Version: V03.40

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)

Cummins Const Co P/S # m00556
(Producer/Supplier Name and Producer/Supplier Code)

S3qc0101680401
(Mix ID)

Cummins Const Co (Portable)- 400TPH PLANT ID # m00556-16
(Plant Name and Plant 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, Valero (Ardmore, OK), m00352
(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-

Producer/Supplier:	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								
Sieve Size	#67 Rock	3/8" Chips	Stone Sand	Scrns.	Sand (Unlisted Source)	Fine R.A.P.			Comb. Agg.	*JMF*	*Min.*	*Max.*	*% Tol. (±)*	
1 in (25 mm)	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*	*7*	
1/2 in (12.5 mm)	50	100	100	100	100	98			87	***90***	*83*	*97*	*7*	x
3/8 in (9.5 mm)	26	97	100	100	100	96			80	***80***	*73*	*87*	*7*	
#4 (4.75 mm)	6	27	89	90	100	80			58	***60***	*53*	*67*	*7*	x
#8 (2.36 mm)	3	6	52	59	100	62			41	***44***	*39*	*49*	*5*	x
#16 (1.18 mm)	3	3	29	35	100	48			31	***32***	*28*	*36*	*4*	x
#30 (.600 mm)	3	3	18	23	98	38			26	***25***	*21*	*29*	*4*	x
#50 (.300 mm)	3	2	11	18	68	26			18	***18***	*14*	*22*	*4*	x
#100 (.150 mm)	2	2	8	16	23	14			9	***10***	*7*	*13*	*3*	x
#200 (.075 mm)	2.0	1.9	5.1	13.1	3.9	8.5			5.4	***6.0***	*4.0*	*8.0*	*2*	xxx
AC Content %						5.0			4.3	***4.3***	*3.9*	*4.7*	*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	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 of Gmm	% Density Required	% VMA	% VMA Required	% VFA	% VFA Required
3.8	2.383	2.536	94.0	Design / Field	14.2	Design / Field	57.7	70 - 75
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
1.4
1.2

Dust Prop. Req. 0.6 - 1.6

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

xxx 3rd 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 3/1/17 per contractor's request.

Last Modified By: Williams, Bobby Ray bwilli01
(User Name and User ID)

Date: 3/1/2017
(mm/dd/yyyy)