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)

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

S4qc0131702000
(Mix ID)

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

Aggregate	Producer/Supplier	% USED
5/8" Chips	Martin-Marietta (Snyder, OK) P/S # m002323802	33
3/8" Chips	Greenhill Materials Co.(Rogers Co., OK) P/S # m001956605	14
Man. Sand	Martin-Marietta (Davis, OK) P/S # m002285005	20
C-33 Scrns.	Martin-Marietta (Snyder, OK) P/S # m002323802	18
Sand (Unlisted Source)	General Materials	15

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	5/8" Chips	3/8" Chips	Man. Sand	C-33 Scrns.	Sand (Unlisted Source)				Comb. Agg.	JMF	Min.	Max.	% Tol. (±)
Producer/Supplier:	Martin-Marietta (Snyder, OK) P/S # m002323802	Greenhill Materials Co.(Rogers Co., OK) P/S # m001956605	Martin-Marietta (Davis, OK) P/S # m002285005	Martin-Marietta (Snyder, OK) P/S # m002323802	General Materials								
3/4 in (19 mm)	100	100	100	100	100				100	**100**	100	100	0
1/2 in (12.5 mm)	90	100	100	100	100				97	**97**	90	100	7
3/8 in (9.5 mm)	69	99	100	100	100				90	**90**	83	97	7
#4 (4.75 mm)	20	47	93	92	97				63	**63**	56	70	7
#8 (2.36 mm)	5	10	55	68	94				40	**40**	35	45	5
#16 (1.18 mm)	2	6	29	44	91				29	**29**	25	33	4
#30 (.600 mm)	2	5	16	27	81				22	**22**	18	26	4
#50 (.300 mm)	1	4	9	15	37				11	**11**	7	15	4
#100 (.150 mm)	1	4	5	7	10				5	**5**	2	8	3
#200 (.075 mm)	0.7	3.6	3.2	4.1	1.3				2.3	**2.3**	0.3	4.3	2
AC Content %									4.9	**4.9**	4.5	5.3	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	89.2	85.5 - 91.5
Ndes	50		96.0

Tests on Aggregates		Required		Units
Durability Index	67	40	min.	%
F.A.A. %U		N/A		%
Flat and Elongated	0	10	max.	%
Fractured Faces	100/100	85/80	min.	%
Insoluble Residue	62.4	30	min.	%
LA Abrasion	29.3	40	max.	%
Micro-Deval	20.4	N/A		%
Permeability	11.7	12.5	max.	10^{-5}cm/s
Sand Equivalent	83	40	min.	%
IOC	0.28			%
Gse	2.624			
Gsb	2.600			
Specimen Weight	4750			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	2.315	2.455	94.3		14.8		61.5	
4.8	2.331	2.437	95.7	96.0 / 94.5 - 97.4	14.6	14.5 / 14.0	70.5	72 - 77
5.3	2.351	2.419	97.2		14.4		80.6	

Dust Prop.
0.6
0.5
0.5

Dust Prop. Req. 0.6 - 1.6

ITS (PSI) 98.3 N/A min.
TSR 0.87 0.80 / 0.75 min. (Design / Field)
Compacted Wt. (lbs/sy/1" thick) = 107.1 @ 4.9 % Asphalt Cement

Hamburg Rut Test Depth (mm) 4.37 12.50 max. @ 10,000 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: 7/14/2017
(mm/dd/yyyy)