



# Oklahoma Department of Transportation Mix Design Report

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

Insoluble ID: I1

(Material Full Name and Material Code)

(Design Type and Design Type ID)

Tulsa Asphalt Co P/S # m00355

S4c00931390701

(Producer/Supplier Name and Producer/Supplier Code)

(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	14
Mine Chat	Mine Chat @ Tri City Area P/S # MineChat	26
Man. Sand	Anchor Stone (Owasso, OK) P/S # m001156603	33
Scrns.	Anchor Stone (Owasso, OK) P/S # m001156603	11
Sand	Anchor Sand, Delaware Ave. (Jenks, OK) P/S # m001137217	15
B. H. Fines	Contractor / Project Site P/S # Contractor	1
<b>Asphalt Cement:</b> Asphaltic Cement Type PG 64-22 OK, acem003, HollyFrontier (Catoosa, OK), m01028		
(Material Full Name, Material Code, Producer/Supplier Name, Producer/Supplier Code)		

Sieve Size	Producer/Supplier:							Comb. Agg.	%	Tol. (±)	
	Anchor Stone (Owasso, OK) P/S # m001156603	Mine Chat @ Tri City Area P/S # MineChat	Anchor Stone (Owasso, OK) P/S # m001156603	Anchor Stone (Owasso, OK) P/S # m001156603	Anchor Sand, Delaware Ave. (Jenks, OK) P/S # m001137217	Contractor / Project Site P/S # Contractor					JMF
	#67 Rock	Mine Chat	Man. Sand	Scrns.	Sand	B. H. Fines					
3/4 in (19 mm)	99	100	100	100	100	100	100	100	100	100	0
1/2 in (12.5 mm)	62	100	100	100	100	100	95	95	88	100	7
3/8 in (9.5 mm)	26	100	100	100	100	100	90	90	83	97	7
#4 (4.75 mm)	3	45	92	96	98	100	69	62	55	69	7
#8 (2.36 mm)	2	8	64	74	87	100	46	42	37	47	5
#16 (1.18 mm)	2	3	38	50	70	100	31	31	27	35	4
#30 (.600 mm)	2	1	20	35	46	100	19	19	15	23	4
#50 (.300 mm)	2	1	9	27	17	100	10	10	6	14	4
#100 (.150 mm)	2	1	5	22	2	100	6	6	3	9	3
#200 (.075 mm)	1.0	0.6	3.3	18.4	0.3	100.0	4.5	5.5	3.5	7.5	2
AC Content %							5.7	5.3	4.9	5.7	0.4

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

	<b>°F (°C)</b>	<b>Required</b>
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 Aggregates	Required	Units
Durability Index	40 min.	%
F.A.A. %U	N/A	%
Flat and Elongated	10 max.	%
Fractured Faces	85/80 min.	%
Insoluble Residue	30 min.	%
LA Abrasion	40 max.	%
Micro-Deval	N/A	%
Permeability	9.6 12.5 max.	10 <sup>-5</sup> cm/s
Sand Equivalent	83 40 min.	%
IOC	0.21	%
Gse	2.650	
Gsb	2.584	
Specimen Weight	4700	g

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
	# Gyr.	% Density of Gmm	
Nini	6	88.7	85.5 - 91.5
Ndes	50		96.0

### Tests on Compressed Mixtures

%AC	Gmb	Gmm	% Density	% Density Required	% VMA	% VMA Required	% VFA
5.5	2.321	2.433	95.4	Design / Field	15.1	Design / Field	69.5
6.0	2.340	2.415	96.9	96.0 / 94.5 - 97.4	14.9	14.5 / 14.0	79.2
6.5	2.341	2.397	97.7		15.3		85.0

ITS (PSI)	107.3	N/A min.
Dust Prop.	TSR 0.87	0.80 / 0.75 min. (Design / Field)
	1.0	Compacted Wt. (lbs/sy/1" thick) = 107.3 @ 5.7 % Asphalt Cement
	0.9	
	0.8	

x 1st JMF Revision

Hamburg Rut Test Depth (mm) 10.32 #N/A

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

Comments: REVISED (AC & GRAD.) Effective 1/16/14 per contractor's request.

Last Modified By: Suitor, Kevin ksuiror (User Name and User ID)

Date: 9/19/2017 (mm/dd/yyyy)