Version: V03.50

Oklahoma Department of Transportation Mix Design Report

Asphalt Concrete, Type S3 (PG 76-28 OK) Mat'l. Code: asco007
(Material Full Name and Material Code)

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

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

S3qc0061800500
(Mix ID)

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

Aggregate	Producer/Supplier	% USED
1" Rock	APAC-Central #020 (J-6 Quarry @ Vinita, OK) P/S # m001241802	20
3/4" Chips	APAC-Central #020 (J-6 Quarry @ Vinita, OK) P/S # m001241802	17
Man. Sand	APAC-Central #020 (J-6 Quarry @ Vinita, OK) P/S # m001241802	25
Scrns.	APAC-Central #020 (J-6 Quarry @ Vinita, OK) P/S # m001241802	12
Sand	Holliday Sand & Gravel (Bixby, OK) P/S # m001657231	11
Fine R.A.P.	Contractor / Project Site P/S # Contractor	15

Asphalt Cement: Asphaltic Cement Type PG 76-28 OK, acem001, Lion Oil Frontier (Muskogee, OK), m01021
(Material Full Name, Material Code, Producer/Supplier Name, Producer/Supplier Code)

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

Producer/Supplier:	APAC-Central #020 (J-6 Quarry @ Vinita, OK) P/S # m001241802	APAC-Central #020 (J-6 Quarry @ Vinita, OK) P/S # m001241802	APAC-Central #020 (J-6 Quarry @ Vinita, OK) P/S # m001241802	APAC-Central #020 (J-6 Quarry @ Vinita, OK) P/S # m001241802	Holliday Sand & Gravel (Bixby, OK) P/S # m001657231	Contractor / Project Site P/S # Contractor							
Sieve Size	**1" Rock**	**3/4" Chips**	**Man. Sand**	**Scrns.**	**Sand**	**Fine R.A.P.**			**Comb. Agg.**	***JMF***	***Min.***	***Max.***	***% Tol. (±)***
1 in (25 mm)	100	100	100	100	100	100			100	***100***	*100*	*100*	*0*
3/4 in (19 mm)	93	100	100	100	100	100			99	***99***	*92*	*100*	*7*
1/2 in (12.5 mm)	52	68	100	100	100	100			85	***85***	*78*	*92*	*7*
3/8 in (9.5 mm)	30	32	100	100	100	96			74	***74***	*67*	*81*	*7*
#4 (4.75 mm)	4	11	98	81	99	76			59	***59***	*52*	*66*	*7*
#8 (2.36 mm)	2	2	58	56	93	56			41	***41***	*36*	*46*	*5*
#16 (1.18 mm)	2	2	30	40	74	41			27	***27***	*23*	*31*	*4*
#30 (.600 mm)	2	2	16	30	44	32			18	***18***	*14*	*22*	*4*
#50 (.300 mm)	2	1	8	22	10	24			10	***10***	*6*	*14*	*4*
#100 (.150 mm)	2	1	6	18	2	15			7	***7***	*4*	*10*	*3*
#200 (.075 mm)	1.8	0.9	4.6	14.5	0.9	11.0			5.2	***5.2***	*3.2*	*7.2*	*2*
AC Content %						5.1			4.6	***4.6***	*4.2*	*5.0*	*0.4*

	°F (°C)	Required
Mix temperature @ discharge from mixer:	325 (163)	± 20 °F (± 10 °C)
Optimum roadway compaction temperature:	305 (152)	
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	8	88.6	85.5 - 89.0
Ndes	80		96.0

Tests on Aggregates		Required		Units
Contabro	8.0	N/A		%
Durability Index	71	40	min.	%
F.A.A. %U		N/A		%
Flat and Elongated		10	max.	%
Fractured Faces	100/100	98/95	min.	%
Insoluble Residue	20.1	N/A		%
LA Abrasion	26	40	max.	%
Micro-Deval	19	25	max.	%
Permeability	6.7	12.5	max.	10^{-5}cm/s
Sand Equivalent	74	50	min.	%
IOC	0.33			%
Gse	2.646			
Gsb	2.596			
Specimen Weight	4700			g

Tests on Compressed Mixtures

%AC	Gmb	Gmm	% Density of Gmm	% Density Required Design / Field	% VMA	% VMA Required Design / Field	% VFA	% VFA Required
4.3	2.339	2.474	94.5		13.8		60.1	
4.8	2.362	2.455	96.2	96.0 / 94.5 - 97.4	13.4	13.5 / 13.0	71.6	70 - 75
5.3	2.380	2.437	97.7		13.2		82.6	

Dust Prop.
1.4
1.3
1.1

Dust Prop. Req.
0.6 - 1.6

ITS (PSI) 158.1 75 min.
TSR 0.83 0.80 / 0.75 min. (Design / Field)
Compacted Wt. (lbs/sy/1" thick) = 108.3 @ 4.6 % Asphalt Cement
3.8 % New Asphalt Cement

Hamburg Rut Test Depth (mm) 3.47 12.50 max. @ 20,000 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: 6/15/2018
(mm/dd/yyyy)