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)

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

S4qc0061283100
(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	15
Mine Chat	Mine Chat @ Tri City Area P/S # MineChat	17
Scrns.	APAC-Central #020 (J-6 Quarry @ Vinita, OK) P/S # m001241802	32
Man. Sand	APAC-Central #020 (J-6 Quarry @ Vinita, OK) P/S # m001241802	21
Sand	Holliday Sand & Gravel (Bixby, OK) P/S # m001997212	15

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	Mine Chat @ Tri City Area P/S # MineChat	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							
Sieve Size	#67 Rock	Mine Chat	Scrns.	Man. Sand	Sand				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)	70	100	100	100	100				96	***96***	*89*	*100*	*7*
3/8 in (9.5 mm)	35	99	100	100	100				90	***90***	*83*	*97*	*7*
#4 (4.75 mm)	4	35	80	94	99				67	***67***	*60*	*74*	*7*
#8 (2.36 mm)	3	5	54	52	91				43	***43***	*38*	*48*	*5*
#16 (1.18 mm)	3	2	38	30	72				30	***30***	*26*	*34*	*4*
#30 (.600 mm)	2	2	28	18	45				20	***20***	*16*	*24*	*4*
#50 (.300 mm)	2	1	22	10	17				12	***12***	*8*	*16*	*4*
#100 (.150 mm)	2	1	17	6	2				7	***7***	*4*	*10*	*3*
#200 (.075 mm)	1.6	0.9	13.4	4.4	0.4				5.7	***5.7***	*3.7*	*7.7*	*2*
AC Content %									5.6	***5.6***	*5.2*	*6.0*	*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	87.1	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	44.8	30	min.	%
LA Abrasion	26.3	40	max.	%
Micro-Deval	19.3	N/A		%
Permeability	2.5	12.5	max.	10^{-5}cm/s
Sand Equivalent	74	40	min.	%
IOC	0.28			%
Gse	2.625			
Gsb	2.579			
Specimen Weight	4700			g

Tests on Compressed Mixtures

%AC	Gmb	Gmm	% Density of Gmm	% Density Required Design / Field	% VMA	% VMA Required Design	% VFA	% VFA Required
4.8	2.262	2.438	92.8	96.0 / 94.5 - 97.4	16.5	14.5	56.4	72 - 77
5.3	2.301	2.420	95.1		15.5		68.4	
5.8	2.315	2.402	96.4		15.4		76.6	

Dust Prop.
1.4
1.2
1.1

Dust Prop. Req. 0.6 - 1.6

ITS (PSI) 110.5 N/A min.
TSR 0.86 0.80 / 0.75 min. (Design / Field)
Compacted Wt. (lbs/sy/1" thick) = 106.0 @ 5.6 % Asphalt Cement

Hamburg Rut Test Depth (mm) 9.07 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)