Version: V03.40

Oklahoma Department of Transportation Mix Design Report

Asphalt Concrete, Type S3 (PG 70-28 OK) Mat'l. Code: asco008
(Material Full Name and Material Code)

Binder ID: B1
(Design Type and Design Type ID)

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

S3qc0021590300
(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	30
3/8" Chips	APAC-Central #016 (Roberts Quarry @ Zeb, OK) P/S # m001301102	20
W. Scrns.	APAC-Central #016 (Roberts Quarry @ Zeb, OK) P/S # m001301102	25
Scrns.	APAC-Central #017 Okay, OK P/S # m001337302	15
Sand	Arkhola S & G (Muskogee, OK) P/S # m001315103	10

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 #016 (Roberts Quarry @ Zeb, OK) P/S # m001301102	APAC-Central #016 (Roberts Quarry @ Zeb, OK) P/S # m001301102	APAC-Central #017 Okay, OK P/S # m001337302	Arkhola S & G (Muskogee, OK) P/S # m001315103								
Sieve Size	#67 Rock	3/8" Chips	W. Scrns.	Scrns.	Sand				Comb. Agg.	JMF	Min.	Max.	% Tol. (±)
1 in (25 mm)	100	100	100	100	100				100	100	100	100	0
3/4 in (19 mm)	100	100	100	100	100				100	100	93	100	7
1/2 in (12.5 mm)	62	100	100	100	100				89	89	82	96	7
3/8 in (9.5 mm)	24	99	100	100	100				77	77	70	84	7
#4 (4.75 mm)	4	32	98	88	99				55	55	48	62	7
#8 (2.36 mm)	3	6	75	56	91				38	38	33	43	5
#16 (1.18 mm)	3	4	46	34	71				25	25	21	29	4
#30 (.600 mm)	3	3	28	23	31				15	15	11	19	4
#50 (.300 mm)	2	3	18	16	4				9	9	5	13	4
#100 (.150 mm)	2	2	12	11	1				6	6	3	9	3
#200 (.075 mm)	2.0	2.0	10.9	9.0	0.3				5.1	5.1	3.1	7.1	2
AC Content %									5.0	5.0	4.6	5.4	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	86.6	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	1	10	max.	%
Fractured Faces	100/100	95/90	min.	%
Insoluble Residue	11.4	N/A		%
LA Abrasion	25.3	40	max.	%
Micro-Deval	19.7	N/A		%
Permeability	4.8	12.5	max.	10^{-5}cm/s
Sand Equivalent	72	45	min.	%
IOC	0.55			%
Gse	2.670			
Gsb	2.602			
Specimen Weight	4810			g

Tests on Compressed Mixtures

%AC	Gmb	Gmm	% Density of Gmm	% Density Required	% VMA	% VMA Required	% VFA	% VFA Required
4.5	2.351	2.486	94.6	Design / Field	13.7	Design / Field	60.6	
5.0	2.368	2.467	96.0	96.0 / 94.5 - 97.4	13.5	13.5 / 13.0	70.4	70 - 75
5.5	2.395	2.449	97.8		13.0		83.1	

Dust Prop.
1.4
1.2
1.1

Dust Prop. Req. 0.6 - 1.6

ITS (PSI) 118.8 N/A min.
TSR 0.81 0.80 / 0.75 min. (Design / Field)
Compacted Wt. (lbs/sy/1" thick) = 108.5 @ 5.0 % Asphalt Cement

Hamburg Rut Test Depth (mm) 7.57 #N/A

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

Comments:

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

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