Version: V03.50

Oklahoma Department of Transportation Mix Design Report

Asphalt Concrete, Type S4 (PG 76-28 OK) Mat'l. Code: asco010
(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)

S4qc0061800700
(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	16
Man. Sand	APAC-Central #020 (J-6 Quarry @ Vinita, OK) P/S # m001241802	32
Scrns.	APAC Central (Oologah, OK) P/S # m010246607	20
Sand	Holliday Sand & Gravel (Bixby, OK) P/S # m001657231	15
Mine Chat	Mine Chat @ Tri City Area P/S # MineChat	17

Asphalt Cement: Asphaltic Cement Type PG 76-28 OK, acem001, 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 (Oologah, OK) P/S # m010246607	Holliday Sand & Gravel (Bixby, OK) P/S # m001657231	Mine Chat @ Tri City Area P/S # MineChat								
Sieve Size	#67 Rock	Man. Sand	Scrns.	Sand	Mine Chat				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)	68	100	100	100	100				95	***95***	*88*	*100*	*7*
3/8 in (9.5 mm)	32	100	100	100	100				89	***89***	*82*	*96*	*7*
#4 (4.75 mm)	11	98	81	99	41				71	***71***	*64*	*78*	*7*
#8 (2.36 mm)	2	58	56	93	7				45	***45***	*40*	*50*	*5*
#16 (1.18 mm)	2	30	40	74	2				29	***29***	*25*	*33*	*4*
#30 (.600 mm)	2	16	30	44	1				18	***18***	*14*	*22*	*4*
#50 (.300 mm)	1	8	22	10	1				9	***9***	*5*	*13*	*4*
#100 (.150 mm)	1	6	18	2	1				6	***6***	*3*	*9*	*3*
#200 (.075 mm)	0.9	4.6	14.5	0.9	0.8				4.8	***4.8***	*2.8*	*6.8*	*2*
AC Content %					5.1				5.3	***5.3***	*4.9*	*5.7*	*0.4*

	°F (°C)	Required
Mix temperature @ discharge from mixer:	325 (163)	± 20 °F (± 10 °C)
Optimum roadway compaction temperature:	305 (152)	
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	8	88.7	85.5 - 89.0
Ndes	80		96.0

Tests on Aggregates		Required		Units
Contabro	4.7	N/A		%
Durability Index	71	40	min.	%
F.A.A. %U		N/A		%
Flat and Elongated		10	max.	%
Fractured Faces	100/100	98/95	min.	%
Insoluble Residue	40.7	40	min.	%
LA Abrasion	32	40	max.	%
Micro-Deval	21	25	max.	%
Permeability	1.3	12.5	max.	10^{-5}cm/s
Sand Equivalent	73	50	min.	%
IOC	0.26			%
Gse	2.616			
Gsb	2.584			
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	2.303	2.430	94.8		15.2		65.8	
5.3	2.311	2.413	95.8	96.0 / 94.5 - 97.4	15.3	14.5 / 14.0	72.5	72 - 77
5.8	2.349	2.395	98.1		14.4		86.8	

Dust Prop.
1.1
1.0
0.9

Dust Prop. Req. 0.6 - 1.6

ITS (PSI) 136.4 75 min.
TSR 0.88 0.80 / 0.75 min. (Design / Field)
Compacted Wt. (lbs/sy/1" thick) = 106.1 @ 5.3 % Asphalt Cement

Hamburg Rut Test Depth (mm) 3.13 12.50 max. @ 20,000 cycles

MEETS SPECIFICATION REQUIREMENTS PER SPECIAL PROVISION 708-26(a-f) 09

Comments:

Last Modified By: Smith, Jerry D. jsmith
(User Name and User ID)

Date: 6/15/2018
(mm/dd/yyyy)