



# 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)  
 Haskell Lemon Const Co (Asphalt) P/S # m00428  
 (Producer/Supplier Name and Producer/Supplier Code)  
 Haskell Lemon (East OKC, OK) - 350TPH PLANT ID # m00428-02  
 (Plant Name and Plant ID)

Binder - Recycled ID: B2  
 (Design Type and Design Type ID)  
 S3qc0131691000  
 (Mix ID)

Aggregate	Producer/Supplier	% USED
1" Rock	Dolese Co (Davis, OK) P/S # m002745002	34
Man. Sand	Martin-Marietta (Davis, OK) P/S # m002285005	15
C-33 Scrns.	Martin-Marietta (Snyder, OK) P/S # m002323802	15
Sand (Unlisted Source)	General Materials Inc. 63rd Plant	11
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)		

Sieve Size	Producer/Supplier:						Comb. Agg.	% Tol. (±)			
	1" Rock	Man. Sand	C-33 Scrns.	Sand (Unlisted Source)	Fine R.A.P.	JMF		Min.	Max.		
1 in (25 mm)	100	100	100	100	100	100	100	100	100	0	
3/4 in (19 mm)	92	100	100	100	100	97	97	90	100	7	
1/2 in (12.5 mm)	59	100	100	100	100	86	86	79	93	7	
3/8 in (9.5 mm)	35	100	100	100	100	78	78	71	85	7	
#4 (4.75 mm)	5	95	95	99	99	66	66	59	73	7	
#8 (2.36 mm)	2	53	69	99	78	49	49	44	54	5	
#16 (1.18 mm)	1	27	42	96	57	36	36	32	40	4	
#30 (.600 mm)	1	15	25	87	42	26	26	22	30	4	
#50 (.300 mm)	1	8	11	67	29	18	18	14	22	4	
#100 (.150 mm)	1	4	3	24	15	8	8	5	11	3	
#200 (.075 mm)	0.8	2.9	0.5	1.0	8.0	2.9	2.9	0.9	4.9	2	
AC Content %					5.7	4.4	4.4	4.0	4.8	0.4	

Requires Form 93-E0 signed by the Department for production use. -Oklahoma D.O.T. Materials-

°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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	% Density		
	# Gyr.	of Gmm	% Density Required
Nini	6	90.8	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		N/A %
LA Abrasion	27	40 max. %
Micro-Deval	16.2	N/A %
Permeability	4.8	12.5 max. 10 <sup>-5</sup> cm/s
Sand Equivalent	79	40 min. %
IOC	0.15	%
Gse	2.669	
Gsb	2.637	
Specimen Weight	4860	g

Tests on Compressed Mixtures							
%AC	Gmb	Gmm	% Density		% VMA	% VMA Required	% VFA
			of Gmm	% Density Required			
3.8	2.366	2.512	94.2	Design / Field	13.7	Design / Field	57.7
4.3	2.383	2.493	95.6	96.0 / 94.5 - 97.4	13.5	13.5 / 13.0	67.4
4.8	2.403	2.474	97.1		13.2		78.0

Dust Prop. 0.9, 0.7, 0.7  
 Dust Prop. Req. 0.6 - 1.6  
 ITS (PSI) 129.7 N/A min.  
 TSR 0.85 0.80 / 0.75 min. (Design / Field)  
 Compacted Wt. (lbs/sy/1" thick) = 109.5 @ 4.4 % Asphalt Cement  
 3.0 % New Asphalt Cement

Hamburg Rut Test Depth (mm) 5.97 #N/A

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

Comments:

Last Modified By: Suitor, Kevin ksutor  
 (User Name and User ID)

Date: 1/23/2018  
 (mm/dd/yyyy)