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)

Insoluble - Recycled ID: I2
(Design Type and Design Type ID)

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

S4qc0131382800
(Mix ID)

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

Aggregate	Producer/Supplier	% USED
5/8" Chips	Hanson Aggregates, WRP Inc (Davis, OK) P/S # m001985008	28
Man. Sand	Martin-Marietta (Davis, OK) P/S # m002285005	12
Man. Sand	Hanson Aggregates, WRP Inc (Davis, OK) P/S # m001985008	15
Scrns.	Martin-Marietta (Davis, OK) P/S # m002285005	10
Sand (Unlisted Source)	General Materials (MacArthur Pit)(OKC,OK)	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:	Hanson Aggregates, WRP Inc (Davis, OK) P/S # m001985008	Martin-Marietta (Davis, OK) P/S # m002285005	Hanson Aggregates, WRP Inc (Davis, OK) P/S # m001985008	Martin-Marietta (Davis, OK) P/S # m002285005	General Materials (MacArthur Pit)(OKC,OK)	Contractor / Project Site P/S # Contractor							
Sieve Size	5/8" Chips	Man. Sand	Man. Sand	Scrns.	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	100	0
1/2 in (12.5 mm)	82	100	100	100	100	100			95	95	88	100	7
3/8 in (9.5 mm)	55	100	100	100	100	100			87	87	80	94	7
#4 (4.75 mm)	14	89	99	89	99	95			72	72	65	79	7
#8 (2.36 mm)	4	52	74	61	97	71			52	52	47	57	5
#16 (1.18 mm)	3	29	44	40	96	52			38	38	34	42	4
#30 (.600 mm)	3	18	25	29	89	41			29	29	25	33	4
#50 (.300 mm)	2	11	13	21	59	29			19	19	15	23	4
#100 (.150 mm)	2	8	6	16	12	17			9	9	6	12	3
#200 (.075 mm)	1.9	5.1	3.0	13.2	1.0	10.5			5.6	5.6	3.6	7.6	2
AC Content %						5.3			4.9	4.9	4.5	5.3	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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-Oklahoma D.O.T. Materials-

Tests on Compressed Mixtures (@ Design AC)	# Gyr.	% Density of Gmm	% Density Required
Nini	6	89.8	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	57.9	30	min.	%
LA Abrasion	27	40	max.	%
Micro-Deval	10.8	N/A		%
Permeability	8.7	12.5	max.	10^{-5}cm/s
Sand Equivalent	78	40	min.	%
IOC	0.61			%
Gse	2.708			
Gsb	2.670			
Specimen Weight	4880			g

Tests on Compressed Mixtures

%AC	Gmb	Gmm	% Density of Gmm	% Density Required	% VMA	% VMA Required	% VFA	% VFA Required
4.3	2.377	2.525	94.1	Design / Field	14.8	Design / Field	60.1	
4.8	2.395	2.506	95.6	96.0 / 94.5 - 97.4	14.6	14.5 / 14.0	69.9	72 - 77
5.3	2.418	2.486	97.3		14.2		81.0	

Dust Prop.	Dust Prop. Req.
1.5	0.6 - 1.6
1.3	
1.2	

ITS (PSI) 130.2 N/A min.
TSR 0.80 0.80 / 0.75 min. (Design / Field)
Compacted Wt. (lbs/sy/1" thick) = 110.1 @ 4.9 % Asphalt Cement
3.6 % New Asphalt Cement

Hamburg Rut Test Depth (mm) 5.16 #N/A

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

Comments:

Last Modified By: Williams, Bobby Ray bwilli01
(User Name and User ID)

Date: 5/3/2017
(mm/dd/yyyy)