



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)
 Glover & Associates Inc. P/S # m00745
 (Producer/Supplier Name and Producer/Supplier Code)
 Glover & Assoc. Asphalt Co. (Muskogee) PLANT ID # m00745-03
 (Plant Name and Plant ID)

Insoluble ID: I1
 (Design Type and Design Type ID)
 S4pv0261302301
 (Mix 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	Arkholas 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)		

Sieve Size	Producer/Supplier:				Comb. Agg.	%			Tol. (±)
	#67 Rock	3/8" Chips	Man. Sand	Sand		JMF	Min.	Max.	
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
#4 (4.75 mm)	5	22	99	99	59	72	65	79	7
#8 (2.36 mm)	4	2	74	96	46	54	49	59	5
#16 (1.18 mm)	4	1	49	81	33	38	34	42	4
#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

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

Mix temperature @ discharge from mixer: 325 (163) ± 20 °F (± 10 °C) **Required**
 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
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
5.8	2.347	2.398	97.9		14.5		85.5

Dust Prop. 1.3 **Dust Prop. Req.** 0.6 - 1.6
 1.1
 1.0
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: REVISED (GRAD.) Effective 3/23/16 per contractor's request.

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

Date: 3/24/2016
 (mm/dd/yyyy)