Version: V03.50

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)

Koss Construction Co - Asphalt (Topeka, KS) P/S # m00732
(Producer/Supplier Name and Producer/Supplier Code)

S3pv0251820000
(Mix ID)

(Plant Name and Plant ID)

Aggregate	Producer/Supplier	% USED
#67 Rock	Dolese Co (Hartshorne, OK) P/S # m002756101	22
3/8" Chips	Dolese Co (Hartshorne, OK) P/S # m002756101	15
Man. Sand	Dolese Co (Coleman, OK) P/S # m002710302	5
Scrns.	Dolese Co (Hartshorne, OK) P/S # m002756101	25
Sand	Muskogee Sand - West Plant (Muskogee, OK) P/S # m007067309	8
Fine R.A.P.	Contractor / Project Site P/S # Contractor	25

Asphalt Additive, Anti-Strip EVOTHERM M1 addi003 Ingevity m00941
(Product Name, Material Code, Producer/Supplier Name, Producer/Supplier Code)

Asphalt Cement: Asphaltic Cement Type PG 64-22 OK, acem003, Lion Oil Co. (Muskogee, OK), m00511
(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	#67 Rock	3/8" Chips	Man. Sand	Scrns.	Sand	Fine R.A.P.			Comb. Agg.	JMF	Min.	Max.	% Tol. (±)
Producer/Supplier:	Dolese Co (Hartshorne, OK) P/S # m002756101	Dolese Co (Hartshorne, OK) P/S # m002756101	Dolese Co (Coleman, OK) P/S # m002710302	Dolese Co (Hartshorne, OK) P/S # m002756101	Muskogee Sand - West Plant (Muskogee, OK) P/S # m007067309	Contractor / Project Site P/S # Contractor							
1 in (25 mm)	100	100	100	100	100	100			100	**100**	100	100	0
3/4 in (19 mm)	94	100	100	100	100	100			99	**99**	92	100	7
1/2 in (12.5 mm)	52	100	100	100	100	95			88	**88**	81	95	7
3/8 in (9.5 mm)	25	94	100	100	100	87			79	**79**	72	86	7
#4 (4.75 mm)	4	13	100	87	99	67			54	**54**	47	61	7
#8 (2.36 mm)	1	2	93	54	96	51			39	**39**	34	44	5
#16 (1.18 mm)	1	2	55	34	89	39			29	**29**	25	33	4
#30 (.600 mm)	1	2	27	23	71	30			21	**21**	17	25	4
#50 (.300 mm)	1	2	12	17	31	21			13	**13**	9	17	4
#100 (.150 mm)	1	1	5	13	4	15			8	**8**	5	11	3
#200 (.075 mm)	0.3	0.8	2.6	10.9	0.6	11.0			5.8	**5.8**	3.8	7.8	2
AC Content %						5.3			4.8	**4.8**	4.4	5.2	0.4
Asphalt Additive, Anti-Strip %									0.3				

	°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	88.8	85.5 - 91.5
Ndes	50		96.0

Tests on Aggregates		Required		Units
Contabro		N/A		%
Durability Index	78	40	min.	%
F.A.A. %U	44	N/A		%
Flat and Elongated	1	10	max.	%
Fractured Faces	100/100	85/80	min.	%
Insoluble Residue	5.8	N/A		%
LA Abrasion	23	40	max.	%
Micro-Deval	13.8	N/A		%
Permeability	6.1	12.5	max.	10^{-5}cm/s
Sand Equivalent	72	40	min.	%
IOC	0.12			%
Gse	2.709			
Gsb	2.653			
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
4.3	2.389	2.526	94.6		13.8		60.9	
4.8	2.407	2.507	96.0	96.0 / 94.5 - 97.4	13.6	13.5 / 13.0	70.6	70 - 75
5.3	2.421	2.487	97.3		13.6		80.1	

Dust Prop.
1.7
1.4
1.3

Dust Prop. Req. 0.6 - 1.6

ITS (PSI) 150.8 N/A min.
TSR 0.83 0.80 / 0.75 min. (Design / Field)
Compacted Wt. (lbs/sy/1" thick) = 110.3 @ 4.8 % Asphalt Cement
3.5 % New Asphalt Cement

Hamburg Rut Test Depth (mm) 3.33 12.50 max. @ 10,000 cycles

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

Comments:

Last Modified By: Smith, Jerry D. jsmith
(User Name and User ID)

Date: 7/2/2018
(mm/dd/yyyy)