Version: V03.40

Oklahoma Department of Transportation Mix Design Report

Asphalt Concrete, Type S3 (PG 64-22 OK) Mat'l. Code: asco09
(Material Full Name and Material Code)

Binder - Recycled ID: B2
(Design Type and Design Type ID)

Tulsa Asphalt Co P/S # m00355
(Producer/Supplier Name and Producer/Supplier Code)

S3c00931300601
(Mix ID)

Tulsa Asphalt Co #2 (Tulsa, OK) 300TPH PLANT ID # m00355-02
(Plant Name and Plant ID)

Aggregate	Producer/Supplier	% USED
#67 Rock	Anchor Stone (Owasso, OK) P/S # m001156603	28
1/2" Chips	Anchor Stone (Owasso, OK) P/S # m001156603	17
Man. Sand	Anchor Stone (Owasso, OK) P/S # m001156603	17
Scrns.	Anchor Stone (Owasso, OK) P/S # m001156603	10
Sand	Anchor Sand, Delaware Ave. (Jenks, OK) P/S # m001137217	12
Coarse R.A.P.	Contractor / Project Site P/S # Contractor	16

Asphalt Cement: Asphaltic Cement Type PG 64-22 OK, acem003, Asphalt Terminals and Transp LLC (Muskogee, OK), m00783
(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: Anchor Stone (Owasso, OK) P/S # m001156603 — #67 Rock	1/2" Chips	Man. Sand	Scrns.	Sand — Anchor Sand, Delaware Ave. (Jenks, OK) P/S # m001137217	Coarse R.A.P. — Contractor / Project Site P/S # Contractor			Comb. Agg.	JMF	Min.	Max.	% Tol. (±)
1 in (25 mm)	100	100	100	100	100	100			100	**100**	100	100	0
3/4 in (19 mm)	99	100	100	100	100	100			100	**100**	93	100	7
1/2 in (12.5 mm)	62	100	100	100	100	100			89	**89**	82	96	7
3/8 in (9.5 mm)	26	98	100	100	100	99			79	**79**	72	86	7
#4 (4.75 mm)	3	41	93	96	98	87			59	**59**	52	66	7
#8 (2.36 mm)	2	5	66	74	87	64			41	**41**	36	46	5
#16 (1.18 mm)	2	3	40	50	70	48			29	**29**	25	33	4
#30 (.600 mm)	2	2	21	35	46	37			19	**19**	15	23	4
#50 (.300 mm)	2	1	10	27	17	27			11	**11**	7	15	4
#100 (.150 mm)	2	1	5	22	2	18			7	**7**	4	10	3
#200 (.075 mm)	1.0	0.7	3.3	18.4	0.3	13.4			5.0	**5.0**	3.0	7.0	2
AC Content %						5.2			5.0	**4.7**	4.3	5.1	0.4 x

	°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	88.3	85.5 - 91.5
Ndes	50		96.0

Tests on Aggregates		Required		Units
Durability Index	52	40	min.	%
F.A.A. %U		N/A		%
Flat and Elongated		10	max.	%
Fractured Faces	100/100	85/80	min.	%
Insoluble Residue	3.4	N/A		%
LA Abrasion	30.2	40	max.	%
Micro-Deval	20.8	N/A		%
Permeability	5	12.5	max.	10^{-5}cm/s
Sand Equivalent	76	40	min.	%
IOC	0.29			%
Gse	2.631			
Gsb	2.572			
Specimen Weight	4725			g

Tests on Compressed Mixtures

%AC	Gmb	Gmm	% Density of Gmm	% Density Required Design / Field	% VMA	% VMA Required Design / Field	% VFA	% VFA Required
4.7	2.338	2.446	95.6	96.0 / 94.5 - 97.4	13.4	13.5 / 13.0	67.2	70 - 75
5.2	2.340	2.428	96.4		13.8		73.9	
5.7	2.377	2.410	98.6		12.8		89.1	

Dust Prop.	Dust Prop. Req.
1.3	0.6 - 1.6
1.1	
1.0	

ITS (PSI) 112.6 N/A min.
TSR 0.87 0.80 / 0.75 min. (Design / Field)
Compacted Wt. (lbs/sy/1" thick) = 107.6 @ 5.0 % Asphalt Cement
4.2 % New Asphalt Cement

x 1st JMF Revision

Hamburg Rut Test Depth (mm) 3.19 12.50 max. @ 10,000 cycles

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

Comments: REVISED (AC) Effective 6/17/14 per contractor's request.

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

Date: 6/18/2014
(mm/dd/yyyy)