



Oklahoma Department of Transportation Mix Design Report

Asphalt Concrete, Type S4 (PG 76-28 OK) Mat'l. Code: asco010

Insoluble ID: I1

(Material Full Name and Material Code)

(Design Type and Design Type ID)

APAC Central - (Arkhol S & G Asphalt) P/S # m00553

S4c00931801000

(Producer/Supplier Name and Producer/Supplier Code)

(Mix ID)

APAC - Central (Mcalester, OK) Formerly Glover PLANT ID # m00553-07

(Plant Name and Plant ID)

Aggregate	Producer/Supplier	% USED
5/8" Chips	Martin-Marietta (Mill Creek, OK) P/S # m002303502	25
3/8" Chips	Dolese Co (Hartshorne, OK) P/S # m002756101	15
Man. Sand	Martin-Marietta (Mill Creek, OK) P/S # m002303502	15
Scrns.	Dolese Co (Hartshorne, OK) P/S # m002756101	30
Sand	Muskogee Sand - West Plant (Muskogee, OK) P/S # m007067309	15

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)

Producer/Supplier:	Martin-Marietta (Mill Creek, OK) P/S # m002303502	Dolese Co (Hartshorne, OK) P/S # m002756101	Martin-Marietta (Mill Creek, OK) P/S # m002303502	Dolese Co (Hartshorne, OK) P/S # m002756101	Muskogee Sand - West Plant (Muskogee, OK) P/S # m007067309	Requires Form 93-E0 signed by the Department for production use. -Oklahoma D.O.T. Materials-				
	5/8" Chips	3/8" Chips	Man. Sand	Scrns.	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)	78	100	100	100	100	95	95	88	100	7
3/8 in (9.5 mm)	48	94	100	100	100	86	86	79	93	7
#4 (4.75 mm)	6	16	99	100	99	64	64	57	71	7
#8 (2.36 mm)	2	3	82	62	96	46	46	41	51	5
#16 (1.18 mm)	2	2	53	38	89	34	34	30	38	4
#30 (.600 mm)	1	2	29	26	71	23	23	19	27	4
#50 (.300 mm)	1	2	12	19	31	13	13	9	17	4
#100 (.150 mm)	1	2	4	14	4	6	6	3	9	3
#200 (.075 mm)	1.0	1.1	1.8	10.2	0.6	3.8	3.8	1.8	5.8	2
AC Content %						5.1	5.1	4.7	5.5	0.4

Mix temperature @ discharge from mixer: 325 (163) **Required** ± 20 °F (± 10 °C)
 Optimum roadway compaction temperature: 305 (152)
 Laboratory mixing temperature: 325 (163)
 Laboratory compaction temperature: 300 (149)

Tests on Aggregates	Required	Units
Durability Index	40 min.	%
F.A.A. %U	N/A	%
Flat and Elongated	10 max.	%
Fractured Faces	98/95 min.	%
Insoluble Residue	40 min.	%
LA Abrasion	40 max.	%
Micro-Deval	25 max.	%
Permeability	12.5 max.	10 ⁻⁵ cm/s
Sand Equivalent	50 min.	%
IOC	0.49	%
Gse	2.650	
Gsb	2.620	
Specimen Weight	4795	g

Tests on Asphalt Cement	Found
Specific Gravity @ 77 ° F	1.0100

Requires Form 93-E0 signed by the Department for production use. -Oklahoma D.O.T. Materials-

Tests on Compressed Mixtures (@ Design AC)			
	% Density		% Density Required
	# Gyr.	of Gmm	
Nini	8	89.2	85.5 - 89.0
Ndes	80		96.0

Tests on Compressed Mixtures							
%AC	Gmb	Gmm	% Density		% VMA	% VMA Required	% VFA
			of Gmm	% Density Required			
4.8	2.334	2.458	95.0	Design / Field	15.2	Design / Field	67.1
5.3	2.363	2.440	96.8	96.0 / 94.5 - 97.4	14.6	14.5 / 14.0	78.1
5.8	2.374	2.422	98.0		14.6		86.3

ITS (PSI) 99.4 75 min.
 TSR 0.80 0.80 / 0.75 min. (Design / Field)
 Dust Prop. 0.9 Dust Prop. Req. 0.6 - 1.6
 Compacted Wt. (lbs/sy/1" thick) = 107.7 @ 5.1 % Asphalt Cement

Hamburg Rut Test Depth (mm) 2.77 12.50 max. @ 20,000 cycles

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

Comments: Similar to S4pv0261701000 (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)