Version: V03.40

Oklahoma Department of Transportation Mix Design Report

Asphalt Concrete, Type S5 (PG 70-28 OK) Mat'l. Code: asco014
(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)

S5qc0381390401
(Mix ID)

Haskell Lemon (Shawnee, OK) - 300TPH PLANT ID # m00428-06
(Plant Name and Plant ID)

Aggregate	Producer/Supplier	% USED
1/4" Chips	Martin-Marietta (Mill Creek, OK) P/S # m002303502	44
C-33 Scrns.	Martin-Marietta (Mill Creek, OK) P/S # m002303502	17
Scrns.	Dolese Co (Davis, OK) P/S # m002745002	24
Sand	General Materials Inc (Oklahoma City, OK) P/S # m009215515	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-

Sieve Size	Producer/Supplier: Martin-Marietta (Mill Creek, OK) P/S # m002303502 — 1/4" Chips	Martin-Marietta (Mill Creek, OK) P/S # m002303502 — C-33 Scrns.	Dolese Co (Davis, OK) P/S # m002745002 — Scrns.	General Materials Inc (Oklahoma City, OK) P/S # m009215515 — Sand					Comb. Agg.	JMF	Min.	Max.	% Tol. (±)	
1/2 in (12.5 mm)	100	100	100	100					100	**100**	100	100	0	
3/8 in (9.5 mm)	100	100	100	100					100	**100**	93	100	7	
#4 (4.75 mm)	47	99	88	100					74	**74**	67	81	7	
#8 (2.36 mm)	8	80	57	100					46	**51**	46	56	5	x
#16 (1.18 mm)	4	48	37	99					34	**34**	30	38	4	
#30 (.600 mm)	2	25	26	94					25	**25**	21	29	4	
#50 (.300 mm)	1	8	19	74					17	**17**	13	21	4	
#100 (.150 mm)	1	3	15	25					8	**8**	5	11	3	
#200 (.075 mm)	0.7	1.6	12.1	1.2					3.7	**3.7**	1.7	5.7	2	
AC Content %									5.5	**5.5**	5.1	5.9	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	7	89.9	85.5 - 90.5
Ndes	65		96.0

Tests on Aggregates		Required		Units
Durability Index	74	40	min.	%
F.A.A. %U		N/A		%
Flat and Elongated	0	10	max.	%
Fractured Faces	100/100	95/90	min.	%
Insoluble Residue	78.7	40	min.	%
LA Abrasion	25.3	40	max.	%
Micro-Deval	16.2	N/A		%
Permeability	4.2	12.5	max.	10^{-5}cm/s
Sand Equivalent	80	45	min.	%
IOC	0.22			%
Gse	2.672			
Gsb	2.630			
Specimen Weight	4780			g

Tests on Compressed Mixtures

%AC	Gmb	Gmm	% Density of Gmm	% Density Required Design / Field	% VMA	% VMA Required Design / Field	% VFA	% VFA Required
4.8	2.324	2.476	93.9	96.0 / 94.5 - 97.4	15.9	15.5 / 15.0	61.6	73 - 78
5.3	2.345	2.458	95.4		15.6		70.5	
5.8	2.364	2.439	96.9		15.3		79.7	

Dust Prop.
0.9
0.8
0.7

Dust Prop. Req. 0.6 - 1.6

ITS (PSI) 85.7 N/A min.

TSR 0.84 0.80 / 0.75 min. (Design / Field)

Compacted Wt. (lbs/sy/1" thick) = 107.8 @ 5.5 % Asphalt Cement

x 1st JMF Revision

Hamburg Rut Test Depth (mm) 11.84 12.50 max. @ 15,000 cycles

MEETS SPECIFICATION REQUIREMENTS PER SPECIAL PROVISION 708-26(a-f) 09

Comments: REVISED (GRAD.) Efeective 5/19/14 per contractor's request.

Last Modified By: Schratwieser, Edward P. eschratw
(User Name and User ID)

Date: 5/20/2014
(mm/dd/yyyy)