Version: V03.40

Oklahoma Department of Transportation Mix Design Report

Asphalt Concrete, Type S4 (PG 70-28 OK) Mat'l. Code: asco011
(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)

S4qc0061800800
(Mix ID)

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

Aggregate	Producer/Supplier	% USED
#67 Rock	APAC-Central #066 (Pawhuska, OK) P/S # m001505703	22
Scrns.	APAC-Central #066 (Pawhuska, OK) P/S # m001505703	10
Man. Sand	APAC-Central #066 (Pawhuska, OK) P/S # m001505703	26
Sand	Sober Sand Co. (Ponca City, OK) P/S # m005373601	15
Mine Chat	Mine Chat @ Tri City Area P/S # MineChat	27

Asphalt Cement: Asphaltic Cement Type PG 70-28 OK, acem002, 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	Mine Chat @ Tri City Area P/S # MineChat								
Sieve Size	#67 Rock	Scrns.	Man. Sand	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)	67	100	100	100	100				93	93	86	100	7
3/8 in (9.5 mm)	36	100	100	100	98				85	85	78	92	7
#4 (4.75 mm)	5	99	99	96	47				64	64	57	71	7
#8 (2.36 mm)	2	78	60	84	7				38	38	33	43	5
#16 (1.18 mm)	2	51	32	64	2				24	24	20	28	4
#30 (.600 mm)	2	35	15	41	1				14	14	10	18	4
#50 (.300 mm)	2	25	9	22	1				9	9	5	13	4
#100 (.150 mm)	2	20	6	4	1				5	5	2	8	3
#200 (.075 mm)	2.2	17.0	5.3	1.1	0.7				3.9	3.9	1.9	5.9	2
AC Content %									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	7	87.4	85.5 - 90.5
Ndes	65		96.0

Tests on Aggregates		Required		Units
Durability Index	76	40	min.	%
F.A.A. %U		N/A		%
Flat and Elongated		10	max.	%
Fractured Faces	100/100	95/90	min.	%
Insoluble Residue	40.5	40	min.	%
LA Abrasion	24	40	max.	%
Micro-Deval	12.3	N/A		%
Permeability	1.2	12.5	max.	10^{-5}cm/s
Sand Equivalent	86	45	min.	%
IOC	0.37			%
Gse	2.634			
Gsb	2.598			
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	2.318	2.445	94.8	96.0 / 94.5 - 97.4	15.1	14.5 / 14.0	65.6	72 - 77
5.3	2.334	2.427	96.2		14.9		74.5	
5.8	2.361	2.409	98.0		14.4		86.1	

Dust Prop.	Dust Prop. Req.
0.9	0.6 - 1.6
0.8	
0.7	

ITS (PSI) 131 N/A min.
TSR 0.85 0.80 / 0.75 min. (Design / Field)
Compacted Wt. (lbs/sy/1" thick) = 106.8 @ 5.3 % Asphalt Cement

Hamburg Rut Test Depth (mm) 1.94 12.50 max. @ 15,000 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)