



Oklahoma Department of Transportation Mix Design Report

Asphalt Concrete, Type S3 (PG 76-28 OK) Mat'l. Code: asco007
 (Material Full Name and Material Code)

Binder ID: B1
 (Design Type and Design Type ID)

Caswell Contracting Inc. P/S # m00551
 (Producer/Supplier Name and Producer/Supplier Code)

WS3pv0441800900
 (Mix ID)

Caswell Contracting (Elk City, OK) - 350TPH PLANT ID # m00551-02
 (Plant Name and Plant ID)

Aggregate	Producer/Supplier	% USED
1" Rock	Martin-Marietta (Snyder, OK) P/S # m002323802	10
5/8" Chips	Martin-Marietta (Snyder, OK) P/S # m002323802	40
Scrns.	Martin-Marietta (Snyder, OK) P/S # m002323802	35
Sand (Unlisted Source)	McLemore Sand (Elk City, OK)	15
Warm Mix Asphalt (WMA) Technology: EVOTHERM (Chem. Add.) qual028 Ingevity m00941 (Product Name, Material Code, Producer/Supplier Name, Producer/Supplier Code)		
Asphalt Cement: Asphaltic Cement Type PG 76-28 OK, acem001, Coastal Energy (Clinton, OK), m01042 (Material Full Name, Material Code, Producer/Supplier Name, Producer/Supplier Code)		

Sieve Size	Producer/Supplier:				Sand (Unlisted Source)	Comb. Agg.	% Tol. (±)			
	Martin-Marietta (Snyder, OK) P/S # m002323802	Martin-Marietta (Snyder, OK) P/S # m002323802	Martin-Marietta (Snyder, OK) P/S # m002323802	McLemore Sand (Elk City, OK)			JMF	Min.	Max.	%
1" Rock	100	100	100	100	100	100	100	100	0	
5/8" Chips	81	100	100	100	98	98	91	100	7	
Scrns.	33	86	100	100	88	88	81	95	7	
1" (25 mm)	17	53	100	100	73	73	66	80	7	
3/4" (19 mm)	3	8	95	100	52	52	45	59	7	
1/2" (12.5 mm)	1	2	70	99	40	40	35	45	5	
3/8" (9.5 mm)	1	1	48	98	32	32	28	36	4	
#4 (4.75 mm)	0	1	33	87	25	25	21	29	4	
#8 (2.36 mm)	0	1	22	37	14	14	10	18	4	
#16 (1.18 mm)	0	1	15	14	8	8	5	11	3	
#30 (.600 mm)	0	1	10.7	5.6	4.8	4.8	2.8	6.8	2	
#50 (.300 mm)	0.1	0.5			4.3	4.3	3.9	4.7	0.4	
#100 (.150 mm)										
#200 (.075 mm)										
AC Content %										

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Warm Mix Asphalt (WMA) Additive %

0.4

Mix temperature @ discharge from mixer: 275 (135) ± 20 °F (± 10 °C)
 Optimum roadway compaction temperature: 260 (127)
 Laboratory mixing temperature: 300 (149)
 Laboratory compaction temperature: 275 (135)

Tests on Aggregates	Required	Units
Contabro	N/A	%
Durability Index	90	40 min. %
F.A.A. %U	N/A	%
Flat and Elongated	3	10 max. %
Fractured Faces	100/100	98/95 min. %
Insoluble Residue	98.4	N/A %
LA Abrasion	20	40 max. %
Micro-Deval	3.4	25 max. %
Permeability	9.2	12.5 max. 10 ⁻⁵ cm/s
Sand Equivalent	81	50 min. %
Pba	0.16	
IOC	0.26	%
Gse	2.620	
Gsb	2.609	
Specimen Weight	4740	g

Tests on Asphalt Cement	Found
Specific Gravity @ 77 °F	1.0100

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	% Density		
	# Gyr.	of Gmm	% Density Required
Nini	8	89.1	85.5 - 89.0
Ndes	80		96.0

Tests on Compressed Mixtures						
%AC	Gmb	Gmm	% Density			
			of Gmm	% Density Required	% VMA	% VFA
4.2	2.351	2.456	95.7	Design / Field	13.7	Design / Field
4.7	2.373	2.437	97.4	96.0 / 94.5 - 97.4	13.3	13.5 / 13.0
5.2	2.395	2.419	99.0		13.0	92.3

ITS (PSI) 117.5 75 min.
 TSR 0.88 0.80 / 0.75 min. (Design / Field)
 Compacted Wt. (lbs/sy/1" thick) = 107.9 @ 4.3 % Asphalt Cement

Hamburg Rut Test Depth (mm) 1.68 12.50 max. @ 20,000 cycles

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

Comments:

Last Modified By: Smith, Jerry D. jsmith
 (User Name and User ID)

Date: 6/8/2018
 (mm/dd/yyyy)