit (Elk City, OK)										
Sieve Size	5/8" Chips	C-33 Scrns.	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)	90	100	100	100					97	97	90	100	7	
3/8 in (9.5 mm)	65	100	100	100					88	88	81	95	7	
#4 (4.75 mm)	13	93	92	100					66	66	59	73	7	
#8 (2.36 mm)	3	67	63	100					48	48	43	53	5	
#16 (1.18 mm)	2	45	42	98					37	37	33	41	4	
#30 (.600 mm)	1	28	29	88					28	28	24	32	4	
#50 (.300 mm)	1	14	20	36					15	15	11	19	4	
#100 (.150 mm)	1	6	15	13					8	8	5	11	3	
#200 (.075 mm)	0.7	3.0	11.3	5.6					5.1	5.1	3.1	7.1	2	
AC Content %									5.4	5.0	4.6	5.4	0.4	x

	°F (°C)	Required
Mix temperature @ discharge from mixer:	305 (152)	± 20 °F (± 10 °C)
Optimum roadway compaction temperature:	290 (143)	
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	6	89.0	85.5 - 91.5
Ndes	50		96.0

Tests on Aggregates		Required		Units
Durability Index	81	40	min.	%
F.A.A. %U		N/A		%
Flat and Elongated	0	10	max.	%
Fractured Faces	100/100	85/80	min.	%
Insoluble Residue	78.4	30	min.	%
LA Abrasion	25	40	max.	%
Micro-Deval	19.6	N/A		%
Permeability	0.9	12.5	max.	10^{-5}cm/s
Sand Equivalent	77	40	min.	%
IOC	0.19			%
Gse	2.646			
Gsb	2.591			
Specimen Weight	4675			g

Tests on Compressed Mixtures

%AC	Gmb	Gmm	% Density of Gmm	% Density Required	% VMA	% VMA Required	% VFA	
4.8	2.305	2.455	93.9	Design / Field	15.3	Design / Field	60.1	% VFA Required
5.3	2.330	2.437	95.6	96.0 / 94.5 - 97.4	14.8	14.5 / 14.0	70.3	72 - 77
5.8	2.350	2.419	97.1		14.6		80.1	

Dust Prop.	Dust Prop. Req.
1.3	0.6 - 1.6
1.1	
1.0	

ITS (PSI) 95.8 N/A min.
TSR 0.86 0.80 / 0.75 min. (Design / Field)
Compacted Wt. (lbs/sy/1" thick) = 107.7 @ 5.4 % Asphalt Cement

x 1st JMF Revision

Hamburg Rut Test Depth (mm) 5.53 12.50 max. @ 10,000 cycles

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

Comments:

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

Date: 2/4/2015
(mm/dd/yyyy)