



Oklahoma Department of Transportation Mix Design Report

Asphalt Concrete, Type S3 (PG 70-28 OK) Mat'l. Code: asco008

Binder ID: B1

(Material Full Name and Material Code)

(Design Type and Design Type ID)

Glover & Associates Inc. P/S # m00745

S3c00931500100

(Producer/Supplier Name and Producer/Supplier Code)

(Mix ID)

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

(Plant Name and Plant ID)

Aggregate	Producer/Supplier	% USED
#67 Rock	APAC-Central #016 (Roberts Quarry @ Zeb, OK) P/S # m001301102	30
3/8" Chips	APAC-Central #016 (Roberts Quarry @ Zeb, OK) P/S # m001301102	20
W. Scrns.	APAC-Central #016 (Roberts Quarry @ Zeb, OK) P/S # m001301102	25
Scrns.	APAC-Central #017 Okay, OK P/S # m001337302	15
Sand	Arkholia S & G (Muskogee, OK) P/S # m001315103	10
Asphalt Cement: Asphaltic Cement Type PG 70-28 OK, acem002, Calumet Lubricants Company (Muskogee, OK), m01021 <small><i>(Material Full Name, Material Code, Producer/Supplier Name, Producer/Supplier Code)</i></small>		

Sieve Size	Producer/Supplier:						Comb. Agg.	%			Tol. (±)
	APAC-Central #016 (Roberts Quarry @ Zeb, OK) P/S # m001301102	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	Arkholia S & G (Muskogee, OK) P/S # m001315103			JMF	Min.	Max.	
	#67 Rock	3/8" Chips	W. Scrns.	Scrns.	Sand						
1 in (25 mm)	100	100	100	100	100		100	100	100	0	
3/4 in (19 mm)	100	100	100	100	100		100	100	93	100	
1/2 in (12.5 mm)	62	100	100	100	100		89	89	82	96	
3/8 in (9.5 mm)	24	99	100	100	100		77	77	70	84	
#4 (4.75 mm)	4	32	98	88	99		55	55	48	62	
#8 (2.36 mm)	3	6	75	56	91		38	38	33	43	
#16 (1.18 mm)	3	4	46	34	71		25	25	21	29	
#30 (.600 mm)	3	3	28	23	31		15	15	11	19	
#50 (.300 mm)	2	3	18	16	4		9	9	5	13	
#100 (.150 mm)	2	2	12	11	1		6	6	3	9	
#200 (.075 mm)	2.0	2.0	10.9	9.0	0.3		5.1	5.1	3.1	7.1	
AC Content %							5.0	5.0	4.6	5.4	

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

	°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	86.6	85.5 - 90.5
Ndes	65	96.0	96.0

Tests on Aggregates	Required	Units
Durability Index	51	40 min. %
F.A.A. %U	N/A	%
Flat and Elongated	1	10 max. %
Fractured Faces	100/100	95/90 min. %
Insoluble Residue	11.4	N/A %
LA Abrasion	25.3	40 max. %
Micro-Deval	19.7	N/A %
Permeability	4.8	12.5 max. 10 ⁻⁵ cm/s
Sand Equivalent	72	45 min. %
IOC	0.55	%
Gse	2.670	
Gsb	2.602	
Specimen Weight	4810	g

Tests on Compressed Mixtures								
%AC	Gmb	Gmm	% Density		% VMA	% VMA Required		% VFA
			of Gmm	% Density Required		Design / Field	Design / Field	
4.5	2.351	2.486	94.6	Design / Field	13.7	Design / Field	60.6	% VFA Required
5.0	2.368	2.467	96.0	96.0 / 94.5 - 97.4	13.5	13.5 / 13.0	70.4	70 - 75
5.5	2.395	2.449	97.8	97.8	13.0		83.1	

Dust Prop.	Dust Prop. Req.
1.4	0.6 - 1.6
1.2	
1.1	

ITS (PSI)	118.8	N/A min.
TSR	0.81	0.80 / 0.75 min. (Design / Field)
Compacted Wt. (lbs/sy/1" thick) = <u>108.5</u> @ <u>5.0</u> % Asphalt Cement		

Hamburg Rut Test Depth (mm) 7.57 12.50 max. @ 15,000 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: 7/27/2015
(mm/dd/yyyy)