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)

J & R Sand Co P/S # m00560
(Producer/Supplier Name and Producer/Supplier Code)

WS3qc0611700702
(Mix ID)

J & R Sand Co (Portable) Felt, OK- 350TPH PLANT ID # m00560-02
(Plant Name and Plant ID)

Aggregate	Producer/Supplier	% USED
3/4" Chips	Dolese Co (Cooperton, OK) P/S # m002723801	18
3/8" Chips	Dolese Co (Cooperton, OK) P/S # m002723801	17
Scrns.	Dolese Co (Cooperton, OK) P/S # m002723801	14
Stone Sand	Dolese Co. (Roosevelt, OK) P/S # m010483804	15
Sand	Kline Sand (Camargo, OK) P/S # m005932206	11
Coarse R.A.P.	Contractor / Project Site P/S # Contractor	25

Warm Mix Asphalt (WMA) Technology: EVOTHERM (Chem. Add.) qual028 Ingevity m00941
(Product Name, Material Code, Producer/Supplier Name, Producer/Supplier Code)

Asphalt Cement: Asphaltic Cement Type PG 64-22 OK, acem003, Coastal Energy (Clinton, OK), m01042
(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-

Sieve Size	Producer/Supplier: Dolese Co (Cooperton, OK) P/S # m002723801	Dolese Co (Cooperton, OK) P/S # m002723801	Dolese Co (Cooperton, OK) P/S # m002723801	Dolese Co. P/S (Roosevelt, OK) # m010483804	Kline Sand P/S (Camargo, OK) # m005932206	Contractor / Project Site P/S # Contractor			Comb. Agg.	JMF	Min.	Max.	% Tol. (±)
	3/4" Chips	3/8" Chips	Scrns.	Stone Sand	Sand	Coarse R.A.P.							
1 in (25 mm)	100	100	100	100	100	100			100	**100**	100	100	0
3/4 in (19 mm)	100	100	100	100	100	100			100	**100**	93	100	7
1/2 in (12.5 mm)	34	100	100	100	100	95			87	**87**	80	94	7
3/8 in (9.5 mm)	8	97	100	100	100	86			79	**79**	72	86	7
#4 (4.75 mm)	3	13	86	96	100	65			56	**56**	49	63	7
#8 (2.36 mm)	2	3	54	70	100	50			42	**42**	37	47	5
#16 (1.18 mm)	2	2	34	49	99	40			34	**34**	30	38	4
#30 (.600 mm)	2	1	24	32	89	33			27	**27**	23	31	4
#50 (.300 mm)	2	1	17	19	40	23			16	**16**	12	20	4
#100 (.150 mm)	2	1	13	9	6	13			8	**8**	5	11	3
#200 (.075 mm)	1.0	1.0	10.4	4.1	1.5	6.9			4.3	**4.3**	2.3	6.3	2
AC Content %						5.2			4.3	**4.6**	4.2	5.0	0.4

x

Warm Mix Asphalt (WMA) Additive % 0.4

	°F (°C)	Required
Mix temperature @ discharge from mixer:	275 (135)	± 20 °F (± 10 °C)
Optimum roadway compaction temperature:	245 (118)	
Laboratory mixing temperature:	285 (141)	
Laboratory compaction temperature:	235 (113)	

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	90.4	85.5 - 91.5
Ndes	50		96.0

Tests on Aggregates		Required		Units
Durability Index	84	40	min.	%
F.A.A. %U		N/A		%
Flat and Elongated	0	10	max.	%
Fractured Faces	100/100	85/80	min.	%
Insoluble Residue	9.4	N/A		%
LA Abrasion	29	40	max.	%
Micro-Deval	16.4	N/A		%
Permeability	1.7	12.5	max.	10^{-5}cm/s
Sand Equivalent	80	40	min.	%
Pba	0.37			
IOC	0.26			%
Gse	2.727			
Gsb	2.700			
Specimen Weight	4750			g

Tests on Compressed Mixtures

%AC	Gmb	Gmm	% Density of Gmm	% Density Required Design / Field	% VMA	% VMA Required Design / Field	% VFA	% VFA Required
3.8	2.411	2.562	94.1	96.0 / 94.5 - 97.4	14.1	13.5 / 13.0	58.2	70 - 75
4.3	2.439	2.541	96.0		13.6		70.6	
4.8	2.455	2.521	97.4		13.4		80.6	

Dust Prop.
1.3
1.1
1.0

Dust Prop. Req. 0.6 - 1.6

ITS (PSI) 205.7 N/A min.

TSR 0.90 0.80 / 0.75 min. (Design / Field)

Compacted Wt. (lbs/sy/1" thick) = 111.3 @ 4.3 % Asphalt Cement

3.0 % New Asphalt Cement

x 1st JMF Revision

Hamburg Rut Test Depth (mm) 6.19 12.50 max. @ 10,000 cycles

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

Comments: Revised JMF by contractor: Effective 10/10/2018

Last Modified By: McComack, Hunter J. hmccomac
(User Name and User ID)

Date: 10/15/2018
(mm/dd/yyyy)