



Oklahoma Department of Transportation Mix Design Report

Asphalt Concrete, Type S3 (PG 64-22 OK) Mat'l. Code: asco009
(Material Full Name and Material Code)

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

Quapaw Co P/S # m00342
(Producer/Supplier Name and Producer/Supplier Code)

S3pv0261380300
(Mix ID)

Quapaw Co (Drumright, OK) - 300TPH PLANT ID # m00342-01
(Plant Name and Plant ID)

Aggregate	Producer/Supplier	% USED
1 1/2" Rock	Quapaw Co (Drumright, OK) P/S # m002781901	28
3/8" Chips	Quapaw Co (Drumright, OK) P/S # m002781901	17
Coarse Scrns.	Quapaw Co (Drumright, OK) P/S # m002781901	18
Fine Scrns.	Quapaw Co (Drumright, OK) P/S # m002781901	22
Sand	Quapaw Co (Drumright, OK) P/S # m002781901	15
Asphalt Cement: 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.	JMF	Min.	Max.	% Tol. (±)
	Quapaw Co (Drumright, OK) # m002781901	Quapaw Co (Drumright, OK) # m002781901	Quapaw Co (Drumright, OK) # m002781901	Quapaw Co (Drumright, OK) # m002781901	Quapaw Co (Drumright, OK) # m002781901	Quapaw Co (Drumright, OK) # m002781901					
	1 1/2" Rock	3/8" Chips	Coarse Scrns.	Fine Scrns.	Sand						
1 in (25 mm)	100	100	100	100	100	100	100	100	100	100	0
3/4 in (19 mm)	78	100	100	100	100	94	94	87	100	7	7
1/2 in (12.5 mm)	41	100	100	100	100	83	83	76	90	7	7
3/8 in (9.5 mm)	25	98	100	100	100	79	79	72	86	7	7
#4 (4.75 mm)	7	22	98	99	100	60	60	53	67	7	7
#8 (2.36 mm)	3	2	55	67	100	41	41	36	46	5	5
#16 (1.18 mm)	2	1	20	41	100	28	28	24	32	4	4
#30 (.600 mm)	2	1	13	30	96	24	24	20	28	4	4
#50 (.300 mm)	2	1	10	24	56	16	16	12	20	4	4
#100 (.150 mm)	1	1	9	20	10	8	8	5	11	3	3
#200 (.075 mm)	1.2	0.9	7.4	14.8	2.0	5.4	5.4	3.4	7.4	2	2
AC Content %						4.3	4.3	3.9	4.7	0.4	0.4

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

Mix temperature @ discharge from mixer: 305 (152) ± 20 °F (± 10 °C) **Required**
 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 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	0.6	%
LA Abrasion	40 max.	%
Micro-Deval	14	%
Permeability	0.6 12.5 max.	10 ⁻⁵ cm/s
Sand Equivalent	58 40 min.	%
Gse	2.792	
Gsb	2.750	
Specimen Weight	5070	g

Tests on Compressed Mixtures (@ Design AC)			
	# Gyr.	% Density of Gmm	% Density Required
Nini	6	89.4	85.5 - 91.5
Ndes	50		96.0

Tests on Compressed Mixtures							
%AC	Gmb	Gmm	% Density		% VMA	% VFA	
			of Gmm	% Density Required		Design / Field	% VFA Required
4.3	2.485	2.595	95.8	Design / Field	13.5	Design / Field	68.9
4.8	2.495	2.574	96.9	96.0 / 94.5 - 97.4	13.6	13.5 / 13.0	77.2
5.3	2.508	2.553	98.2		13.6		70 - 75
							86.8

ITS (PSI) 145.9 N/A min.
 TSR 0.82 0.80 / 0.75 min. (Design / Field)
 Compacted Wt. (lbs/sy/1" thick) = 114.2 @ 4.3 % Asphalt Cement

Dust Prop.	Dust Prop. Req.
1.4	0.6 - 1.6
1.3	
1.1	

Hamburg Rut Test Depth (mm) 4.09 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: 3/4/2015
(mm/dd/yyyy)