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)

Binder - Recycled ID: B2
(Design Type and Design Type ID)

Haskell Lemon Const Co (Asphalt) P/S # m00428
(Producer/Supplier Name and Producer/Supplier Code)

S4qc0131495000
(Mix ID)

Haskell Lemon (West OKC, OK) - 450TPH PLANT ID # m00428-01
(Plant Name and Plant ID)

Aggregate	Producer/Supplier	% USED
5/8" Chips	Dolese Co (Davis, OK) P/S # m002745002	28
Man. Sand	Martin-Marietta (Davis, OK) P/S # m002285005	20
C-33 Scrns.	Martin-Marietta (Snyder, OK) P/S # m002323802	17
Sand	General Materials Inc (Oklahoma City, OK) P/S # m009215515	10
Coarse R.A.P.	Contractor / Project Site P/S # Contractor	25

Asphalt Cement: Asphaltic Cement Type PG 64-22 OK, acem003, Lion Oil Co. (Muskogee, OK), m00511
(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-

Sieve Size	Dolese Co (Davis, OK) P/S # m002745002	Martin-Marietta (Davis, OK) P/S # m002285005	Martin-Marietta (Snyder, OK) P/S # m002323802	General Materials Inc (Oklahoma City, OK) P/S # m009215515	Contractor / Project Site P/S # Contractor				Comb. Agg.	JMF	Min.	Max.	% Tol. (±)
	5/8" Chips	Man. Sand	C-33 Scrns.	Sand	Coarse R.A.P.								
3/4 in (19 mm)	100	100	100	100	100				100	**100**	100	100	0
1/2 in (12.5 mm)	91	100	100	100	93				96	**96**	89	100	7
3/8 in (9.5 mm)	60	100	100	100	71				82	**82**	75	89	7
#4 (4.75 mm)	5	93	94	99	30				53	**53**	46	60	7
#8 (2.36 mm)	3	55	71	99	19				39	**39**	34	44	5
#16 (1.18 mm)	3	27	48	97	16				28	**28**	24	32	4
#30 (.600 mm)	2	14	28	90	14				21	**21**	17	25	4
#50 (.300 mm)	2	7	13	65	11				13	**13**	9	17	4
#100 (.150 mm)	1	4	5	16	7				5	**5**	2	8	3
#200 (.075 mm)	1.0	3.3	3.1	1.5	4.0				2.6	**2.6**	0.6	4.6	2
AC Content %					3.6				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

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	6	89.6	85.5 - 91.5
Ndes	50		96.0

Tests on Aggregates		Required		Units
Durability Index	75	40	min.	%
F.A.A. %U		N/A		%
Flat and Elongated	0	10	max.	%
Fractured Faces	100/100	85/80	min.	%
Insoluble Residue		N/A		%
LA Abrasion	27	40	max.	%
Micro-Deval	16.4	N/A		%
Permeability	7.9	12.5	max.	10^{-5}cm/s
Sand Equivalent	82	40	min.	%
IOC	0.11			%
Gse	2.676			
Gsb	2.651			
Specimen Weight	4840			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	2.362	2.499	94.5	96.0 / 94.5 - 97.4	14.7	14.5 / 14.0	62.6	72 - 77
4.8	2.382	2.480	96.0		14.5		72.4	
5.3	2.403	2.461	97.6		14.2		83.1	

Dust Prop.
0.7
0.6
0.5

Dust Prop. Req. 0.6 - 1.6

ITS (PSI) 92.2 N/A min.
TSR 0.81 0.80 / 0.75 min. (Design / Field)
Compacted Wt. (lbs/sy/1" thick) = 109.1 @ 4.8 % Asphalt Cement
3.9 % New Asphalt Cement

Hamburg Rut Test Depth (mm) 7.82 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: 11/9/2015
(mm/dd/yyyy)