Version: V03.40

Oklahoma Department of Transportation Mix Design Report

Asphalt Concrete, Type S3 (PG 76-28 OK) Mat'l. Code: asco007
(Material Full Name and Material Code)

Binder ID: B1
(Design Type and Design Type ID)

Haskell Lemon Const Co (Asphalt) P/S # m00428
(Producer/Supplier Name and Producer/Supplier Code)

S3qc0131801400
(Mix ID)

Haskell Lemon (Portable - HWY 33 Perkins)- 400TPH PLANT ID # m00428-03
(Plant Name and Plant ID)

Aggregate	Producer/Supplier	% USED
#67 Rock	Dolese Co (Cooperton, OK) P/S # m002723801	23
3/8" Chips	Dolese Co (Cooperton, OK) P/S # m002723801	10
C-33 Scrns.	Martin-Marietta (Snyder, OK) P/S # m002323802	30
Scrns.	Western Aggregates, LLC (Carnegie, OK) P/S # m006583803	12
Sand		10
Fine R.A.P.	Contractor / Project Site P/S # Contractor	15

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:	Dolese Co (Cooperton, OK) P/S # m002723801	Dolese Co (Cooperton, OK) P/S # m002723801	Martin-Marietta (Snyder, OK) P/S # m002323802	Western Aggregates, LLC (Carnegie, OK) P/S # m006583803		Contractor / Project Site P/S # Contractor							
Sieve Size	#67 Rock	3/8" Chips	C-33 Scrns.	Scrns.	Sand	Fine R.A.P.			Comb. Agg.	*JMF*	*Min.*	*Max.*	*% Tol. (±)*
1 in (25 mm)	100	100	100	100	100	100			100	***100***	*100*	*100*	*0*
3/4 in (19 mm)	98	100	100	100	100	100			100	***100***	*93*	*100*	*7*
1/2 in (12.5 mm)	59	100	100	99	100	100			90	***90***	*83*	*97*	*7*
3/8 in (9.5 mm)	27	99	100	97	100	100			83	***83***	*76*	*90*	*7*
#4 (4.75 mm)	5	8	95	72	100	99			64	***64***	*57*	*71*	*7*
#8 (2.36 mm)	3	2	70	41	99	84			49	***49***	*44*	*54*	*5*
#16 (1.18 mm)	3	2	47	24	99	65			38	***38***	*34*	*42*	*4*
#30 (.600 mm)	2	1	29	16	94	53			29	***29***	*25*	*33*	*4*
#50 (.300 mm)	2	1	15	12	66	38			19	***19***	*15*	*23*	*4*
#100 (.150 mm)	2	1	7	9	10	22			8	***8***	*5*	*11*	*3*
#200 (.075 mm)	1.7	1.1	4.1	7.9	1.2	12.1			4.6	***4.6***	*2.6*	*6.6*	*2*
AC Content %						5.3			4.3	***4.3***	*3.9*	*4.7*	*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	88.2	85.5 - 89.0
Ndes	80		96.0

Tests on Aggregates		Required		Units
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		N/A		%
LA Abrasion	25.3	40	max.	%
Micro-Deval	16.4	25	max.	%
Permeability	3	12.5	max.	10^{-5}cm/s
Sand Equivalent	77	50	min.	%
IOC	0.29			%
Gse	2.670			
Gsb	2.647			
Specimen Weight	4865			g

Tests on Compressed Mixtures

%AC	Gmb	Gmm	% Density of Gmm	% Density Required Design / Field	% VMA	% VMA Required Design / Field	% VFA	% VFA Required
3.8	2.375	2.513	94.5		13.7		59.9	
4.3	2.393	2.494	96.0	96.0 / 94.5 - 97.4	13.5	13.5 / 13.0	70.4	70 - 75
4.8	2.413	2.475	97.5		13.2		81.1	

Dust Prop.
1.3
1.2
1.0

Dust Prop. Req. 0.6 - 1.6

ITS (PSI) 128.3 75 min.
TSR 0.93 0.80 / 0.75 min. (Design / Field)
Compacted Wt. (lbs/sy/1" thick) = 109.7 @ 4.3 % Asphalt Cement
3.5 % New Asphalt Cement

Hamburg Rut Test Depth (mm) 2.99 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: 8/20/2018
(mm/dd/yyyy)