



Oklahoma Department of Transportation Mix Design Report

Asphalt Concrete, Type S3 (PG 64-22 OK) Mat'l. Code: asco009

Binder - Recycled ID: B2

(Material Full Name and Material Code)

(Design Type and Design Type ID)

Cummins Const Co P/S # m00556

S3c00931701800

(Producer/Supplier Name and Producer/Supplier Code)

(Mix ID)

Cummins Const Co (Portable)- 400TPH PLANT ID # m00556-15

(Plant Name and Plant ID)

Aggregate	Producer/Supplier	% USED
1 1/2" Rock	Western Aggregates, LLC (Carnegie, OK) P/S # m006583803	15
1/2" Chips	Western Aggregates, LLC (Carnegie, OK) P/S # m006583803	15
Stone Sand	Dolese Co. (Richards Spur, OK) P/S # m002761601	25
Scrns.	Western Aggregates, LLC (Carnegie, OK) P/S # m006583803	10
Sand (Unlisted Source)	GMI Sand OKC, 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.	Requires Form 93-E0 signed by the Department for production use. -Oklahoma D.O.T. Materials-			% Tol. (±)
	Western Aggregates, LLC (Carnegie, OK) P/S # m006583803	Western Aggregates, LLC (Carnegie, OK) P/S # m006583803	Dolese Co. (Richards Spur, OK) P/S # m002761601	Western Aggregates, LLC (Carnegie, OK) P/S # m006583803	GMI Sand OKC, OK	Contractor / Project Site P/S # Contractor			JMF	Min.	Max.	
1 1/2" Rock	81	100	100	100	100	100	97	97	97	97	0	
1/2" Chips	30	100	100	100	100	100	90	90	83	97	7	
Stone Sand	10	84	100	99	100	95	83	83	76	90	7	
Scrns.	1	4	97	79	99	83	64	64	57	71	7	
Sand (Unlisted Source)	1	1	62	53	99	67	48	48	43	53	5	
Fine R.A.P.	1	1	32	33	97	46	33	33	29	37	4	
	1	1	17	21	91	32	24	24	20	28	4	
	1	1	8	16	59	21	15	15	11	19	4	
	1	1	5	14	12	14	8	8	5	11	3	
	0.8	0.9	4.1	13.1	2.5	8.5	5.0	5.0	3.0	7.0	2	
AC Content %						5.2	4.4	4.4	4.0	4.8	0.4	

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	89.5	85.5 - 91.5
Ndes	50		96.0

Tests on Aggregates	Required	Units
Durability Index	90	40 min. %
F.A.A. %U	N/A	%
Flat and Elongated	0	10 max. %
Fractured Faces	89/93	85/80 min. %
Insoluble Residue	96.5	N/A %
LA Abrasion	31	40 max. %
Micro-Deval	7.8	N/A %
Permeability	10.7	12.5 max. 10 ⁻⁵ cm/s
Sand Equivalent	78	40 min. %
IOC	0.20	%
Gse	2.698	
Gsb	2.679	
Specimen Weight	4800	g

Tests on Compressed Mixtures								
%AC	Gmb	Gmm	% Density of Gmm	% Density Required	% VMA	% VMA Required	% VFA	% VFA Required
3.9	2.361	2.533	93.2	Design / Field	15.3	Design / Field	55.6	72 - 77
4.4	2.412	2.513	96.0	96.0 / 94.5 - 97.4	13.9	14.5 / 14.0	71.2	
4.9	2.427	2.494	97.3		13.8		80.4	

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

ITS (PSI) 91.3 N/A min.
TSR 0.83 0.80 / 0.75 min. (Design / Field)
 Compacted Wt. (lbs/sy/1" thick) = 110.6 @ 4.4 % Asphalt Cement
 3.1 % New Asphalt Cement

Hamburg Rut Test Depth (mm) 3.40 12.50 max. @ 10,000 cycles

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

Comments: Similar to S3qc0101700800, Plant Change. Ksuitoer 11/8/2017

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

Date: 11/8/2017
 (mm/dd/yyyy)