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 Central - (Arkhola S & G Asphalt) P/S # m00553
(Producer/Supplier Name and Producer/Supplier Code)

S4qc0021590701
(Mix ID)

APAC-Central #04037 (Portable-Zeb, OK) - 300TPH PLANT ID # m00553-01
(Plant Name and Plant ID)

Aggregate	Producer/Supplier	% USED
#67 Rock	APAC-Central #016 (Roberts Quarry @ Zeb, OK) P/S # m001301102	13
3/8" Chips	APAC-Central #017 Okay, OK P/S # m001337302	24
Scrns.	APAC-Central #017 Okay, OK P/S # m001337302	28
Man. Sand	APAC-Central #016 (Roberts Quarry @ Zeb, OK) P/S # m001301102	20
Sand	APAC - Arkhola Muskogee Sand Plant P/S # m001315103	15

Asphalt Cement: Asphaltic Cement Type PG 70-28 OK, acem002, Lion Oil Co. (Muskogee, OK), m00511
(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 #016 (Roberts Quarry @ Zeb, OK) P/S # m001301102	APAC-Central #017 Okay, OK P/S # m001337302	APAC-Central #017 Okay, OK P/S # m001337302	APAC-Central #016 (Roberts Quarry @ Zeb, OK) P/S # m001301102	APAC - Arkhola Muskogee Sand Plant P/S # m001315103								
Sieve Size	#67 Rock	3/8" Chips	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)	65	100	100	100	100				95	95	88	100	7
3/8 in (9.5 mm)	25	100	100	100	100				90	90	83	97	7
#4 (4.75 mm)	5	22	89	97	99				65	65	58	72	7
#8 (2.36 mm)	4	7	57	72	92				46	46	41	51	5
#16 (1.18 mm)	2	5	36	46	75				32	32	28	36	4
#30 (.600 mm)	2	4	24	30	46				21	21	17	25	4
#50 (.300 mm)	2	3	18	17	9				11	11	7	15	4
#100 (.150 mm)	2	3	15	10	1				7	7	4	10	3
#200 (.075 mm)	2.0	2.0	11.0	8.0	0.5				5.5	5.5	3.5	7.5	2
AC Content %									5.0	5.3	4.9	5.7	0.4

x

	°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	87.8	85.5 - 90.5
Ndes	65		96.0

Tests on Aggregates		Required		Units
Durability Index	51	40	min.	%
F.A.A. %U		N/A		%
Flat and Elongated	0	10	max.	%
Fractured Faces	100/100	95/90	min.	%
Insoluble Residue	44.9	40	min.	%
LA Abrasion	25.3	40	max.	%
Micro-Deval	19.7	N/A		%
Permeability	4.7	12.5	max.	10^{-5}cm/s
Sand Equivalent	65	45	min.	%
IOC	0.67			%
Gse	2.619			
Gsb	2.593			
Specimen Weight	4730			g

Tests on Compressed Mixtures

%AC	Gmb	Gmm	% Density of Gmm	% Density Required	% VMA	% VMA Required	% VFA	% VFA Required
4.6	2.307	2.440	94.5	Design / Field	15.1	Design / Field	63.6	
5.1	2.334	2.422	96.4	96.0 / 94.5 - 97.4	14.6	14.5 / 14.0	75.3	72 - 77
5.6	2.360	2.404	98.2		14.1		87.2	

Dust Prop.	Dust Prop. Req.
1.3	0.6 - 1.6
1.2	
1.1	

ITS (PSI) 97.6 N/A min.
TSR 0.86 0.80 / 0.75 min. (Design / Field)
Compacted Wt. (lbs/sy/1" thick) = 106.2 @ 5.0 % Asphalt Cement

x 1st JMF Revision

Hamburg Rut Test Depth (mm) 7.06 #N/A

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

Comments: REVISED (AC) Effective 6/14/16 per contractor's request.

Last Modified By: Suitor, Kevin ksuitor
(User Name and User ID)

Date: 11/17/2017
(mm/dd/yyyy)