



Oklahoma Department of Transportation Mix Design Report

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

Insoluble ID: I1
(Design Type and Design Type ID)

APAC-Oklahoma P/S # m00552
(Producer/Supplier Name and Producer/Supplier Code)

S4qc0061203100
(Mix ID)

APAC Central #04054 (Vinita, OK)- 400TPH PLANT ID # m00552-11
(Plant Name and Plant ID)

Aggregate	Producer/Supplier	% USED
#67 Rock	APAC-Central #020 (J-6 Quarry @ Vinita, OK) P/S # m001241802	15
Mine Chat	Mine Chat @ Tri City Area P/S # MineChat	17
Scrn's.	APAC-Central #020 (J-6 Quarry @ Vinita, OK) P/S # m001241802	32
Man. Sand	APAC-Central #020 (J-6 Quarry @ Vinita, OK) P/S # m001241802	21
Sand	Holiday Sand & Gravel (Bixby, OK) P/S # m001997212	15

Asphalt Cement: Asphaltic Cement Type PG 64-22 OK, acem003, Lion Oil Co. (Muskogee, OK), m00511
(Material Full Name, Material Code, Producer/Supplier Name, Producer/Supplier Code)

Producer/Supplier:

APAC-Central #020 (J-6 Quarry @ Vinita, OK) P/S # m001241802	Mine Chat @ Tri City Area P/S # MineChat	APAC-Central #020 (J-6 Quarry @ Vinita, OK) P/S # m001241802	APAC-Central #020 (J-6 Quarry @ Vinita, OK) P/S # m001241802	Holiday Sand & Gravel (Bixby, OK) P/S # m001997212
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Requires Form 93-E0 signed by the Department for production use. -Oklahoma D.O.T. Materials-

Sieve Size	#67 Rock	Mine Chat	Scrn's.	Man. Sand	Sand	Comb. Agg.	%			Tol. (±)
	JMF	Min.	Max.							
3/4 in (19 mm)	100	100	100	100	100	100	100	100	100	0
1/2 in (12.5 mm)	70	100	100	100	100	96	96	89	100	7
3/8 in (9.5 mm)	35	99	100	100	100	90	90	83	97	7
#4 (4.75 mm)	4	35	80	94	99	67	67	60	74	7
#8 (2.36 mm)	3	5	54	52	91	43	43	38	48	5
#16 (1.18 mm)	3	2	38	30	72	30	30	26	34	4
#30 (.600 mm)	2	2	28	18	45	20	20	16	24	4
#50 (.300 mm)	2	1	22	10	17	12	12	8	16	4
#100 (.150 mm)	2	1	17	6	2	7	7	4	10	3
#200 (.075 mm)	1.6	0.9	13.4	4.4	0.4	5.7	5.7	3.7	7.7	2
AC Content %	5.6	5.6	5.2	6.0	0.4	5.6	5.6	5.2	6.0	0.4

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 Compressed Mixtures (@ Design AC)			
	% Gyr.	% Density of Gmm	% Density Required
Nini	6	87.1	85.5 - 91.5
Ndes	50		96.0

Tests on Aggregates	Required	Units
Durability Index	64	40 min. %
F.A.A. %U		N/A %
Flat and Elongated	10	max. %
Fractured Faces	100/100	85/80 min. %
Insoluble Residue	44.8	30 min. %
LA Abrasion	26.3	40 max. %
Micro-Deval	19.3	N/A %
Permeability	2.5	12.5 max. 10 ⁻⁵ cm/s
Sand Equivalent	74	40 min. %
IOC	0.28	%
Gse	2.625	
Gsb	2.579	
Specimen Weight	4700	g

Tests on Compressed Mixtures							
%AC	Gmb	Gmm	% Density of Gmm	% Density Required	% VMA	% VMA Required	% VFA
4.8	2.262	2.438	92.8	Design / Field	16.5	Design	56.4
5.3	2.301	2.420	95.1	96.0 / 94.5 - 97.4	15.5	14.5	68.4
5.8	2.315	2.402	96.4		15.4		72 - 77
							76.6

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

ITS (PSI) 110.5 N/A min.
TSR 0.86 0.80 / 0.75 min. (Design / Field)
Compacted Wt. (lbs/sy/1" thick) = 106.0 @ 5.6 % Asphalt Cement

Hamburg Rut Test Depth (mm) 9.07 12.50 max. @ 10,000 cycles

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

Comments:

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

Date: 7/10/2012
(mm/dd/yyyy)