Version: V03.40

Oklahoma Department of Transportation Mix Design Report

Asphalt Concrete, Type S4 (PG 64-22 OK) Mat'l. Code: asco012
(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)

S4qc0101680500
(Mix ID)

Cummins Const Co (Portable)- 400TPH PLANT ID # m00556-16
(Plant Name and Plant ID)

Aggregate	Producer/Supplier	% USED
5/8" Chips	Dolese Co (Ardmore, OK) P/S # m002701001	20
3/8" Chips	Dolese Co (Ardmore, OK) P/S # m002701001	15
Stone Sand	Martin-Marietta (Davis, OK) P/S # m002285005	20
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	5/8" Chips	3/8" Chips	Stone Sand	Scrns.	Sand (Unlisted Source)	Fine R.A.P.			Comb. Agg.	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)	95	100	100	100	100	98			99	99	92	100	7
3/8 in (9.5 mm)	55	97	100	100	100	96			90	90	83	97	7
#4 (4.75 mm)	9	27	89	90	100	80			63	63	56	70	7
#8 (2.36 mm)	3	6	52	59	100	62			43	43	38	48	5
#16 (1.18 mm)	2	3	29	35	100	48			32	32	28	36	4
#30 (.600 mm)	2	3	18	23	98	38			26	26	22	30	4
#50 (.300 mm)	2	2	11	18	68	26			18	18	14	22	4
#100 (.150 mm)	1	2	8	16	23	14			10	10	7	13	3
#200 (.075 mm)	1.1	1.9	5.1	13.1	3.9	8.5			5.4	5.4	3.4	7.4	2
AC Content %						5.0			4.9	4.9	4.5	5.3	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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-Oklahoma D.O.T. Materials-

Tests on Compressed Mixtures (@ Design AC)

	# Gyr.	% Density of Gmm	% Density Required
Nini	6	87.7	85.5 - 91.5
Ndes	50		96.0

Tests on Aggregates		Required		Units
Durability Index	76	40	min.	%
F.A.A. %U		N/A		%
Flat and Elongated	0	10	max.	%
Fractured Faces	100/100	85/80	min.	%
Insoluble Residue	1.6	N/A		%
LA Abrasion	27	40	max.	%
Micro-Deval	12.1	N/A		%
Permeability	7.2	12.5	max.	10^{-5}cm/s
Sand Equivalent	80	40	min.	%
IOC	0.31			%
Gse	2.691			
Gsb	2.658			
Specimen Weight	4850			g

Tests on Compressed Mixtures

%AC	Gmb	Gmm	% Density of Gmm	% Density Required	% VMA	% VMA Required	% VFA	% VFA Required
4.4	2.350	2.507	93.7	Design / Field	15.5	Design / Field	59.4	
4.9	2.388	2.488	96.0	96.0 / 94.5 - 97.4	14.6	14.5 / 14.0	72.6	72 - 77
5.4	2.403	2.469	97.3		14.5		81.4	

Dust Prop.	Dust Prop. Req.
1.4	0.6 - 1.6
1.2	
1.1	

ITS (PSI) 155.5 N/A min.
TSR 0.81 0.80 / 0.75 min. (Design / Field)
Compacted Wt. (lbs/sy/1" thick) = 109.5 @ 4.9 % Asphalt Cement
3.6 % New Asphalt Cement

Hamburg Rut Test Depth (mm) 6.58 12.50 max. @ 10,000 cycles

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

Comments:

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

Date: 2/6/2017
(mm/dd/yyyy)