Version: V03.50

Oklahoma Department of Transportation Mix Design Report

Asphalt Concrete, Type S5 (PG 76-28 OK) Mat'l. Code: asco013
(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)

S5qc0131801300
(Mix ID)

Haskell Lemon (East OKC, OK) - 350TPH PLANT ID # m00428-02
(Plant Name and Plant ID)

Aggregate	Producer/Supplier	% USED
'D' Rock	Martin-Marietta (Snyder, OK) P/S # m002323802	38
Man. Sand	Martin-Marietta (Davis, OK) P/S # m002285005	25
C-33 Scrns.	Martin-Marietta (Snyder, OK) P/S # m002323802	23
Sand (Unlisted Source)	General Materials	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	Martin-Marietta (Davis, OK) P/S # m002285005	Martin-Marietta (Snyder, OK) P/S # m002323802	General Materials									
Sieve Size	'D' Rock	Man. Sand	C-33 Scrns.	Sand (Unlisted Source)					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)	99	100	100	100					100	100	93	100	7
#4 (4.75 mm)	51	92	95	100					78	78	71	85	7
#8 (2.36 mm)	12	54	66	99					47	47	42	52	5
#16 (1.18 mm)	4	30	40	96					32	32	28	36	4
#30 (.600 mm)	2	17	23	87					22	22	18	26	4
#50 (.300 mm)	1	10	12	51					13	13	9	17	4
#100 (.150 mm)	1	6	6	16					6	6	3	9	3
#200 (.075 mm)	0.9	3.9	3.5	2.5					2.5	2.5	0.5	4.5	2
AC Content %									5.4	5.4	5.0	5.8	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	8	88.6	85.5 - 89.0
Ndes	80		96.0

Tests on Aggregates		Required		Units
Contabro		N/A		%
Durability Index	79	40	min.	%
F.A.A. %U		N/A		%
Flat and Elongated	0	10	max.	%
Fractured Faces	100/100	98/95	min.	%
Insoluble Residue	77.7	40	min.	%
LA Abrasion	27	40	max.	%
Micro-Deval	10.8	25	max.	%
Permeability	5.1	12.5	max.	10^{-5}cm/s
Sand Equivalent	90	50	min.	%
IOC	0.29			%
Gse	2.642			
Gsb	2.613			
Specimen Weight	4735			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	2.304	2.452	94.0		16.1		62.7	
5.3	2.325	2.434	95.5	96.0 / 94.5 - 97.4	15.7	15.5 / 15.0	71.3	73 - 78
5.8	2.345	2.416	97.1		15.5		81.3	

Dust Prop.
0.6
0.5
0.5

Dust Prop. Req. 0.6 - 1.6

ITS (PSI) 80.4 75 min.
TSR 0.80 0.80 / 0.75 min. (Design / Field)
Compacted Wt. (lbs/sy/1" thick) = 106.9 @ 5.4 % Asphalt Cement

Hamburg Rut Test Depth (mm) 4.24 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: 6/21/2018
(mm/dd/yyyy)