Version: V03.40

Oklahoma Department of Transportation Mix Design Report

Asphalt Concrete, Type S4 (PG 76-28 OK) Mat'l. Code: asco010
(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)

S4qc0381600100
(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	30
C-33 Scrns.	Martin-Marietta (Mill Creek, OK) P/S # m002303502	21
Man. Sand	Martin-Marietta (Davis, OK) P/S # m002285005	24
Sand (Unlisted Source)	General Materials(63rd St. Plant) OKC,OK	10
Fine R.A.P.	Contractor / Project Site P/S # Contractor	15

Asphalt Cement: Asphaltic Cement Type PG 76-28 OK, acem001, Valero (Ardmore, OK), m00352
(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(63rd St. Plant) OKC,OK	Contractor / Project Site P/S # Contractor								
Sieve Size	**5/8" Chips**	**C-33 Scrns.**	**Man. Sand**	**Sand (Unlisted Source)**	**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				97	***97***	*90*	*100*	*7*
3/8 in (9.5 mm)	60	100	100	100	100				88	***88***	*81*	*95*	*7*
#4 (4.75 mm)	5	99	93	100	95				69	***69***	*62*	*76*	*7*
#8 (2.36 mm)	3	87	56	99	73				53	***53***	*48*	*58*	*5*
#16 (1.18 mm)	3	57	31	98	52				38	***38***	*34*	*42*	*4*
#30 (.600 mm)	2	33	19	94	39				27	***27***	*23*	*31*	*4*
#50 (.300 mm)	2	14	11	74	27				18	***18***	*14*	*22*	*4*
#100 (.150 mm)	1	4	7	25	15				8	***8***	*5*	*11*	*3*
#200 (.075 mm)	1.0	1.6	4.0	1.3	8.9				3.1	***3.1***	*1.1*	*5.1*	*2*
AC Content %					5.3				5.0	***5.0***	*4.6*	*5.4*	*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
Durability Index	75	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	27	40	max.	%
Micro-Deval	16.2	25	max.	%
Permeability	5.2	12.5	max.	10^{-5}cm/s
Sand Equivalent	84	50	min.	%
IOC	0.23			%
Gse	2.676			
Gsb	2.648			
Specimen Weight	4830			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	2.352	2.499	94.1		15.0		60.7	
4.8	2.370	2.480	95.6	96.0 / 94.5 - 97.4	14.8	14.5 / 14.0	70.3	72 - 77
5.3	2.387	2.461	97.0		14.6		79.5	

Dust Prop.	Dust Prop. Req.
0.8	
0.7	0.6 - 1.6
0.6	

ITS (PSI) 109.2 75 min.
TSR 0.88 0.80 / 0.75 min. (Design / Field)
Compacted Wt. (lbs/sy/1" thick) = 108.8 @ 5.0 % Asphalt Cement
4.2 % New Asphalt Cement

Hamburg Rut Test Depth (mm) 11.10 12.50 max. @ 20,000 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: 4/28/2016
(mm/dd/yyyy)