Version: V03.40

Oklahoma Department of Transportation Mix Design Report

Asphalt Concrete, Type S3 (PG 64-22 OK) Mat'l. Code: asco009
(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)

S3c00931801000
(Mix ID)

APAC - Central (Muskogee, OK) Formerly Glover PLANT ID # m00553-09
(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
Man. Sand	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 64-22 OK, acem003, 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	Man. Sand	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)	99	100	100	100	100				100	100	93	100	7
1/2 in (12.5 mm)	61	100	100	100	100				88	88	81	95	7
3/8 in (9.5 mm)	35	96	100	100	100				80	80	73	87	7
#4 (4.75 mm)	6	33	98	87	99				56	56	49	63	7
#8 (2.36 mm)	5	8	75	63	92				41	41	36	46	5
#16 (1.18 mm)	4	5	47	41	75				28	28	24	32	4
#30 (.600 mm)	4	4	30	27	41				18	18	14	22	4
#50 (.300 mm)	3	4	19	19	12				11	11	7	15	4
#100 (.150 mm)	3	3	14	14	2				7	7	4	10	3
#200 (.075 mm)	2.2	2.5	8.5	10.4	1.3				5.0	5.0	3.0	7.0	2
AC Content %									5.3	5.3	4.9	5.7	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	87.1	85.5 - 91.5
Ndes	50		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	85/80	min.	%
Insoluble Residue	10.7	N/A		%
LA Abrasion	25.3	40	max.	%
Micro-Deval	19.7	N/A		%
Permeability	0	12.5	max.	10^{-5}cm/s
Sand Equivalent	82	40	min.	%
IOC	0.39			%
Gse	2.686			
Gsb	2.600			
Specimen Weight	4825			g

Tests on Compressed Mixtures

%AC	Gmb	Gmm	% Density of Gmm	% Density Required	% VMA	% VMA Required	% VFA	
4.5	2.344	2.499	93.8	Design / Field	13.9	Design / Field	55.4	% VFA Required
5.0	2.360	2.480	95.2	96.0 / 94.5 - 97.4	13.8	13.5 / 13.0	65.2	70 - 75
5.5	2.383	2.461	96.8		13.4		76.1	

Dust Prop.
1.5
1.3
1.2

Dust Prop. Req. 0.6 - 1.6

ITS (PSI) 157 N/A min.
TSR 0.86 0.80 / 0.75 min. (Design / Field)
Compacted Wt. (lbs/sy/1" thick) = 108.6 @ 5.3 % Asphalt Cement

Hamburg Rut Test Depth (mm) 2.33 12.50 max. @ 10,000 cycles

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

Comments: Similar to S3c00931800800 (Plant ID Change *P/S Change: Glover to APAC*)

Last Modified By: McComack, Hunter J. hmccomac
(User Name and User ID)

Date: 6/13/2018
(mm/dd/yyyy)