Version: V03.40

Oklahoma Department of Transportation Mix Design Report

Asphalt Concrete, Type S3 (PG 64-22 OK) Mat'l. Code: asco009
(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)

S3pv0111390200
(Mix ID)

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

Aggregate	Producer/Supplier	% USED
3/4" Chips	Dolese Co (Cooperton, OK) P/S # m002723801	18
5/8" Chips	Martin-Marietta (Snyder, OK) P/S # m002323802	23
C-33 Scrns.	Martin-Marietta (Snyder, OK) P/S # m002323802	23
Scrns.	Dolese Co (Cooperton, OK) P/S # m002723801	24
Sand (Unlisted Source)	McLemore Pit (Elk City, OK)	12

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:	Dolese Co (Cooperton, OK) P/S # m002723801	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	3/4" Chips	5/8" Chips	C-33 Scrns.	Scrns.	Sand (Unlisted Source)				Comb. Agg.	JMF	Min.	Max.	% Tol. (±)
1 in (25 mm)	100	100	100	100	100				100	**100**	100	100	0
3/4 in (19 mm)	100	100	100	100	100				100	**100**	93	100	7
1/2 in (12.5 mm)	30	90	100	100	100				85	**85**	78	92	7
3/8 in (9.5 mm)	4	65	100	100	100				75	**75**	68	82	7
#4 (4.75 mm)	1	13	93	92	100				59	**59**	52	66	7
#8 (2.36 mm)	1	3	67	63	100				43	**43**	38	48	5
#16 (1.18 mm)	1	2	45	42	98				33	**33**	29	37	4
#30 (.600 mm)	1	1	28	29	88				24	**24**	20	28	4
#50 (.300 mm)	1	1	14	20	36				13	**13**	9	17	4
#100 (.150 mm)	1	1	6	15	13				7	**7**	4	10	3
#200 (.075 mm)	0.4	0.7	3.0	11.3	5.6				4.3	**4.3**	2.3	6.3	2
AC Content %									4.8	**4.8**	4.4	5.2	0.4

	°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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-Oklahoma D.O.T. Materials-

Tests on Compressed Mixtures (@ Design AC)

	# Gyr.	% Density of Gmm	% Density Required
Nini	6	89.2	85.5 - 91.5
Ndes	50		96.0

Tests on Aggregates		Required		Units
Durability Index	83	40	min.	%
F.A.A. %U		N/A		%
Flat and Elongated	0	10	max.	%
Fractured Faces	100/100	85/80	min.	%
Insoluble Residue	52.9	30	min.	%
LA Abrasion	25	40	max.	%
Micro-Deval	16.4	N/A		%
Permeability	5.7	12.5	max.	10^{-5}cm/s
Sand Equivalent	77	40	min.	%
IOC	0.21			%
Gse	2.665			
Gsb	2.618			
Specimen Weight	4775			g

Tests on Compressed Mixtures

%AC	Gmb	Gmm	% Density of Gmm	% Density Required Design / Field	% VMA	% VMA Required Design / Field	% VFA	% VFA Required
4.3	2.334	2.490	93.7	96.0 / 94.5 - 97.4	14.7	13.5 / 13.0	57.1	70 - 75
4.8	2.367	2.471	95.8		13.9		69.8	
5.3	2.391	2.452	97.5		13.5		81.5	

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

ITS (PSI) 175 N/A min.
TSR 0.91 0.80 / 0.75 min. (Design / Field)
Compacted Wt. (lbs/sy/1" thick) = 108.7 @ 4.8 % Asphalt Cement

Hamburg Rut Test Depth (mm) 4.76 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)