



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 (Coleman, OK) - 300TPH PLANT ID # m00556-11
 (Plant Name and Plant ID)

Binder - Recycled ID: B2
 (Design Type and Design Type ID)
 WS3qc0101376801
 (Mix ID)

Aggregate	Producer/Supplier	% USED
#67 Rock	Dolese Co (Coleman, OK) P/S # m002710302	25
3/8" Chips	Dolese Co (Coleman, OK) P/S # m002710302	10
Man. Sand	TXI Mill Creek Stone Plant P/S # m005253504	20
Scrs.	Dolese Co (Coleman, OK) P/S # m002710302	10
Sand (Unlisted Source)	Cardinal Sand (Coleman, OK)	10
Fine R.A.P.	Contractor / Project Site P/S # Contractor	25

Warm Mix Asphalt (WMA) Technology: TEREX (Foaming Process) qual028 Terex Roadbuilding m00801
 (Product Name, Material Code, Producer/Supplier Name, Producer/Supplier Code)

Asphalt Cement: Asphaltic Cement Type PG 64-22 OK, acem003, Lion Oil Frontier (Muskogee, OK), m01021
 (Material Full Name, Material Code, Producer/Supplier Name, Producer/Supplier Code)

Producer/Supplier:	Dolese Co (Coleman, OK) P/S # m002710302	Dolese Co (Coleman, OK) P/S # m002710302	TXI Mill Creek Stone Plant P/S # m005253504	Dolese Co (Coleman, OK) P/S # m002710302	Cardinal Sand (Coleman, OK)	Contractor / Project Site P/S # Contractor	Requires Form 93-E0 signed by the Department for production use. -Oklahoma D.O.T. Materials-				
	#67 Rock	3/8" Chips	Man. Sand	Scrs.	Sand (Unlisted Source)	Fine R.A.P.					
Sieve Size							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)	98	100	100	100	100	100	100	100	93	100	7
1/2 in (12.5 mm)	53	100	100	100	100	100	88	90	83	97	7
3/8 in (9.5 mm)	31	95	100	100	100	94	81	87	80	94	7
#4 (4.75 mm)	3	19	99	89	100	71	59	67	60	74	7
#8 (2.36 mm)	1	6	82	55	100	45	44	49	44	54	5
#16 (1.18 mm)	1	4	54	36	99	32	33	41	37	45	4
#30 (.600 mm)	1	2	30	27	99	25	25	34	30	38	4
#50 (.300 mm)	1	1	12	20	85	19	18	26	22	30	4
#100 (.150 mm)	1	1	4	15	33	13	9	16	13	19	3
#200 (.075 mm)	0.6	0.9	1.8	12.5	9.2	6.2	4.3	6.5	4.5	8.5	2
AC Content %						5.2	4.3	4.3	3.9	4.7	0.4

Warm Mix Asphalt (WMA) Additive % 2.0

Mix temperature @ discharge from mixer: 275 (135) °F (°C) Required ± 20 °F (± 10 °C)
 Optimum roadway compaction temperature: 260 (127)
 Laboratory mixing temperature: 300 (149)
 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	89.8	85.5 - 91.5
Ndes	50		96.0

Tests on Aggregates	Required	Units
Durability Index	67	40 min. %
F.A.A. %U	N/A	%
Flat and Elongated	10	max. %
Fractured Faces	100/100	85/80 min. %
Insoluble Residue	11.2	N/A %
LA Abrasion	22.3	40 max. %
Micro-Deval	12.4	N/A %
Permeability	3.9	12.5 max. 10 ⁻⁵ cm/s
Sand Equivalent	69	40 min. %
Pba	0.36	
IOC	0.86	%
Gse	2.775	
Gsb	2.748	
Specimen Weight	4900	g

Tests on Compressed Mixtures							
%AC	Gmb	Gmm	% Density of Gmm	% Density Required	% VMA	% VMA Required	% VFA
3.8	2.432	2.602	93.5	Design / Field	14.9	Design / Field	56.4
4.3	2.477	2.581	96.0	96.0 / 94.5 - 97.4	13.7	13.5 / 13.0	70.8
4.8	2.488	2.560	97.2		13.8		79.7

ITS (PSI) 196.4 N/A min.
 TSR 0.83 0.80 / 0.75 min. (Design / Field)
 Compacted Wt. (lbs/sy/1" thick) = 113.5 @ 4.3 % Asphalt Cement
 3.0 % New Asphalt Cement

x 1st JMF Revision

Hamburg Rut Test Depth (mm) 2.06 #N/A

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

Comments: _____

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

Date: 11/27/2018
 (mm/dd/yyyy)