Version: V03.40

Oklahoma Department of Transportation Mix Design Report

Asphalt Concrete, Type S4 (PG 64-22 OK) Mat'l. Code: asco012
(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)

S4qc0381590100
(Mix ID)

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

Aggregate	Producer/Supplier	% USED
5/8" Chips	Dolese Co (Davis, OK) P/S # m002745002	27
C-33 Scrns.	Martin-Marietta (Mill Creek, OK) P/S # m002303502	21
Man. Sand	Martin-Marietta (Davis, OK) P/S # m002285005	17
Sand	General Materials Inc (Oklahoma City, OK) P/S # m009215515	10
Fine 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:	Dolese Co (Davis, OK) P/S # m002745002	Martin-Marietta (Mill Creek, OK) P/S # m002303502	Martin-Marietta (Davis, OK) P/S # m002285005	General Materials Inc (Oklahoma City, OK) P/S # m009215515	Contractor / Project Site P/S # Contractor								
Sieve Size	**5/8" Chips**	**C-33 Scrns.**	**Man. Sand**	**Sand**	**Fine R.A.P.**				**Comb. Agg.**	***JMF***	***Min.***	***Max.***	***% Tol. (±)***
3/4 in (19 mm)	100	100	100	100	100				100	***100***	*100*	*100*	*0*
1/2 in (12.5 mm)	91	100	100	100	100				98	***98***	*91*	*100*	*7*
3/8 in (9.5 mm)	60	100	100	100	100				89	***89***	*82*	*96*	*7*
#4 (4.75 mm)	5	99	93	100	93				71	***71***	*64*	*78*	*7*
#8 (2.36 mm)	3	80	56	99	72				55	***55***	*50*	*60*	*5*
#16 (1.18 mm)	3	48	31	98	53				39	***39***	*35*	*43*	*4*
#30 (.600 mm)	2	25	19	94	43				29	***29***	*25*	*33*	*4*
#50 (.300 mm)	2	8	11	74	32				19	***19***	*15*	*23*	*4*
#100 (.150 mm)	1	3	7	25	21				10	***10***	*7*	*13*	*3*
#200 (.075 mm)	1.0	1.6	4.0	1.3	12.7				4.6	***4.6***	*2.6*	*6.6*	*2*
AC Content %					5.3				4.8	***4.8***	*4.4*	*5.2*	*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	90.5	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	16.2	N/A		%
Permeability	0.6	12.5	max.	10^{-5}cm/s
Sand Equivalent	82	40	min.	%
IOC	0.22			%
Gse	2.680			
Gsb	2.649			
Specimen Weight	4845			g

Tests on Compressed Mixtures

%AC	Gmb	Gmm	% Density of Gmm	% Density Required Design / Field	% VMA	% VMA Required Design / Field	% VFA	% VFA Required
4.3	2.359	2.502	94.3		14.8		61.5	
4.8	2.380	2.483	95.9	96.0 / 94.5 - 97.4	14.5	14.5 / 14.0	71.7	72 - 77
5.3	2.399	2.464	97.4		14.2		81.7	

Dust Prop.	Dust Prop. Req.
1.2	
1.0	0.6 - 1.6
0.9	

ITS (PSI) 119 N/A min.
TSR 0.82 0.80 / 0.75 min. (Design / Field)
Compacted Wt. (lbs/sy/1" thick) = 109.2 @ 4.8 % Asphalt Cement
3.5 % New Asphalt Cement

Hamburg Rut Test Depth (mm) 4.49 12.50 max. @ 10,000 cycles

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

Comments:

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

Date: 4/28/2015
(mm/dd/yyyy)