



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)

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

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

S4qc0101801000
(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	APAC Central Midland Quarry (Midland, AR) P/S # m011207919	25
3/8" Chips	Dolese Co (Hartshorne, OK) P/S # m002756101	21
Man. Sand	Dolese Co (Hartshorne, OK) P/S # m002756101	34
Scrns.	Dolese Co (Hartshorne, OK) P/S # m002756101	10
Sand (Unlisted Source)	Arkansas River Sand	10
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)		

Producer/Supplier:	APAC Central Midland Quarry (Midland, AR) P/S # m011207919	Dolese Co (Hartshorne, OK) P/S # m002756101	Dolese Co (Hartshorne, OK) P/S # m002756101	Dolese Co (Hartshorne, OK) P/S # m002756101	Arkansas River Sand	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)	Comb. Agg.	JMF	Min.	Max.	% Tol. (±)
3/4 in (19 mm)	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
3/8 in (9.5 mm)	40	95	100	100	100	84	84	77	91	7
#4 (4.75 mm)	9	25	89	97	100	57	57	50	64	7
#8 (2.36 mm)	5	3	50	64	99	35	35	30	40	5
#16 (1.18 mm)	4	2	23	45	98	24	24	20	28	4
#30 (.600 mm)	4	1	8	31	93	16	16	12	20	4
#50 (.300 mm)	4	1	5	22	50	10	10	6	14	4
#100 (.150 mm)	3	1	4	16	8	5	5	2	8	3
#200 (.075 mm)	2.1	0.7	3.2	11.9	3.4	3.3	3.3	1.3	5.3	2
AC Content %						5.5	5.5	5.1	5.9	0.4

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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Tests on Compressed Mixtures (@ Design AC)			
	# Gyr.	% Density of Gmm	% Density Required
Nini	7	87.1	85.5 - 90.5
Ndes	65		96.0

Tests on Aggregates	Required	Units
Durability Index	40 min.	%
F.A.A. %U	N/A	%
Flat and Elongated	10 max.	%
Fractured Faces	95/90 min.	%
Insoluble Residue	41.1	%
LA Abrasion	25	%
Micro-Deval	11.4	%
Permeability	5.1	10 ⁻⁵ cm/s
Sand Equivalent	66	%
IOC	0.65	%
Gse	2.644	
Gsb	2.584	
Specimen Weight	4650	g

Tests on Compressed Mixtures						
%AC	Gmm	Gmm	% Density Required	% VMA	% VMA Required	% VFA
5.0	2.293	2.446	93.7	15.7	Design / Field	59.9
5.5	2.331	2.428	96.0	14.8	96.0 / 94.5 - 97.4	73.0
6.0	2.352	2.410	97.6	14.4		72 - 77

Dust Prop.	0.8	Dust Prop. Req.	0.6 - 1.6
	0.7		
	0.6		
ITS (PSI)		94	N/A min.
TSR		0.89	0.80 / 0.75 min. (Design / Field)
Compacted Wt. (lbs/sy/1" thick) =		106.8	@ 5.5 % Asphalt Cement

Hamburg Rut Test Depth (mm) 3.54 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: 4/25/2018
(mm/dd/yyyy)