



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)

WS3qc0381590200
 (Mix ID)

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

Aggregate	Producer/Supplier	% USED
1" Rock	Dolese Co (Davis, OK) P/S # m002745002	22
C-33 Scrns.	Martin-Marietta (Mill Creek, OK) P/S # m002303502	19
Man. Sand	Martin-Marietta (Davis, OK) P/S # m002285005	14
Sand	General Materials Inc (Oklahoma City, OK) P/S # m009215515	10
Coarse R.A.P.	Contractor / Project Site P/S # Contractor	35
Warm Mix Asphalt (WMA) Technology: TEREX (Foaming Process) qual028 Terex Roadbuilding m00801 (Product Name, Material Code, Producer/Supplier Name, Producer/Supplier Code)		
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	1" Rock	C-33 Scrns.	Man. Sand	Sand	Coarse R.A.P.	Comb. Agg.	% Tol. (±)			
							JMF	Min.	Max.	% Tol. (±)
1 in (25 mm)	100	100	100	100	100	100	100	100	0	
3/4 in (19 mm)	96	100	100	100	100	99	99	92	7	
1/2 in (12.5 mm)	64	100	100	100	90	89	89	82	7	
3/8 in (9.5 mm)	39	100	100	100	78	79	79	72	7	
#4 (4.75 mm)	6	99	93	100	32	54	54	47	7	
#8 (2.36 mm)	3	80	56	99	25	42	42	37	5	
#16 (1.18 mm)	2	48	31	98	19	30	30	26	4	
#30 (.600 mm)	2	25	19	94	16	23	23	19	4	
#50 (.300 mm)	2	8	11	74	13	15	15	11	4	
#100 (.150 mm)	1	3	7	25	8	7	7	4	3	
#200 (.075 mm)	1.2	1.6	4.0	1.3	6.9	3.7	3.7	1.7	2	
AC Content %					3.6	4.3	4.3	3.9	0.4	

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

Warm Mix Asphalt (WMA) Additive %

1.5

Mix temperature @ discharge from mixer: 275 (135) °F (°C) Required ± 20 °F (± 10 °C)
 Optimum roadway compaction temperature: 260 (127)
 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	90.7	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	11.1	12.5 max. 10 ⁻⁵ cm/s
Sand Equivalent	88	40 min. %
Pba	0.31	
IOC	0.10	%
Gse	2.679	
Gsb	2.657	
Specimen Weight	4880	g

Tests on Compressed Mixtures							
%AC	Gmb	Gmm	% Density of Gmm	% Density Required	% VMA	% VMA Required	% VFA
3.8	2.373	2.521	94.1	Design / Field	14.1	Design / Field	58.2
4.3	2.400	2.501	96.0	96.0 / 94.5 - 97.4	13.6	13.5 / 13.0	70.6
4.8	2.425	2.482	97.7		13.1		82.4

ITS (PSI) 133.7 N/A min.
 TSR 0.85 0.80 / 0.75 min. (Design / Field)
 Compacted Wt. (lbs/sy/1" thick) = 110.0 @ 4.3 % Asphalt Cement
 3.0 % New Asphalt Cement

Hamburg Rut Test Depth (mm) 4.16 12.50 max. @ 10,000 cycles

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

Comments: TEMPORARY CONSTRUCTION ONLY

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

Date: 3/31/2015
 (mm/dd/yyyy)