Version: V03.40

Oklahoma Department of Transportation Mix Design Report

Asphalt Concrete, Type S4 (PG 76-28 OK) Mat'l. Code: asco010
(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)

S4pv0111201201
(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	15
5/8" Chips	Martin-Marietta (Snyder, OK) P/S # m002323802	15
Mine Chat	3-Way Materials (Baxter Springs, KS) P/S # m001118011	25
Scrns.	APAC-Central #066 @ Pawhuska, OK P/S # m001505703	18
Drag Sand	Blevins Asphalt Const. Co. (Ottawa Co., OK) P/S # m009195810	15
Sand	Sober Sand Co. (Ponca City, OK) P/S # m005373601	12

Asphalt Cement: Asphaltic Cement Type PG 76-28 OK, acem001, Valero (Halstead, KS), m00964
(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-

Sieve Size	APAC-Central #066 @ Pawhuska, OK P/S # m001505703 (3/4" Chips)	Martin-Marietta (Snyder, OK) P/S # m002323802 (5/8" Chips)	3-Way Materials (Baxter Springs, KS) P/S # m001118011 (Mine Chat)	APAC-Central #066 @ Pawhuska, OK P/S # m001505703 (Scrns.)	Blevins Asphalt Const. Co. (Ottawa Co., OK) P/S # m009195810 (Drag Sand)	Sober Sand Co. (Ponca City, OK) P/S # m005373601 (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)	60	70	100	100	100	100			90	95	88	100	7	x
3/8 in (9.5 mm)	35	14	100	100	100	100			77	89	82	96	7	x
#4 (4.75 mm)	10	2	79	100	100	97			66	62	55	69	7	x
#8 (2.36 mm)	3	1	49	73	96	86			51	40	35	45	5	x
#16 (1.18 mm)	3	1	32	48	70	67			36	27	23	31	4	x
#30 (.600 mm)	2	1	21	35	40	47			24	18	14	22	4	x
#50 (.300 mm)	2	1	12	26	17	22			13	11	7	15	4	x
#100 (.150 mm)	2	1	8	20	6	3			7	7	4	10	3	x
#200 (.075 mm)	1.7	0.5	6.0	16.5	2.0	1.3			5.3	5.4	3.4	7.4	2	x
AC Content %									5.6	5.2	4.8	5.6	0.4	x

	°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	87.8	85.5 - 89.0
Ndes	80		96.0

Tests on Aggregates		Required		Units
Durability Index	74	40	min.	%
F.A.A. %U		N/A		%
Flat and Elongated	0	10	max.	%
Fractured Faces	100/100	98/95	min.	%
Insoluble Residue	57.1	40	min.	%
LA Abrasion	24	40	max.	%
Micro-Deval	15.3	25	max.	%
Permeability	11.1	12.5	max.	10^{-5}cm/s
Sand Equivalent	81	50	min.	%
IOC	0.27			%
Gse	2.667			
Gsb	2.607			
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
4.8	2.303	2.472	93.2		15.9		57.2	
5.3	2.327	2.454	94.8	96.0 / 94.5 - 97.4	15.5	14.5 / 14.0	66.5	72 - 77
5.8	2.356	2.435	96.8		14.9		78.5	

Dust Prop.
1.3
1.2
1.1

Dust Prop. Req. 0.6 - 1.6

ITS (PSI) 199.4 75 min.
TSR 0.99 0.80 / 0.75 min. (Design / Field)
Compacted Wt. (lbs/sy/1" thick) = 108.1 @ 5.6 % Asphalt Cement

x 1st JMF Revision

Hamburg Rut Test Depth (mm) 0.86 12.50 max. @ 20,000 cycles

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

Comments: REVISED (AC & GRAD.) Effective 2/11/16 per contractor's request.

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

Date: 2/22/2016
(mm/dd/yyyy)