



Oklahoma Department of Transportation Mix Design Report

Asphalt Concrete, Type S3 (PG 64-22 OK) Mat'l. Code: asco009
(Material Full Name and Material Code)

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

T. J. Campbell P/S # m00570
(Producer/Supplier Name and Producer/Supplier Code)

S3pv0261800500
(Mix ID)

T. J. Campbell (South OKC, OK) - 350TPH PLANT ID # m00570-02
(Plant Name and Plant ID)

Aggregate	Producer/Supplier	% USED
#67 Rock	Dolese Co (Davis, OK) P/S # m002745002	17
5/8" Chips	Hanson Aggregates, WRP Inc (Davis, OK) P/S # m001985008	25
Man. Sand	Martin-Marietta (Davis, OK) P/S # m002285005	23
Sand	Dolese Co. (Oklahoma City, OK) P/S # m009225516	10
Fine R.A.P.	Contractor / Project Site P/S # Contractor	25

Asphalt Cement: Asphaltic Cement Type PG 64-22 OK, acem003, Coffeyville Resources Refining (Wynnewood, OK), m00357
(Material Full Name, Material Code, Producer/Supplier Name, Producer/Supplier Code)

Producer/Supplier:	Dolese Co (Davis, OK) P/S # m002745002	Hanson Aggregates, WRP Inc (Davis, OK) P/S # m001985008	Martin-Marietta (Davis, OK) P/S # m002285005	Dolese Co. (Oklahoma City, OK) P/S # m009225516	Contractor / Project Site P/S # Contractor	Requires Form 93-E0 signed by the Department for production use. -Oklahoma D.O.T. Materials-						
Sieve Size	#67 Rock	5/8" Chips	Man. Sand	Sand	Fine R.A.P.	Comb. Agg.	JMF	Min.	Max.	% Tol. (±)		
1 in (25 mm)	100	100	100	100	100	100	100	100	100	0		
3/4 in (19 mm)	92	100	100	100	100	99	99	92	100	7		
1/2 in (12.5 mm)	58	86	100	100	94	88	88	81	95	7		
3/8 in (9.5 mm)	35	68	100	100	85	77	77	70	84	7		
#4 (4.75 mm)	6	24	94	100	60	54	54	47	61	7		
#8 (2.36 mm)	2	8	56	100	43	36	36	31	41	5		
#16 (1.18 mm)	2	5	32	99	34	27	27	23	31	4		
#30 (.600 mm)	2	4	19	92	28	22	22	18	26	4		
#50 (.300 mm)	1	3	11	56	22	15	15	11	19	4		
#100 (.150 mm)	1	3	7	12	13	7	7	4	10	3		
#200 (.075 mm)	1.1	2.3	4.4	1.1	7.3	3.7	3.7	1.7	5.7	2		
AC Content %					3.8	4.5	4.5	4.1	4.9	0.4		

°F (°C) Required
 Mix temperature @ discharge from mixer: 305 (152) ± 20 °F (± 10 °C)
 Optimum roadway compaction temperature: 290 (143)
 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	6	89.0	85.5 - 91.5
Ndes	50		96.0

Tests on Aggregates	Required	Units
Durability Index	71	40 min. %
F.A.A. %U		N/A %
Flat and Elongated	0	10 max. %
Fractured Faces	100/100	85/80 min. %
Insoluble Residue		N/A %
LA Abrasion	28	40 max. %
Micro-Deval	13.9	N/A %
Permeability	6.4	12.5 max. 10 ⁻⁵ cm/s
Sand Equivalent	91	40 min. %
IOC	0.44	%
Gse	2.686	
Gsb	2.652	
Specimen Weight	4880	g

Tests on Compressed Mixtures							
%AC	% Density			% VMA	% VMA Required	% VFA	% VFA Required
	Gmb	Gmm	of Gmm				
4.3	2.391	2.507	95.4	13.7	Design / Field	66.4	70 - 75
4.8	2.408	2.488	96.8	13.6	96.0 / 94.5 - 97.4	76.5	
5.3	2.419	2.469	98.0	13.6		85.3	

Dust Prop.
 1.0 Dust Prop. Req.
 0.9 0.6 - 1.6
 0.8

ITS (PSI) 151.4 N/A min.
 TSR 0.86 0.80 / 0.75 min. (Design / Field)
 Compacted Wt. (lbs/sy/1" thick) = 110.0 @ 4.5 % Asphalt Cement
 3.5 % New Asphalt Cement

Hamburg Rut Test Depth (mm) 2.20 12.50 max. @ 10,000 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: 4/18/2018
(mm/dd/yyyy)