Version: V03.40

Oklahoma Department of Transportation Mix Design Report

Asphalt Concrete, Type S4 (PG 70-28 OK) Mat'l. Code: asco011
(Material Full Name and Material Code)

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

J.O.B. Const Co P/S # m00562
(Producer/Supplier Name and Producer/Supplier Code)

S4qc0101802200
(Mix ID)

J.O.B Const Co #27-2 (Hartshorne) - 350TPH PLANT ID # m00562-02
(Plant Name and Plant ID)

Aggregate	Producer/Supplier	% USED
3/4" Chips	Dolese Co (Hartshorne, OK) P/S # m002756101	15
3/8" Chips	Dolese Co (Hartshorne, OK) P/S # m002756101	10
Man. Sand	Dolese Co (Hartshorne, OK) P/S # m002756101	12
Scrns.	Dolese Co (Hartshorne, OK) P/S # m002756101	20
Sand (Unlisted Source)	Arkansas River Sand Braden Bottoms, OK	8
Fine R.A.P.	Contractor / Project Site P/S # Contractor	35

Asphalt Cement: Asphaltic Cement Type PG 70-28 OK, acem002, Lion Oil Co. (Muskogee, OK), m00511
(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	3/4" Chips	3/8" Chips	Man. Sand	Scrns.	Sand (Unlisted Source)	Fine R.A.P.			Comb. Agg.	JMF	Min.	Max.	% Tol. (±)
Producer/Supplier:	Dolese Co (Hartshorne, OK) P/S # m002756101	Dolese Co (Hartshorne, OK) P/S # m002756101	Dolese Co (Hartshorne, OK) P/S # m002756101	Dolese Co (Hartshorne, OK) P/S # m002756101	Arkansas River Sand Braden Bottoms, OK	Contractor / Project Site P/S # Contractor							
3/4 in (19 mm)	100	100	100	100	100	100			100	100	100	100	0
1/2 in (12.5 mm)	55	100	100	100	100	99			93	93	86	100	7
3/8 in (9.5 mm)	17	95	100	100	100	96			86	86	79	93	7
#4 (4.75 mm)	3	20	81	97	100	68			63	63	56	70	7
#8 (2.36 mm)	2	6	43	64	99	52			45	45	40	50	5
#16 (1.18 mm)	2	2	18	45	98	43			35	35	31	39	4
#30 (.600 mm)	2	2	8	31	93	36			28	28	24	32	4
#50 (.300 mm)	2	2	5	22	50	26			19	19	15	23	4
#100 (.150 mm)	2	1	4	16	8	16			10	10	7	13	3
#200 (.075 mm)	1.7	0.7	3.2	11.9	3.4	8.1			6.2	6.2	4.2	8.2	2
AC Content %						5.0			5.3	5.3	4.9	5.7	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	7	88.5	85.5 - 90.5
Ndes	65		96.0

Tests on Aggregates		Required		Units
Durability Index	76	40	min.	%
F.A.A. %U		N/A		%
Flat and Elongated		10	max.	%
Fractured Faces	100/100	95/90	min.	%
Insoluble Residue	5.6	N/A		%
LA Abrasion	17	40	max.	%
Micro-Deval	9.3	N/A		%
Permeability	9	12.5	max.	10^{-5}cm/s
Sand Equivalent	59	45	min.	%
IOC	0.47			%
Gse	2.655			
Gsb	2.629			
Specimen Weight	4750			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	2.314	2.462	94.0	96.0 / 94.5 - 97.4	16.2	14.5 / 14.0	63.0	72 - 77
5.3	2.346	2.444	96.0		15.5		74.2	
5.8	2.369	2.426	97.7		15.1		84.8	

Dust Prop.	Dust Prop. Req.
1.4	0.6 - 1.6
1.3	
1.1	

ITS (PSI) 111.2 N/A min.
TSR 0.94 0.80 / 0.75 min. (Design / Field)
Compacted Wt. (lbs/sy/1" thick) = 107.5 @ 5.3 % Asphalt Cement
3.5 % New Asphalt Cement

Hamburg Rut Test Depth (mm) 4.00 12.50 max. @ 15,000 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: 6/11/2018
(mm/dd/yyyy)