Version: V03.40

Oklahoma Department of Transportation Mix Design Report

Asphalt Concrete, Type S4 (PG 64-22 OK) Mat'l. Code: asco012
(Material Full Name and Material Code)

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

MPC Materials P/S # m00906
(Producer/Supplier Name and Producer/Supplier Code)

S4pv0441601000
(Mix ID)

MPC Materials - Markwell (Newcastle) PLANT ID # m00906-01
(Plant Name and Plant ID)

Aggregate	Producer/Supplier	% USED
5/8" Chips	Hanson Aggregates, WRP Inc (Davis, OK) P/S # m001985008	45
Man. Sand	Hanson Aggregates, WRP Inc (Davis, OK) P/S # m001985008	10
Scrns.	Dolese Co (Davis, OK) P/S # m002745002	30
Sand (Unlisted Source)	General Materials, Inc. (OKC, OK) P/S # m001911	15

Asphalt Cement: Asphaltic Cement Type PG 64-22 OK, acem003, Trumbull Asphalt Co (OKC, OK), m00354
(Material Full Name, Material Code, Producer/Supplier Name, Producer/Supplier Code)

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

Sieve Size	Hanson Aggregates, WRP Inc (Davis, OK) P/S # m001985008 (5/8" Chips)	Hanson Aggregates, WRP Inc (Davis, OK) P/S # m001985008 (Man. Sand)	Dolese Co (Davis, OK) P/S # m002745002 (Scrns.)	General Materials, Inc. (OKC, OK) P/S # m001911 (Sand (Unlisted Source))					Comb. Agg.	JMF	Min.	Max.	% Tol. (±)
3/4 in (19 mm)	100	100	100	100					100	100	100	100	0
1/2 in (12.5 mm)	85	100	100	100					93	93	86	100	7
3/8 in (9.5 mm)	64	100	100	100					84	84	77	91	7
#4 (4.75 mm)	15	100	86	100					58	58	51	65	7
#8 (2.36 mm)	5	71	62	100					43	43	38	48	5
#16 (1.18 mm)	3	45	38	98					32	32	28	36	4
#30 (.600 mm)	2	24	26	93					25	25	21	29	4
#50 (.300 mm)	2	14	19	52					16	16	12	20	4
#100 (.150 mm)	2	7	15	11					8	8	5	11	3
#200 (.075 mm)	2.0	4.0	12.2	1.3					5.2	5.2	3.2	7.2	2
AC Content %									5.2	5.2	4.8	5.6	0.4

	°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

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

Tests on Compressed Mixtures (@ Design AC)

	# Gyr.	% Density of Gmm	% Density Required
Nini	6	89.6	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	1	10	max.	%
Fractured Faces	100/100	85/80	min.	%
Insoluble Residue	72.1	30	min.	%
LA Abrasion	16.4	40	max.	%
Micro-Deval	7.3	N/A		%
Permeability	9.9	12.5	max.	10^{-5}cm/s
Sand Equivalent	77	40	min.	%
IOC	0.33			%
Gse	2.742			
Gsb	2.705			
Specimen Weight	4750			g

Tests on Compressed Mixtures

%AC	Gmb	Gmm	% Density of Gmm	% Density Required Design / Field	% VMA	% VMA Required Design / Field	% VFA	% VFA Required
4.5	2.381	2.546	93.5	96.0 / 94.5 - 97.4	15.9	14.5 / 14.0	59.1	72 - 77
5.0	2.415	2.525	95.6		15.2		71.1	
5.5	2.428	2.506	96.9		15.2		79.6	

Dust Prop.	Dust Prop. Req.
1.3	0.6 - 1.6
1.2	
1.0	

ITS (PSI) 80.6 N/A min.
TSR 0.83 0.80 / 0.75 min. (Design / Field)
Compacted Wt. (lbs/sy/1" thick) = 110.8 @ 5.2 % Asphalt Cement

Hamburg Rut Test Depth (mm) 10.16 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: 7/7/2016
(mm/dd/yyyy)