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)

S4c00931801100
(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 #017 Okay, OK P/S # m001337302	32
3/8" Chips	APAC-Central #016 (Roberts Quarry @ Zeb, OK) P/S # m001301102	13
Man. Sand	APAC-Central #016 (Roberts Quarry @ Zeb, OK) P/S # m001301102	40
Sand	Arkhola S & G (Muskogee, OK) 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-

Sieve Size	#67 Rock	3/8" Chips	Man. Sand	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	Arkhola S & G (Muskogee, OK) P/S # m001315103										
3/4 in (19 mm)	99	100	100	100					100	100	100	100	0	
1/2 in (12.5 mm)	74	100	100	100					92	92	85	99	7	
3/8 in (9.5 mm)	35	95	100	100					79	87	80	94	7	x
#4 (4.75 mm)	5	22	99	99					59	72	65	79	7	x
#8 (2.36 mm)	4	2	74	96					46	54	49	59	5	x
#16 (1.18 mm)	4	1	49	81					33	38	34	42	4	x
#30 (.600 mm)	4	1	32	51					22	22	18	26	4	
#50 (.300 mm)	4	1	19	12					11	11	7	15	4	
#100 (.150 mm)	3	1	12	2					6	6	3	9	3	
#200 (.075 mm)	3.3	0.5	8.8	5.0					5.4	5.4	3.4	7.4	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	88.2	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	40.7	40	min.	%
LA Abrasion	25.3	40	max.	%
Micro-Deval	19.7	N/A		%
Permeability	2.6	12.5	max.	10^{-5}cm/s
Sand Equivalent	79	45	min.	%
IOC	0.56			%
Gse	2.620			
Gsb	2.587			
Specimen Weight	4735			g

Tests on Compressed Mixtures

%AC	Gmb	Gmm	% Density of Gmm	% Density Required	% VMA	% VMA Required	% VFA	% VFA Required
4.8	2.323	2.434	95.4	Design / Field	14.5	Design / Field	68.3	
5.3	2.332	2.416	96.5	96.0 / 94.5 - 97.4	14.6	14.5 / 14.0	76.0	72 - 77
5.8	2.347	2.398	97.9		14.5		85.5	

Dust Prop.
1.3
1.1
1.0

Dust Prop. Req. 0.6 - 1.6

ITS (PSI) 112.6 N/A min.
TSR 0.81 0.80 / 0.75 min. (Design / Field)
Compacted Wt. (lbs/sy/1" thick) = 106.8 @ 5.0 % Asphalt Cement

x 1st JMF Revision

Hamburg Rut Test Depth (mm) 6.62 12.50 max. @ 15,000 cycles

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

Comments: Similar to S4pv0261302301 (Plant and Producer ID Change)(*P/S Change: Glover to APAC)

Last Modified By: Vivanco, David dvivanco
(User Name and User ID)

Date: 6/14/2018
(mm/dd/yyyy)