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)

S4qc0061580200
(Mix ID)

APAC-OK (Pawhuska, OK) - 400TPH PLANT ID # m00552-01
(Plant Name and Plant ID)

Aggregate	Producer/Supplier	% USED
#67 Rock	APAC-Central #066 (Pawhuska, OK) P/S # m001505703	13
1/2" Chips	APAC-Central #066 (Pawhuska, OK) P/S # m001505703	18
Man. Sand	APAC-Central #066 (Pawhuska, OK) P/S # m001505703	39
Sand	Sober Sand Co. (Ponca City, OK) P/S # m005373601	10
Fine R.A.P.	Contractor / Project Site P/S # Contractor	20

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 #066 (Pawhuska, OK) P/S # m001505703	APAC-Central #066 (Pawhuska, OK) P/S # m001505703	APAC-Central #066 (Pawhuska, OK) P/S # m001505703	Sober Sand Co. (Ponca City, OK) P/S # m005373601	Contractor / Project Site P/S # Contractor								
Sieve Size	#67 Rock	1/2" Chips	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)	54	100	100	100	97				93	***93***	*86*	*100*	*7*
3/8 in (9.5 mm)	24	89	100	100	92				87	***87***	*80*	*94*	*7*
#4 (4.75 mm)	2	7	93	96	73				62	***62***	*55*	*69*	*7*
#8 (2.36 mm)	2	2	52	84	53				40	***40***	*35*	*45*	*5*
#16 (1.18 mm)	2	2	28	64	38				26	***26***	*22*	*30*	*4*
#30 (.600 mm)	2	2	14	44	28				16	***16***	*12*	*20*	*4*
#50 (.300 mm)	2	2	7	21	20				9	***9***	*5*	*13*	*4*
#100 (.150 mm)	2	2	5	3	14				6	***6***	*3*	*9*	*3*
#200 (.075 mm)	1.6	1.6	4.3	0.6	12.1				4.7	***4.7***	*2.7*	*6.7*	*2*
AC Content %					5.0				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

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Tests on Compressed Mixtures (@ Design AC)

	# Gyr.	% Density of Gmm	% Density Required
Nini	6	88.0	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	0.3	N/A		%
LA Abrasion	24	40	max.	%
Micro-Deval	14.3	N/A		%
Permeability	6.8	12.5	max.	10^{-5}cm/s
Sand Equivalent	72	40	min.	%
IOC	0.41			%
Gse	2.656			
Gsb	2.641			
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	2.326	2.463	94.4		16.2		65.4	
5.3	2.350	2.445	96.1	96.0 / 94.5 - 97.4	15.7	14.5 / 14.0	75.2	72 - 77
5.8	2.389	2.427	98.4		14.8		89.2	

Dust Prop.	Dust Prop. Req.
1.0	
0.9	0.6 - 1.6
0.8	

ITS (PSI) 102.2 N/A min.
TSR 0.86 0.80 / 0.75 min. (Design / Field)
Compacted Wt. (lbs/sy/1" thick) = 107.7 @ 5.2 % Asphalt Cement
4.2 % New Asphalt Cement

Hamburg Rut Test Depth (mm) 2.36 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: 12/1/2016
(mm/dd/yyyy)