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)

S4qc0131672100
(Mix ID)

Haskell Lemon (Norman, OK) - 400TPH PLANT ID # m00428-05
(Plant Name and Plant ID)

Aggregate	Producer/Supplier	% USED
5/8" Chips	Hanson Aggregates, WRP Inc (Davis, OK) P/S # m001985008	41
Man. Sand	Martin-Marietta (Davis, OK) P/S # m002285005	16
Man. Sand	Hanson Aggregates, WRP Inc (Davis, OK) P/S # m001985008	19
Scrns.	Martin-Marietta (Davis, OK) P/S # m002285005	12
Sand (Unlisted Source)	General Materials Inc (Okla. City, OK) P/S #m009215515	12

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:	Hanson Aggregates, WRP Inc (Davis, OK) P/S # m001985008	Martin-Marietta (Davis, OK) P/S # m002285005	Hanson Aggregates, WRP Inc (Davis, OK) P/S # m001985008	Martin-Marietta (Davis, OK) P/S # m002285005	General Materials Inc (Okla. City, OK) P/S #m009215515				Comb. Agg.	JMF	Min.	Max.	% Tol. (±)
	5/8" Chips	Man. Sand	Man. Sand	Scrns.	Sand (Unlisted Source)								
3/4 in (19 mm)	100	100	100	100	100				100	**100**	100	100	0
1/2 in (12.5 mm)	81	100	100	100	100				92	**92**	85	99	7
3/8 in (9.5 mm)	61	100	100	100	100				84	**84**	77	91	7
#4 (4.75 mm)	18	94	99	89	100				64	**64**	57	71	7
#8 (2.36 mm)	4	57	72	61	99				44	**44**	39	49	5
#16 (1.18 mm)	3	31	44	40	97				31	**31**	27	35	4
#30 (.600 mm)	3	18	27	29	91				24	**24**	20	28	4
#50 (.300 mm)	2	10	11	21	53				13	**13**	9	17	4
#100 (.150 mm)	2	6	9	16	9				6	**6**	3	9	3
#200 (.075 mm)	1.6	4.2	5.3	13.2	1.1				4.1	**4.1**	2.1	6.1	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	88.6	85.5 - 90.5
Ndes	65		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	95/90	min.	%
Insoluble Residue	72	40	min.	%
LA Abrasion	20	40	max.	%
Micro-Deval	7.3	N/A		%
Permeability	10.3	12.5	max.	10^{-5}cm/s
Sand Equivalent	84	45	min.	%
IOC	0.56			%
Gse	2.713			
Gsb	2.674			
Specimen Weight	4890			g

Tests on Compressed Mixtures

%AC	Gmb	Gmm	% Density of Gmm	% Density Required	% VMA	% VMA Required	% VFA	% VFA Required
4.3	2.380	2.530	94.1	Design / Field	14.8	Design / Field	60.1	
4.8	2.402	2.510	95.7	96.0 / 94.5 - 97.4	14.5	14.5 / 14.0	70.3	72 - 77
5.3	2.419	2.490	97.1		14.3		79.7	

Dust Prop.
1.1
1.0
0.9

Dust Prop. Req. 0.6 - 1.6

ITS (PSI) 80.9 N/A min.
TSR 0.83 0.80 / 0.75 min. (Design / Field)
Compacted Wt. (lbs/sy/1" thick) = 110.2 @ 4.9 % Asphalt Cement

Hamburg Rut Test Depth (mm) 3.25 #N/A

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

Comments:

Last Modified By: McComack, Hunter J. hmccomac
(User Name and User ID)

Date: 6/8/2018
(mm/dd/yyyy)