Version: V03.40

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)

Evans & Assoc Const Co P/S # m00557
(Producer/Supplier Name and Producer/Supplier Code)

S4pv0111400600
(Mix ID)

Evans & Assoc Const Co (Ponca City, OK) - 400TPH PLANT ID # m00557-01
(Plant Name and Plant ID)

Aggregate	Producer/Supplier	% USED
3/4" Chips	APAC-Central #066 @ Pawhuska, OK P/S # m001505703	21
CM-5	Mine Chat @ Tri City Area P/S # MineChat	24
Man. Sand	APAC-Central #066 @ Pawhuska, OK P/S # m001505703	10
Scrns.	APAC-Central #066 @ Pawhuska, OK P/S # m001505703	15
Sand	Sober Sand Co. (Ponca City, OK) P/S # m005373601	15
Drag Sand	Blevins Asphalt Const. Co. (Ottawa Co., OK) P/S # m009195810	15

Asphalt Cement: Asphaltic Cement Type PG 64-22 OK, acem003, Valero (Arkansas City, KS), m00512
(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 #066 @ Pawhuska, OK P/S # m001505703	Mine Chat @ Tri City Area P/S # MineChat	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	Blevins Asphalt Const. Co. (Ottawa Co., OK) P/S # m009195810							
Sieve Size	3/4" Chips	CM-5	Man. Sand	Scrns.	Sand	Drag Sand			Comb. Agg.	JMF	Min.	Max.	% Tol. (±)
3/4 in (19 mm)	100	100	100	100	100	100			100	100	100	100	0
1/2 in (12.5 mm)	72	100	100	100	100	100			94	94	87	100	7
3/8 in (9.5 mm)	40	100	100	100	100	100			87	87	80	94	7
#4 (4.75 mm)	6	40	97	97	96	99			64	64	57	71	7
#8 (2.36 mm)	2	5	60	72	84	86			44	44	39	49	5
#16 (1.18 mm)	1	3	33	48	66	50			29	29	25	33	4
#30 (.600 mm)	1	2	20	34	48	28			19	19	15	23	4
#50 (.300 mm)	1	1	10	25	25	14			11	11	7	15	4
#100 (.150 mm)	1	1	6	20	7	8			6	6	3	9	3
#200 (.075 mm)	1.4	1.4	5.4	17.4	3.4	6.4			5.3	5.3	3.3	7.3	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 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	76	40	min.	%
F.A.A. %U		N/A		%
Flat and Elongated	0	10	max.	%
Fractured Faces	100/100	85/80	min.	%
Insoluble Residue	43.9	30	min.	%
LA Abrasion	26.3	40	max.	%
Micro-Deval	16.3	N/A		%
Permeability	5.9	12.5	max.	10^{-5}cm/s
Sand Equivalent	88	40	min.	%
IOC	0.29			%
Gse	2.625			
Gsb	2.581			
Specimen Weight	4625			g

Tests on Compressed Mixtures

%AC	Gmb	Gmm	% Density of Gmm	% Density Required Design / Field	% VMA	% VMA Required Design / Field	% VFA	% VFA Required
4.8	2.296	2.438	94.2	96.0 / 94.5 - 97.4	15.3	14.5 / 14.0	62.1	72 - 77
5.3	2.323	2.420	96.0		14.8		73.0	
5.8	2.348	2.402	97.8		14.3		84.6	

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

ITS (PSI) 112.8 N/A min.
TSR 0.90 0.80 / 0.75 min. (Design / Field)
Compacted Wt. (lbs/sy/1" thick) = 106.5 @ 5.3 % Asphalt Cement

Hamburg Rut Test Depth (mm) 1.99 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: 8/26/2014
(mm/dd/yyyy)