



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)
 Cummins Const Co P/S # m00556
 (Producer/Supplier Name and Producer/Supplier Code)
 Cummins Const Co (Portable)- 400TPH PLANT ID # m00556-16
 (Plant Name and Plant ID)

Binder - Recycled ID: B2
 (Design Type and Design Type ID)
 S3qc0101600401
 (Mix ID)

Aggregate	Producer/Supplier	% USED
#67 Rock	Dolese Co (Ardmore, OK) P/S # m002701001	25
3/8" Chips	Dolese Co (Ardmore, OK) P/S # m002701001	15
Stone Sand	Martin-Marietta (Davis, OK) P/S # m002285005	15
Scrns.	Dolese Co (Ardmore, OK) P/S # m002701001	10
Sand (Unlisted Source)	Flume Sand (Thackerville, OK)	10
Fine R.A.P.	Contractor / Project Site P/S # Contractor	25

Asphalt Cement: Asphaltic Cement Type PG 64-22 OK, acem003, Asphalt Terminals and Transp LLC (Muskogee, OK), m00783
 (Material Full Name, Material Code, Producer/Supplier Name, Producer/Supplier Code)

Sieve Size	Producer/Supplier:							Comb. Agg.	Requirements				Tol. (±)
	Dolese Co (Ardmore, OK) P/S # m002701001	Dolese Co (Ardmore, OK) P/S # m002701001	Martin-Marietta (Davis, OK) P/S # m002285005	Dolese Co (Ardmore, OK) P/S # m002701001	Flume Sand (Thackerville, OK)	Contractor / Project Site P/S # Contractor			JMF	Min.	Max.		
1 in (25 mm)	100	100	100	100	100	100	100	100	100	100	100	0	
3/4 in (19 mm)	95	100	100	100	100	100	99	99	92	100	100	7	
1/2 in (12.5 mm)	50	100	100	100	100	100	87	90	83	97	100	7	
3/8 in (9.5 mm)	26	97	100	100	100	100	80	80	73	87	100	7	
#4 (4.75 mm)	6	27	89	90	100	100	58	60	53	67	100	7	
#8 (2.36 mm)	3	6	52	59	100	100	41	44	39	49	100	5	
#16 (1.18 mm)	3	3	29	35	100	100	31	36	32	40	100	4	
#30 (.600 mm)	3	3	18	23	98	100	26	32	28	36	100	4	
#50 (.300 mm)	3	2	11	18	68	100	18	23	19	27	100	4	
#100 (.150 mm)	2	2	8	16	23	100	9	11	8	14	100	3	
#200 (.075 mm)	2.0	1.9	5.1	13.1	3.9	100	5.4	5.4	3.4	7.4	100	2	
AC Content %							4.3	4.3	3.9	4.7	100	0.4	

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

Mix temperature @ discharge from mixer: 305 (152) ± 20 °F (± 10 °C) **Required**
 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	88.5	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	2.1	N/A %
LA Abrasion	28	40 max. %
Micro-Deval	13.9	N/A %
Permeability	2.5	12.5 max. 10 ⁻⁵ cm/s
Sand Equivalent	78	40 min. %
IOC	0.15	%
Gse	2.697	
Gsb	2.673	
Specimen Weight	4900	g

Tests on Compressed Mixtures							
%AC	Gmb	Gmm	% Density		% VMA	% VMA Required	% VFA
			of Gmm	% Density Required			
3.8	2.383	2.536	94.0	Design / Field	14.2	Design / Field	57.7
4.3	2.415	2.516	96.0	96.0 / 94.5 - 97.4	13.5	13.5 / 13.0	70.4
4.8	2.432	2.497	97.4		13.4		80.6

Dust Prop. 1.5 **Dust Prop. Req.** 0.6 - 1.6
 1.4
 1.2

ITS (PSI) 203 N/A min.
TSR 0.90 0.80 / 0.75 min. (Design / Field)
 Compacted Wt. (lbs/sy/1" thick) = 110.7 @ 4.3 % Asphalt Cement
 3.0 % New Asphalt Cement

x 1st JMF Revision

Hamburg Rut Test Depth (mm) 2.62 12.50 max. @ 10,000 cycles

MEETS SPECIFICATION REQUIREMENTS PER SPECIAL PROVISION 708-26(a-f) 09

Comments: REVISED (GRAD.) Effective 10/24/16 per contractor's request.

Last Modified By: Schratwieser, Edward P. eschratw
 (User Name and User ID)

Date: 10/28/2016
 (mm/dd/yyyy)