Version: V03.40

Oklahoma Department of Transportation Mix Design Report

Asphalt Concrete, Type S4 (PG 64-22 OK) Mat'l. Code: asco012
(Material Full Name and Material Code)

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

Glover & Associates Inc. P/S # m00745
(Producer/Supplier Name and Producer/Supplier Code)

S4pv0261400300
(Mix ID)

Glover & Assoc. Asphalt Co. (Muskogee) PLANT ID # m00745-03
(Plant Name and Plant ID)

Aggregate	Producer/Supplier	% USED
#67 Rock	APAC-Central #017 Okay, OK P/S # m001337302	12
3/8" Chips	Kemp Stone (Hulbert, OK) P/S # m007101106	23
Bckshot.	Kemp Stone (Hulbert, OK) P/S # m007101106	42
Scrns.	Kemp Stone (Hulbert, OK) P/S # m007101106	13
Sand	Muskogee Sand - West Plant (Muskogee, OK) P/S # m007067309	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-

Sieve Size	Producer/Supplier: APAC-Central #017 Okay, OK P/S # m001337302	Kemp Stone (Hulbert, OK) P/S # m007101106	Kemp Stone (Hulbert, OK) P/S # m007101106	Kemp Stone (Hulbert, OK) P/S # m007101106	Muskogee Sand - West Plant (Muskogee, OK) P/S # m007067309				Comb. Agg.	JMF	Min.	Max.	% Tol. (±)
	#67 Rock	3/8" Chips	Bckshot.	Scrns.	Sand								
3/4 in (19 mm)	100	100	100	100	100				100	100	100	100	0
1/2 in (12.5 mm)	73	100	100	100	100				97	97	90	100	7
3/8 in (9.5 mm)	29	95	100	100	100				90	90	83	97	7
#4 (4.75 mm)	4	11	90	99	99				64	64	57	71	7
#8 (2.36 mm)	3	3	59	76	97				45	45	40	50	5
#16 (1.18 mm)	3	3	36	53	85				32	32	28	36	4
#30 (.600 mm)	3	2	20	37	67				21	21	17	25	4
#50 (.300 mm)	3	2	11	26	35				12	12	8	16	4
#100 (.150 mm)	3	2	7	18	4				7	7	4	10	3
#200 (.075 mm)	2.1	1.6	5.7	13.0	0.6				4.8	4.8	2.8	6.8	2
AC Content %									5.2	5.2	4.8	5.6	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	87.2	85.5 - 91.5
Ndes	50		96.0

Tests on Aggregates		Required		Units
Durability Index	60	40	min.	%
F.A.A. %U		N/A		%
Flat and Elongated	0	10	max.	%
Fractured Faces	100/100	85/80	min.	%
Insoluble Residue	18.1	N/A		%
LA Abrasion	27	40	max.	%
Micro-Deval	23.6	N/A		%
Permeability	0.3	12.5	max.	10^{-5}cm/s
Sand Equivalent	77	40	min.	%
IOC	0.55			%
Gse	2.675			
Gsb	2.618			
Specimen Weight	4810			g

Tests on Compressed Mixtures

%AC	Gmb	Gmm	% Density of Gmm	% Density Required Design / Field	% VMA	% VMA Required Design / Field	% VFA	% VFA Required
4.8	2.344	2.479	94.6	96.0 / 94.5 - 97.4	14.8	14.5 / 14.0	63.5	72 - 77
5.3	2.366	2.460	96.2		14.4		73.6	
5.8	2.381	2.442	97.5		14.3		82.5	

Dust Prop.
1.2
1.1
1.0

Dust Prop. Req. 0.6 - 1.6

ITS (PSI) 132.6 N/A min.

TSR 0.85 0.80 / 0.75 min. (Design / Field)

Compacted Wt. (lbs/sy/1" thick) = 108.4 @ 5.2 % Asphalt Cement

Hamburg Rut Test Depth (mm) 1.96 12.50 max. @ 10,000 cycles

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

Comments:

Last Modified By: Schratwieser, Edward P. eschratw
(User Name and User ID)

Date: 4/23/2014
(mm/dd/yyyy)