



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)
 APAC-Oklahoma P/S # m00552
 (Producer/Supplier Name and Producer/Supplier Code)
 APAC-OK (Pawhuska, OK) - 400TPH PLANT ID # m00552-01
 (Plant Name and Plant ID)

Binder - Recycled ID: B2
 (Design Type and Design Type ID)
 S3qc0061580100
 (Mix ID)

Aggregate	Producer/Supplier	% USED
1" Rock	APAC-Central #066 @ Pawhuska, OK P/S # m001505703	21
1/2" Chips	APAC-Central #066 @ Pawhuska, OK P/S # m001505703	16
Man. Sand	APAC-Central #066 @ Pawhuska, OK P/S # m001505703	29
Sand	Sober Sand Co. (Ponca City, OK) P/S # m005373601	11
Fine R.A.P.	Contractor / Project Site P/S # Contractor	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)
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Sieve Size	Producer/Supplier:					Comb. Agg.	% Tol. (±)		
	APAC-Central #066 @ Pawhuska, OK P/S # m001505703	APAC-Central #066 @ Pawhuska, OK P/S # m001505703	APAC-Central #066 @ Pawhuska, OK P/S # m001505703	Sober Sand Co. (Ponca City, OK) P/S # m005373601	Contractor / Project Site P/S # Contractor		JMF	Min.	Max.
1" Rock	100	100	100	100	100	100	100	100	0
3/4 in (19 mm)	85	100	100	100	100	97	97	90	100
1/2 in (12.5 mm)	21	100	100	100	97	83	83	76	90
3/8 in (9.5 mm)	7	89	100	100	92	77	77	70	84
#4 (4.75 mm)	4	7	93	96	73	56	56	49	63
#8 (2.36 mm)	3	2	52	84	53	37	37	32	42
#16 (1.18 mm)	2	2	28	64	38	25	25	21	29
#30 (.600 mm)	2	2	14	44	28	16	16	12	20
#50 (.300 mm)	2	2	7	21	20	10	10	6	14
#100 (.150 mm)	2	2	5	3	14	6	6	3	9
#200 (.075 mm)	1.8	1.6	4.3	0.6	12.1	4.7	4.7	2.7	6.7
AC Content %					5.0	4.7	4.7	4.3	5.1

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)
 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	71	40 min. %
F.A.A. %U		N/A %
Flat and Elongated	0	10 max. %
Fractured Faces	100/100	85/80 min. %
Insoluble Residue	0.3	N/A %
LA Abrasion	24	40 max. %
Micro-Deval	14.3	N/A %
Permeability	8.7	12.5 max. 10 ⁻⁵ cm/s
Sand Equivalent	72	40 min. %
IOC	0.34	%
Gse	2.651	
Gsb	2.638	
Specimen Weight	4750	g

Tests on Compressed Mixtures							
%AC	Gmb	Gmm	% Density of Gmm	% Density Required	% VMA	% VMA Required	% VFA
4.3	2.352	2.478	94.9	Design / Field	14.7	Design / Field	65.3
4.8	2.362	2.459	96.1	96.0 / 94.5 - 97.4	14.8	13.5 / 13.0	73.6
5.3	2.370	2.441	97.1		14.9		80.5

Dust Prop.	ITS (PSI)	124.3	N/A min.
1.1	TSR	0.85	0.80 / 0.75 min. (Design / Field)
1.0	Compacted Wt. (lbs/sy/1" thick) =	108.3	@ 4.7 % Asphalt Cement
0.9			3.5 % New Asphalt Cement

Hamburg Rut Test Depth (mm) 1.71 12.50 max. @ 10,000 cycles
 MEETS SPECIFICATION REQUIREMENTS PER SPECIAL PROVISION 708-26(a-f) 09

Comments: _____
 Last Modified By: Schratwieser, Edward P. eschatw Date: 12/1/2016
 (User Name and User ID) (mm/dd/yyyy)