Version: V03.40

Oklahoma Department of Transportation Mix Design Report

Asphalt Concrete, Type S3 (PG 64-22 OK) Mat'l. Code: asco009
(Material Full Name and Material Code)

Binder - Recycled ID: B2
(Design Type and Design Type ID)

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

S3qc0131701800
(Mix ID)

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

Aggregate	Producer/Supplier	% USED
1" Rock	Martin-Marietta (Davis, OK) P/S # m002285005	29
Man. Sand	Martin-Marietta (Davis, OK) P/S # m002285005	19
Man. Sand	Hanson Aggregates, WRP Inc (Davis, OK) P/S # m001985008	17
Sand (Unlisted Source)	General Materials Inc.	10
Coarse R.A.P.	Contractor / Project Site P/S # Contractor	25

Asphalt Cement: Asphaltic Cement Type PG 64-22 OK, acem003, 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 (Davis, OK) P/S # m002285005	Martin-Marietta (Davis, OK) P/S # m002285005	Hanson Aggregates, WRP Inc (Davis, OK) P/S # m001985008	General Materials Inc.	Contractor / Project Site P/S # Contractor								
Sieve Size	**1" Rock**	**Man. Sand**	**Man. Sand**	**Sand (Unlisted Source)**	**Coarse R.A.P.**				**Comb. Agg.**	***JMF***	***Min.***	***Max.***	***% Tol. (±)***
1 in (25 mm)	100	100	100	100	100				100	***100***	*100*	*100*	*0*
3/4 in (19 mm)	92	100	100	100	100				98	***98***	*91*	*100*	*7*
1/2 in (12.5 mm)	46	100	100	100	88				81	***81***	*74*	*88*	*7*
3/8 in (9.5 mm)	21	100	100	100	53				65	***65***	*58*	*72*	*7*
#4 (4.75 mm)	2	94	99	97	26				51	***51***	*44*	*58*	*7*
#8 (2.36 mm)	1	57	72	94	20				38	***38***	*33*	*43*	*5*
#16 (1.18 mm)	1	31	44	91	17				27	***27***	*23*	*31*	*4*
#30 (.600 mm)	1	18	27	81	14				20	***20***	*16*	*24*	*4*
#50 (.300 mm)	1	10	11	37	11				11	***11***	*7*	*15*	*4*
#100 (.150 mm)	1	6	9	10	7				6	***6***	*3*	*9*	*3*
#200 (.075 mm)	0.7	4.2	5.3	1.3	4.3				3.1	***3.1***	*1.1*	*5.1*	*2*
AC Content %					3.6				4.4	***4.4***	*4.0*	*4.8*	*0.4*

	°F (°C)	Required
Mix temperature @ discharge from mixer:	305 (152)	± 20 °F (± 10 °C)
Optimum roadway compaction temperature:	290 (143)	
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	6	89.6	85.5 - 91.5
Ndes	50		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	85/80	min.	%
Insoluble Residue		N/A		%
LA Abrasion	27	40	max.	%
Micro-Deval	10.8	N/A		%
Permeability	12.2	12.5	max.	10^{-5}cm/s
Sand Equivalent	86	40	min.	%
IOC	0.18			%
Gse	2.686			
Gsb	2.654			
Specimen Weight	4885			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	2.377	2.527	94.1	96.0 / 94.5 - 97.4	13.8	13.5 / 13.0	57.2	70 - 75
4.3	2.398	2.507	95.7		13.5		68.1	
4.8	2.418	2.488	97.2		13.3		78.9	

Dust Prop.
0.9
0.8
0.7

Dust Prop. Req.
0.6 - 1.6

ITS (PSI) 117.1 N/A min.
TSR 0.80 0.80 / 0.75 min. (Design / Field)
Compacted Wt. (lbs/sy/1" thick) = 110.1 @ 4.4 % Asphalt Cement
3.5 % New Asphalt Cement

Hamburg Rut Test Depth (mm) 2.73 12.50 max. @ 10,000 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: 7/14/2017
(mm/dd/yyyy)