Version: V03.40

Oklahoma Department of Transportation Mix Design Report

Asphalt Concrete, Type S4 (PG 70-28 OK) Mat'l. Code: asco011
(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)

S4qc0131801000
(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	37
Man. Sand	Martin-Marietta (Davis, OK) P/S # m002285005	29
C-33 Scrns.	Martin-Marietta (Snyder, OK) P/S # m002323802	19
Sand (Unlisted Source)	General Materials	15

Asphalt Cement: Asphaltic Cement Type PG 70-28 OK, acem002, 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	Martin-Marietta (Davis, OK) P/S # m002285005	Martin-Marietta (Snyder, OK) P/S # m002323802	General Materials									
Sieve Size	**5/8" Chips**	**Man. Sand**	**C-33 Scrns.**	**Sand (Unlisted Source)**					**Comb. Agg.**	***JMF***	***Min.***	***Max.***	***% Tol. (±)***
3/4 in (19 mm)	100	100	100	100					100	***100***	*100*	*100*	*0*
1/2 in (12.5 mm)	81	100	100	100					93	***93***	*86*	*100*	*7*
3/8 in (9.5 mm)	49	100	100	100					81	***81***	*74*	*88*	*7*
#4 (4.75 mm)	8	91	94	100					62	***62***	*55*	*69*	*7*
#8 (2.36 mm)	2	53	71	99					44	***44***	*39*	*49*	*5*
#16 (1.18 mm)	2	30	49	96					33	***33***	*29*	*37*	*4*
#30 (.600 mm)	1	17	31	84					24	***24***	*20*	*28*	*4*
#50 (.300 mm)	1	10	17	55					15	***15***	*11*	*19*	*4*
#100 (.150 mm)	1	5	9	17					6	***6***	*3*	*9*	*3*
#200 (.075 mm)	0.9	3.4	5.3	4.2					3.0	***3.0***	*1.0*	*5.0*	*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

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Tests on Compressed Mixtures (@ Design AC)

	# Gyr.	% Density of Gmm	% Density Required
Nini	7	89.3	85.5 - 90.5
Ndes	65		96.0

Tests on Aggregates		Required		Units
Durability Index	79	40	min.	%
F.A.A. %U		N/A		%
Flat and Elongated	0	10	max.	%
Fractured Faces	100/100	95/90	min.	%
Insoluble Residue	74.5	40	min.	%
LA Abrasion	27	40	max.	%
Micro-Deval	10.8	N/A		%
Permeability	5	12.5	max.	10^{-5}cm/s
Sand Equivalent	85	45	min.	%
IOC	0.15			%
Gse	2.639			
Gsb	2.609			
Specimen Weight	4770			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	2.322	2.468	94.1	96.0 / 94.5 - 97.4	14.8	14.5 / 14.0	60.1	72 - 77
4.8	2.343	2.449	95.7		14.5		70.3	
5.3	2.362	2.431	97.2		14.3		80.4	

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

ITS (PSI) 69.2 N/A min.
TSR 0.89 0.80 / 0.75 min. (Design / Field)
Compacted Wt. (lbs/sy/1" thick) = 107.6 @ 4.9 % Asphalt Cement

Hamburg Rut Test Depth (mm) 9.29 12.50 max. @ 15,000 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: 3/7/2018
(mm/dd/yyyy)