



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)

WS3qc0381280900
 (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	26
Man. Sand	Martin-Marietta (Davis, OK) P/S # m002285005	20
C-33 Scrns.	Martin-Marietta (Mill Creek, OK) P/S # m002303502	19
Sand	General Materials Inc (Oklahoma City, OK) P/S # m009215515	10
Coarse R.A.P.	Contractor / Project Site P/S # Contractor	25
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	Producer/Supplier:						Comb. Agg.	% Tol. (±)			
	Dolese Co (Davis, OK) P/S # m002745002	Martin-Marietta (Davis, OK) P/S # m002285005	Martin-Marietta (Mill Creek, OK) P/S # m002303502	General Materials Inc (Oklahoma City, OK) P/S # m009215515	Contractor / Project Site P/S # Contractor			JMF	Min.	Max.	% Tol. (±)
1" Rock	100	100	100	100	100	100	100	100	100	0	
3/4 in (19 mm)	96	100	100	100	100	99	99	92	100	7	
1/2 in (12.5 mm)	64	100	100	100	95	89	89	82	96	7	
3/8 in (9.5 mm)	39	100	100	100	86	81	81	74	88	7	
#4 (4.75 mm)	6	93	100	100	52	62	62	55	69	7	
#8 (2.36 mm)	3	56	85	99	37	47	47	42	52	5	
#16 (1.18 mm)	2	31	54	98	29	34	34	30	38	4	
#30 (.600 mm)	2	19	31	94	24	26	26	22	30	4	
#50 (.300 mm)	2	11	12	74	18	17	17	13	21	4	
#100 (.150 mm)	1	7	4	26	11	8	8	5	11	3	
#200 (.075 mm)	1.2	4.4	2.1	1.3	6.2	3.3	3.3	1.3	5.3	2	
AC Content %					3.6	4.5	4.5	4.1	4.9	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 Aggregates	Required	Units
Durability Index	74	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	3	12.5 max. 10 ⁻⁵ cm/s
Sand Equivalent	83	40 min. %
Pba	0.54	
IOC	0.20	%
Gse	2.690	
Gsb	2.652	
Specimen Weight	4885	g

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	90.2	85.5 - 91.5
Ndes	50		96.0

Tests on Compressed Mixtures							
%AC	Gmb	Gmm	% Density		% VMA	% VFA	
			of Gmm	% Density Required		Design / Field	% VFA Required
4.2	2.389	2.514	95.0	Design / Field	13.7	Design / Field	63.5
4.7	2.409	2.495	96.6	96.0 / 94.5 - 97.4	13.4	13.5 / 13.0	74.6
5.2	2.428	2.476	98.1		13.2		85.6

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

ITS (PSI) 128.3 N/A min.
TSR 0.89 0.80 / 0.75 min. (Design / Field)
 Compacted Wt. (lbs/sy/1" thick) = 110.1 @ 4.5 % Asphalt Cement
 3.6 % New Asphalt Cement

Hamburg Rut Test Depth (mm) 3.20 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: 11/12/2013
 (mm/dd/yyyy)