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)

APAC-Oklahoma P/S # m00552
(Producer/Supplier Name and Producer/Supplier Code)

S4qc0061380800
(Mix ID)

APAC Central #04054 (Vinita, OK)- 400TPH PLANT ID # m00552-11
(Plant Name and Plant ID)

Aggregate	Producer/Supplier	% USED
#67 Rock	APAC-Central #020 (J-6 Quarry @ Vinita, OK) P/S # m001241802	22
Scrns.	APAC-Central #020 (J-6 Quarry @ Vinita, OK) P/S # m001241802	10
Man. Sand	APAC-Central #020 (J-6 Quarry @ Vinita, OK) P/S # m001241802	31
Sand	Holliday Sand & Gravel (Bixby, OK) P/S # m001997212	12
Fine R.A.P.	Contractor / Project Site P/S # Contractor	25

Asphalt Cement: Asphaltic Cement Type PG 64-22 OK, acem003, HollyFrontier (Catoosa, OK), m01028
(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:	APAC-Central #020 (J-6 Quarry @ Vinita, OK) P/S # m001241802	APAC-Central #020 (J-6 Quarry @ Vinita, OK) P/S # m001241802	APAC-Central #020 (J-6 Quarry @ Vinita, OK) P/S # m001241802	Holliday Sand & Gravel (Bixby, OK) P/S # m001997212	Contractor / Project Site P/S # Contractor							
Sieve Size	#67 Rock	Scrns.	Man. Sand	Sand	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)	67	100	100	100	97				92	92	85	99	7
3/8 in (9.5 mm)	35	100	100	100	92				84	84	77	91	7
#4 (4.75 mm)	4	89	93	99	70				68	68	61	75	7
#8 (2.36 mm)	3	60	49	88	40				42	42	37	47	5
#16 (1.18 mm)	2	43	29	68	38				31	31	27	35	4
#30 (.600 mm)	2	32	17	42	30				21	21	17	25	4
#50 (.300 mm)	2	25	8	16	23				13	13	9	17	4
#100 (.150 mm)	2	19	6	2	16				8	8	5	11	3
#200 (.075 mm)	1.4	14.9	4.2	0.4	10.7				5.8	5.8	3.8	7.8	2
AC Content %					5.2				5.3	5.3	4.9	5.7	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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-Oklahoma D.O.T. Materials-

Tests on Compressed Mixtures (@ Design AC)

	# Gyr.	% Density of Gmm	% Density Required
Nini	6	88.2	85.5 - 91.5
Ndes	50		96.0

Tests on Aggregates		Required		Units
Durability Index	64	40	min.	%
F.A.A. %U		N/A		%
Flat and Elongated		10	max.	%
Fractured Faces	100/100	85/80	min.	%
Insoluble Residue	17	N/A		%
LA Abrasion	26.3	40	max.	%
Micro-Deval	19.3	N/A		%
Permeability	0.2	12.5	max.	10^{-5}cm/s
Sand Equivalent	75	40	min.	%
IOC	0.33			%
Gse	2.633			
Gsb	2.609			
Specimen Weight	4700			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	2.313	2.444	94.6		15.6		65.4	
5.3	2.325	2.426	95.8	96.0 / 94.5 - 97.4	15.6	14.5 / 14.0	73.1	72 - 77
5.8	2.353	2.409	97.7		15.0		84.7	

Dust Prop.
1.3
1.2
1.1

Dust Prop. Req. 0.6 - 1.6

ITS (PSI) 191.6 N/A min.
TSR 0.91 0.80 / 0.75 min. (Design / Field)
Compacted Wt. (lbs/sy/1" thick) = 106.7 @ 5.3 % Asphalt Cement
4.0 % New Asphalt Cement

Hamburg Rut Test Depth (mm) 2.68 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: 7/9/2015
(mm/dd/yyyy)