



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)
 J.O.B. Const Co P/S # m00562
 (Producer/Supplier Name and Producer/Supplier Code)
 J.O.B Const Co #27-2 (Hartshorne) - 350TPH PLANT ID # m00562-02
 (Plant Name and Plant ID)

Insoluble ID: I1
 (Design Type and Design Type ID)
 S4qc0101802300
 (Mix ID)

Aggregate	Producer/Supplier	% USED
3/4" Chips	APAC Central Midland Quarry (Midland, AR) P/S # m011207919	24
3/8" Chips	Dolese Co (Hartshorne, OK) P/S # m002756101	20
Man. Sand	Dolese Co (Hartshorne, OK) P/S # m002756101	38
Scrns.	Dolese Co (Hartshorne, OK) P/S # m002756101	8
Sand (Unlisted Source)	Arkansas River Sand Braden Bottoms, OK	10
Asphalt Cement: Asphaltic Cement Type PG 76-28 OK, acem001, Lion Oil Co. (Muskogee, OK), m00511 (Material Full Name, Material Code, Producer/Supplier Name, Producer/Supplier Code)		

Sieve Size	Producer/Supplier:						Comb. Agg.	% Tol. (±)			
	3/4" Chips	3/8" Chips	Man. Sand	Scrns.	Sand (Unlisted Source)			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)	63	100	100	100	100	91	91	84	98	7	7
3/8 in (9.5 mm)	33	95	100	100	100	83	83	76	90	7	7
#4 (4.75 mm)	4	25	89	97	100	58	58	51	65	7	7
#8 (2.36 mm)	3	3	50	64	99	35	35	30	40	5	5
#16 (1.18 mm)	3	2	23	45	98	23	23	19	27	4	4
#30 (.600 mm)	3	2	8	31	93	16	16	12	20	4	4
#50 (.300 mm)	3	2	5	22	50	10	10	6	14	4	4
#100 (.150 mm)	2	1	4	16	8	4	4	1	7	3	3
#200 (.075 mm)	2.1	0.7	3.2	11.9	3.4	3.2	3.2	1.2	5.2	2	2
AC Content %					5.0	5.5	5.5	5.1	5.9	0.4	0.4

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

Mix temperature @ discharge from mixer: 325 (163) ± 20 °F (± 10 °C) **Required**
 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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 -Oklahoma D.O.T. Materials-

Tests on Compressed Mixtures (@ Design AC)			
	# Gyr.	% Density of Gmm	% Density Required
Nini	8	87.1	85.5 - 89.0
Ndes	80		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	98/95 min. %
Insoluble Residue	40.5	40 min. %
LA Abrasion	39	40 max. %
Micro-Deval	9.3	25 max. %
Permeability	3.5	12.5 max. 10 ⁻⁵ cm/s
Sand Equivalent	72	50 min. %
IOC	0.46	%
Gse	2.625	
Gsb	2.591	
Specimen Weight	4650	g

Tests on Compressed Mixtures						
%AC	Gmb	Gmm	% Density of Gmm	% Density Required	% VMA	% VMA Required
5.0	2.283	2.431	93.9	Design / Field	16.3	Design / Field
5.5	2.316	2.413	96.0	96.0 / 94.5 - 97.4	15.5	14.5 / 14.0
6.0	2.327	2.395	97.2		15.6	74.2 / 72 - 77
						82.1

Dust Prop.
 0.7
 0.6
 0.6
Dust Prop. Req.
 0.6 - 1.6

ITS (PSI) 85.4 75 min.
TSR 0.89 0.80 / 0.75 min. (Design / Field)
 Compacted Wt. (lbs/sy/1" thick) = 106.1 @ 5.5 % Asphalt Cement

Hamburg Rut Test Depth (mm) 2.36 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: 6/13/2018
 (mm/dd/yyyy)