Version: V03.50

Oklahoma Department of Transportation Mix Design Report

Asphalt Concrete, Type S4 (PG 76-28 OK) Mat'l. Code: asco010
(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)

S4qc0131801500
(Mix ID)

Haskell Lemon (Portable)- 400TPH PLANT ID # m00428-03
(Plant Name and Plant ID)

Aggregate	Producer/Supplier	% USED
5/8" Chips	Martin-Marietta (Snyder, OK) P/S # m002323802	27
5/8" Chips	Western Aggregates, LLC (Carnegie, OK) P/S # m006583803	12
C-33 Scrns.	Martin-Marietta (Snyder, OK) P/S # m002323802	26
Scrns.	Western Aggregates, LLC (Carnegie, OK) P/S # m006583803	21
Sand (Unlisted Source)	GMI MacArthur Pit	14

Asphalt Cement: Asphaltic Cement Type PG 76-28 OK, acem001, 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-

Producer/Supplier:	Martin-Marietta (Snyder, OK) P/S # m002323802	Western Aggregates, LLC (Carnegie, OK) P/S # m006583803	Martin-Marietta (Snyder, OK) P/S # m002323802	Western Aggregates, LLC (Carnegie, OK) P/S # m006583803	GMI MacArthur Pit								
Sieve Size	5/8" Chips	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*	*100*	*0*
1/2 in (12.5 mm)	92	44	100	99	100				91	***91***	*84*	*98*	*7*
3/8 in (9.5 mm)	67	7	100	97	100				79	***79***	*72*	*86*	*7*
#4 (4.75 mm)	22	2	95	72	100				60	***60***	*53*	*67*	*7*
#8 (2.36 mm)	5	2	70	41	99				42	***42***	*37*	*47*	*5*
#16 (1.18 mm)	3	2	47	24	99				32	***32***	*28*	*36*	*4*
#30 (.600 mm)	2	2	29	16	94				25	***25***	*21*	*29*	*4*
#50 (.300 mm)	2	2	15	12	66				16	***16***	*12*	*20*	*4*
#100 (.150 mm)	2	1	7	9	10				6	***6***	*3*	*9*	*3*
#200 (.075 mm)	1.2	1.2	4.1	7.9	1.2				3.4	***3.4***	*1.4*	*5.4*	*2*
AC Content %									4.9	***4.9***	*4.5*	*5.3*	*0.4*

	°F (°C)	Required
Mix temperature @ discharge from mixer:	325 (163)	± 20 °F (± 10 °C)
Optimum roadway compaction temperature:	305 (152)	
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	8	88.6	85.5 - 89.0
Ndes	80		96.0

Tests on Aggregates		Required		Units
Contabro		N/A		%
Durability Index	82	40	min.	%
F.A.A. %U		N/A		%
Flat and Elongated	0	10	max.	%
Fractured Faces	100/100	98/95	min.	%
Insoluble Residue	58.1	40	min.	%
LA Abrasion	23	40	max.	%
Micro-Deval	9.4	25	max.	%
Permeability	1.1	12.5	max.	10^{-5}cm/s
Sand Equivalent	82	50	min.	%
IOC	0.21			%
Gse	2.648			
Gsb	2.620			
Specimen Weight	4785			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	2.326	2.475	94.0		15.0		60.0	
4.8	2.350	2.457	95.6	96.0 / 94.5 - 97.4	14.6	14.5 / 14.0	69.9	72 - 77
5.3	2.369	2.438	97.2		14.4		80.6	

Dust Prop.	Dust Prop. Req.
0.9	
0.8	0.6 - 1.6
0.7	

ITS (PSI) 130.1 75 min.
TSR 0.96 0.80 / 0.75 min. (Design / Field)
Compacted Wt. (lbs/sy/1" thick) = 107.9 @ 4.9 % Asphalt Cement

Hamburg Rut Test Depth (mm) 11.36 12.50 max. @ 20,000 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: 8/22/2018
(mm/dd/yyyy)