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)

Binder - Recycled ID: B2
(Design Type and Design Type ID)

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

S4pv0411600200
(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	28
Man. Sand	Hanson Aggregates, WRP Inc (Davis, OK) P/S # m001985008	27
Scrns.	Dolese Co (Davis, OK) P/S # m002745002	10
Sand (Unlisted Source)	GeneralMaterials,Inc (Okc,OK)m001911402	10
Fine R.A.P.	Contractor / Project Site P/S # Contractor	25

Asphalt Cement: Asphaltic Cement Type PG 64-22 OK, acem003, Coffeyville Resources Refining (Wynnewood, OK), m00357
(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-

Producer/Supplier:	Hanson Aggregates, WRP Inc (Davis, OK) P/S # m001985008	Hanson Aggregates, WRP Inc (Davis, OK) P/S # m001985008	Dolese Co (Davis, OK) P/S # m002745002	GeneralMaterials,Inc (Okc,OK)m001911402	Contractor / Project Site P/S # Contractor								
Sieve Size	5/8" Chips	Man. Sand	Scrns.	Sand (Unlisted Source)	Fine R.A.P.				Comb. Agg.	JMF	Min.	Max.	% Tol. (±)
3/4 in (19 mm)	100	100	100	100	100				100	100	100	100	0
1/2 in (12.5 mm)	75	100	100	100	100				93	93	86	100	7
3/8 in (9.5 mm)	52	100	100	100	97				86	86	79	93	7
#4 (4.75 mm)	13	99	97	97	79				70	70	63	77	7
#8 (2.36 mm)	3	73	72	96	60				52	52	47	57	5
#16 (1.18 mm)	2	45	49	94	47				39	39	35	43	4
#30 (.600 mm)	2	27	34	87	38				29	29	25	33	4
#50 (.300 mm)	2	15	24	60	28				20	20	16	24	4
#100 (.150 mm)	2	8	18	15	17				10	10	7	13	3
#200 (.075 mm)	1.3	4.4	15.0	1.3	9.7				5.6	5.6	3.6	7.6	2
AC Content %					5.4				5.1	5.1	4.7	5.5	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

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Tests on Compressed Mixtures (@ Design AC)

	# Gyr.	% Density of Gmm	% Density Required
Nini	6	89.4	85.5 - 91.5
Ndes	50		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	85/80	min.	%
Insoluble Residue		N/A		%
LA Abrasion	28	40	max.	%
Micro-Deval	13.9	N/A		%
Permeability	2.9	12.5	max.	10^{-5}cm/s
Sand Equivalent	78	40	min.	%
IOC	0.65			%
Gse	2.710			
Gsb	2.673			
Specimen Weight	4800			g

Tests on Compressed Mixtures

%AC	Gmb	Gmm	% Density of Gmm	% Density Required Design / Field	% VMA	% VMA Required Design / Field	% VFA	% VFA Required
4.8	2.389	2.507	95.3	96.0 / 94.5 - 97.4	14.9	14.5 / 14.0	68.5	72 - 77
5.3	2.401	2.488	96.5		14.9		76.5	
5.8	2.428	2.469	98.3		14.4		88.2	

Dust Prop.	Dust Prop. Req.
1.3	0.6 - 1.6
1.2	
1.1	

ITS (PSI) 112.2 N/A min.
TSR 0.80 0.80 / 0.75 min. (Design / Field)
Compacted Wt. (lbs/sy/1" thick) = 109.8 @ 5.1 % Asphalt Cement
3.7 % New Asphalt Cement

Hamburg Rut Test Depth (mm) 1.68 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: 2/22/2016
(mm/dd/yyyy)