



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

S4qc0061800100
(Mix ID)

(Producer/Supplier Name and Producer/Supplier Code)

APAC Central #04053 (Tulsa, OK) - 600TPH PLANT ID # m00552-07
(Plant Name and Plant ID)

Aggregate	Producer/Supplier	% USED
3/4" Chips	APAC-Central, 46th St (NW pit Tulsa, OK) P/S # m001197201	21
Man. Sand	APAC-Central, 46th St (NW pit Tulsa, OK) P/S # m001197201	17
Scrns.	APAC-Central, 46th St (NW pit Tulsa, OK) P/S # m001197201	24
Sand	Holliday Sand & Gravel (Bixby, OK) P/S # m001657231	15
Mine Chat	Mine Chat @ Tri City Area P/S # MineChat	23
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)		

Producer/Supplier:	APAC-Central, 46th St (NW pit Tulsa, OK) P/S # m001197201	APAC-Central, 46th St (NW pit Tulsa, OK) P/S # m001197201	APAC-Central, 46th St (NW pit Tulsa, OK) P/S # m001197201	Holliday Sand & Gravel (Bixby, OK) P/S # m001657231	Mine Chat @ Tri City Area P/S # MineChat					Requires Form 93-E0 signed by the Department for production use. -Oklahoma D.O.T. Materials-				
										Comb. Agg.	JMF	Min.	Max.	% Tol. (±)
Sieve Size	3/4" Chips	Man. Sand	Scrns.	Sand	Mine Chat									
3/4 in (19 mm)	100	100	100	100	100			100	100	100	100	0		
1/2 in (12.5 mm)	57	100	100	100	100			91	91	84	98	7		
3/8 in (9.5 mm)	27	100	100	100	100			85	85	78	92	7		
#4 (4.75 mm)	4	80	83	99	48			60	60	53	67	7		
#8 (2.36 mm)	4	45	58	91	10			38	38	33	43	5		
#16 (1.18 mm)	4	23	42	72	3			26	26	22	30	4		
#30 (.600 mm)	3	12	31	43	2			17	17	13	21	4		
#50 (.300 mm)	3	7	24	9	1			9	9	5	13	4		
#100 (.150 mm)	3	5	18	1	1			6	6	3	9	3		
#200 (.075 mm)	2.7	4.4	14.7	0.4	0.7			5.1	5.1	3.1	7.1	2		
AC Content %								5.3	5.3	4.9	5.7	0.4		

°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 Aggregates	Required	Units
Durability Index	68	40 min. %
F.A.A. %U		N/A %
Flat and Elongated		10 max. %
Fractured Faces	100/100	85/80 min. %
Insoluble Residue	38.7	30 min. %
LA Abrasion	23	40 max. %
Micro-Deval	14.9	N/A %
Permeability	0.8	12.5 max. 10 ⁻⁵ cm/s
Sand Equivalent	76	40 min. %
IOC	0.34	%
Gse	2.643	
Gsb	2.586	
Specimen Weight	4700	g

Tests on Compressed Mixtures (@ Design AC)			
	% Density		
	# Gyr.	of Gmm	% Density Required
Nini	6	87.7	85.5 - 91.5
Ndes	50		96.0

Tests on Compressed Mixtures							
%AC	Gmb	Gmm	% Density of Gmm	% Density Required	% VMA	% VMA Required	% VFA
4.8	2.315	2.453	94.4	Design / Field	14.8	Design / Field	62.2
5.3	2.335	2.434	95.9	96.0 / 94.5 - 97.4	14.5	14.5 / 14.0	71.7
5.8	2.344	2.416	97.0		14.6		79.5
							72 - 77

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

ITS (PSI) 163.6 N/A min.
 TSR 0.95 0.80 / 0.75 min. (Design / Field)
 Compacted Wt. (lbs/sy/1" thick) = 107.1 @ 5.3 % Asphalt Cement

Hamburg Rut Test Depth (mm) 3.64 12.50 max. @ 10,000 cycles

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

Comments: _____

Last Modified By:

Smith, Jerry D. jsmith
(User Name and User ID)

Date:

2/8/2018
(mm/dd/yyyy)