



Oklahoma Department of Transportation Mix Design Report

Asphalt Concrete, Type S4 (PG 76-28 OK) Mat'l. Code: asco010
 (Material Full Name and Material Code)
 MPC Materials P/S # m00906
 (Producer/Supplier Name and Producer/Supplier Code)
 MPC Materials - Markwell (Newcastle) PLANT ID # m00906-01
 (Plant Name and Plant ID)

Insoluble ID: I1
 (Design Type and Design Type ID)
 S4pv0411600400
 (Mix ID)

Aggregate	Producer/Supplier	% USED
5/8" Chips	Hanson Aggregates, WRP Inc (Davis, OK) P/S # m001985008	38
Man. Sand	Hanson Aggregates, WRP Inc (Davis, OK) P/S # m001985008	25
Scrns.	Dolese Co (Davis, OK) P/S # m002745002	22
Sand (Unlisted Source)	General Materials, Inc (OKC, OK) m001911402	15
Asphalt Cement: Asphaltic Cement Type PG 76-28 OK, acem001, Valero (Ardmore, OK), m00352 (Material Full Name, Material Code, Producer/Supplier Name, Producer/Supplier Code)		

Sieve Size	Producer/Supplier:				Comb. Agg.	Requires Form 93-E0 signed by the Department for production use. -Oklahoma D.O.T. Materials-			% Tol. (±)
	5/8" Chips	Man. Sand	Scrns.	Sand (Unlisted Source)		JMF	Min.	Max.	
3/4 in (19 mm)	100	100	100	100	100	100	100	100	0
1/2 in (12.5 mm)	80	100	100	100	92	92	85	99	7
3/8 in (9.5 mm)	56	100	100	100	83	83	76	90	7
#4 (4.75 mm)	18	100	96	98	68	68	61	75	7
#8 (2.36 mm)	6	76	69	96	51	51	46	56	5
#16 (1.18 mm)	3	49	48	94	38	38	34	42	4
#30 (.600 mm)	3	30	34	78	28	28	24	32	4
#50 (.300 mm)	3	17	26	57	20	20	16	24	4
#100 (.150 mm)	2	7	20	8	8	8	5	11	3
#200 (.075 mm)	1.8	2.7	16.3	0.7	5.1	5.1	3.1	7.1	2
AC Content %					5.3	5.3	4.9	5.7	0.4

Mix temperature @ discharge from mixer: 325 (163) ± 20 °F (± 10 °C) **Required**
 Optimum roadway compaction temperature: 305 (152)
 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	8	89.0	85.5 - 89.0
Ndes	80		96.0

Tests on Aggregates	Required	Units
Durability Index	71	40 min. %
F.A.A. %U		N/A %
Flat and Elongated	0	10 max. %
Fractured Faces	100/100	98/95 min. %
Insoluble Residue	83	40 min. %
LA Abrasion	13.9	40 max. %
Micro-Deval	13.9	25 max. %
Permeability	8.6	12.5 max. 10 ⁻⁵ cm/s
Sand Equivalent	73	50 min. %
IOC	0.68	%
Gse	2.736	
Gsb	2.674	
Specimen Weight	4850	g

Tests on Compressed Mixtures							
%AC	Gmb	Gmm	% Density		% VMA	% VMA Required	% VFA
			of Gmm	% Density Required			
4.8	2.399	2.529	94.9	Design / Field	14.6	Design / Field	65.1
5.3	2.412	2.509	96.1	96.0 / 94.5 - 97.4	14.6	14.5 / 14.0	73.3
5.8	2.440	2.489	98.0		14.0		85.7

Dust Prop. 1.3 **Dust Prop. Req.** 0.6 - 1.6
 ITS (PSI) 99 75 min.
 TSR 0.80 0.80 / 0.75 min. (Design / Field)
 Compacted Wt. (lbs/sy/1" thick) = 110.4 @ 5.3 % Asphalt Cement

Hamburg Rut Test Depth (mm) 3.74 12.50 max. @ 20,000 cycles

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

Comments: _____
 Last Modified By: Schratwieser, Edward P. eschrattw Date: 5/3/2016
 (User Name and User ID) (mm/dd/yyyy)