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)

Highway Contr Co P/S # m00559
(Producer/Supplier Name and Producer/Supplier Code)

S4pv0441600300
(Mix ID)

Highway Contr Co (Guymon, OK)- 250TPH PLANT ID # m00559-03
(Plant Name and Plant ID)

Aggregate	Producer/Supplier	% USED
3/4" Chips	XIT Sand & Gravel (Channing, TX) P/S # m008077825	23
5/16" Chips	XIT Sand & Gravel (Channing, TX) P/S # m008077825	31
Scrns.	XIT Sand & Gravel (Channing, TX) P/S # m008077825	33
Sand	J & R Sand Co, Winchell Pit (Beaver Co., OK) P/S # m002050402	12
Hydrated Lime	U.S. Lime Co. - St. Clair (Marble City, OK) P/S # m00316	1

Asphalt Cement: Asphaltic Cement Type PG 64-22 OK, acem003, Valero Mckee (Sunray, TX), m00311
(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:	XIT Sand & Gravel (Channing, TX) P/S # m008077825	XIT Sand & Gravel (Channing, TX) P/S # m008077825	XIT Sand & Gravel (Channing, TX) P/S # m008077825	J & R Sand Co, Winchell Pit (Beaver Co., OK) P/S # m002050402	U.S. Lime Co. - St. Clair (Marble City, OK) P/S # m00316								
Sieve Size	3/4" Chips	5/16" Chips	Scrns.	Sand	Hydrated Lime				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)	59	100	100	100	100				91	91	84	98	7
3/8 in (9.5 mm)	29	99	100	100	100				83	83	76	90	7
#4 (4.75 mm)	2	63	99	99	100				66	66	59	73	7
#8 (2.36 mm)	1	6	93	88	100				44	44	39	49	5
#16 (1.18 mm)	1	2	69	60	100				32	32	28	36	4
#30 (.600 mm)	1	1	51	36	100				23	23	19	27	4
#50 (.300 mm)	1	1	35	14	100				15	15	11	19	4
#100 (.150 mm)	1	1	21	3	100				9	9	6	12	3
#200 (.075 mm)	0.8	0.8	10.7	2.0	99.8				5.2	5.2	3.2	7.2	2
AC Content %									5.7	5.7	5.3	6.1	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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Tests on Compressed Mixtures (@ Design AC)

	# Gyr.	% Density of Gmm	% Density Required
Nini	6	88.2	85.5 - 91.5
Ndes	50		96.0

Tests on Aggregates		Required		Units
Durability Index	87	40	min.	%
F.A.A. %U		N/A		%
Flat and Elongated	2	10	max.	%
Fractured Faces	93/85	85/80	min.	%
Insoluble Residue	92.3	30	min.	%
LA Abrasion	27.5	40	max.	%
Micro-Deval	6.3	N/A		%
Permeability	2.9	12.5	max.	10^{-5}cm/s
Sand Equivalent	61	40	min.	%
IOC	-0.03			%
Gse	2.637			
Gsb	2.616			
Specimen Weight	4772			g

Tests on Compressed Mixtures

%AC	Gmb	Gmm	% Density of Gmm	% Density Required Design / Field	% VMA	% VMA Required Design / Field	% VFA	% VFA Required
5.2	2.264	2.433	93.1	96.0 / 94.5 - 97.4	18.0	14.5 / 14.0	61.7	72 - 77
5.7	2.324	2.415	96.2		16.2		76.5	
6.2	2.349	2.398	98.0		15.8		87.3	

Dust Prop.
1.1
1.0
0.9

Dust Prop. Req. 0.6 - 1.6

ITS (PSI) 97.9 N/A min.
TSR 0.95 0.80 / 0.75 min. (Design / Field)
Compacted Wt. (lbs/sy/1" thick) = 106.3 @ 5.7 % Asphalt Cement

Hamburg Rut Test Depth (mm) 2.73 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: 3/2/2016
(mm/dd/yyyy)