Version: V03.40

Oklahoma Department of Transportation Mix Design Report

Asphalt Concrete, Type S3 (PG 70-28 OK) Mat'l. Code: asco008
(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)

S3qc0101802100
(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	25
3/8" Chips	Dolese Co (Hartshorne, OK) P/S # m002756101	15
Man. Sand	Dolese Co (Hartshorne, OK) P/S # m002756101	18
Scrns.	Dolese Co (Hartshorne, OK) P/S # m002756101	17
Sand (Unlisted Source)	Arkansas River Sand Braden Bottoms, OK	10
Fine R.A.P.	Contractor / Project Site P/S # Contractor	15

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							
1 in (25 mm)													0
3/4 in (19 mm)	100	100	100	100	100	100			100	100	93	100	7
1/2 in (12.5 mm)	55	100	100	100	100	99			89	89	82	96	7
3/8 in (9.5 mm)	17	95	100	100	100	96			78	78	71	85	7
#4 (4.75 mm)	3	20	81	97	100	68			55	55	48	62	7
#8 (2.36 mm)	2	6	43	64	99	52			38	38	33	43	5
#16 (1.18 mm)	2	2	18	45	98	43			28	28	24	32	4
#30 (.600 mm)	2	2	8	31	93	36			22	22	18	26	4
#50 (.300 mm)	2	2	5	22	50	26			14	14	10	18	4
#100 (.150 mm)	2	1	4	16	8	16			7	7	4	10	3
#200 (.075 mm)	1.7	0.7	3.2	11.9	3.4	8.1			4.7	4.7	2.7	6.7	2
AC Content %						5.0			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	7	88.2	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	7.2	N/A		%
LA Abrasion	17	40	max.	%
Micro-Deval	9.3	N/A		%
Permeability	9.5	12.5	max.	10^{-5}cm/s
Sand Equivalent	62	45	min.	%
IOC	0.43			%
Gse	2.672			
Gsb	2.634			
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
4.1	2.348	2.503	93.8	96.0 / 94.5 - 97.4	14.5	13.5 / 13.0	57.2	70 - 75
4.6	2.385	2.484	96.0		13.6		70.6	
5.1	2.401	2.465	97.4		13.5		80.7	

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

ITS (PSI) 102.1 N/A min.
TSR 0.84 0.80 / 0.75 min. (Design / Field)
Compacted Wt. (lbs/sy/1" thick) = 109.3 @ 4.6 % Asphalt Cement
3.8 % New Asphalt Cement

Hamburg Rut Test Depth (mm) 7.37 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: 6/13/2018
(mm/dd/yyyy)