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

S4qc0021800200
(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 #017 (Okay, OK) P/S # m001337302	25
3/8" Chips	APAC-Central #016 (Roberts Quarry @ Zeb, OK) P/S # m001301102	10
Man. Sand	APAC-Central #016 (Roberts Quarry @ Zeb, OK) P/S # m001301102	35
Scrns.	APAC-Central #017 (Okay, OK) P/S # m001337302	20
Sand	APAC - Arkhola Muskogee Sand Plant P/S # m001315103	10

Asphalt Cement: Asphaltic Cement Type PG 76-28 OK, acem001, 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-

Sieve Size	#67 Rock	3/8" Chips	Man. Sand	Scrns.	Sand				Comb. Agg.	JMF	Min.	Max.	% Tol. (±)
Producer/Supplier:	APAC-Central #017 (Okay, OK) P/S # m001337302	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	APAC - Arkhola Muskogee Sand Plant P/S # m001315103								
3/4 in (19 mm)	100	100	100	100	100				100	**100**	100	100	0
1/2 in (12.5 mm)	66	100	100	100	100				92	**92**	85	99	7
3/8 in (9.5 mm)	30	100	100	100	100				83	**83**	76	90	7
#4 (4.75 mm)	6	44	100	89	98				69	**69**	62	76	7
#8 (2.36 mm)	5	10	80	57	90				51	**51**	46	56	5
#16 (1.18 mm)	4	6	52	35	70				34	**34**	30	38	4
#30 (.600 mm)	4	6	32	24	34				21	**21**	17	25	4
#50 (.300 mm)	3	5	18	17	5				11	**11**	7	15	4
#100 (.150 mm)	3	4	10	11	1				7	**7**	4	10	3
#200 (.075 mm)	2.4	2.9	7.5	9.0	0.9				5.4	**5.4**	3.4	7.4	2
AC Content %									5.5	**5.5**	5.1	5.9	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	88.5	85.5 - 89.0
Ndes	80		96.0

Tests on Aggregates		Required		Units
Contabro	#REF!	N/A		%
Durability Index	51	40	min.	%
F.A.A. %U		N/A		%
Flat and Elongated	0	10	max.	%
Fractured Faces	100/100	98/95	min.	%
Insoluble Residue	46.5	40	min.	%
LA Abrasion	25.3	40	max.	%
Micro-Deval	19.7	25	max.	%
Permeability	6.5	12.5	max.	10^{-5}cm/s
Sand Equivalent	58	50	min.	%
IOC	0.66			%
Gse	2.649			
Gsb	2.598			
Specimen Weight	4745			g

Tests on Compressed Mixtures

%AC	Gmb	Gmm	% Density of Gmm	% Density Required Design / Field	% VMA	% VMA Required Design / Field	% VFA	% VFA Required
5.0	2.299	2.450	93.8		15.9		61.0	
5.5	2.346	2.432	96.5	96.0 / 94.5 - 97.4	14.7	14.5 / 14.0	76.2	72 - 77
6.0	2.360	2.414	97.8		14.6		84.9	

Dust Prop.	Dust Prop. Req.
1.3	0.6 - 1.6
1.1	
1.0	

ITS (PSI) 124.4 75 min.
TSR 0.89 0.80 / 0.75 min. (Design / Field)
Compacted Wt. (lbs/sy/1" thick) = 107.0 @ 5.5 % Asphalt Cement

Hamburg Rut Test Depth (mm) 7.96 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: 5/11/2018
(mm/dd/yyyy)