Version: V03.50

Oklahoma Department of Transportation Mix Design Report

Asphalt Concrete, Type S3 (PG 76-28 OK) Mat'l. Code: asco007
(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)

S3pv0251820300
(Mix ID)

(Plant Name and Plant ID)

Aggregate	Producer/Supplier	% USED
#67 Rock	Dolese Co (Hartshorne, OK) P/S # m002756101	30
5/8" Chips	Dolese Co (Hartshorne, OK) P/S # m002756101	20
Man. Sand	Dolese Co (Coleman, OK) P/S # m002710302	15
Scrns.	Dolese Co (Hartshorne, OK) P/S # m002756101	13
Sand	Muskogee Sand - West Plant (Muskogee, OK) P/S # m007067309	7
Fine R.A.P.	Contractor / Project Site P/S # Contractor	15

Asphalt Additive, Anti-Strip EVOTHERM P25 addi003 Ingevity m00941
(Product Name, Material Code, Producer/Supplier Name, Producer/Supplier Code)

Asphalt Cement: Asphaltic Cement Type PG 76-28 OK, acem001, 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	5/8" 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			98	**98**	91	100	7
1/2 in (12.5 mm)	52	93	100	100	100	95			83	**83**	76	90	7
3/8 in (9.5 mm)	25	59	100	100	100	87			67	**67**	60	74	7
#4 (4.75 mm)	4	8	100	87	99	67			46	**46**	39	53	7
#8 (2.36 mm)	1	2	93	54	96	51			36	**36**	31	41	5
#16 (1.18 mm)	1	2	55	34	89	39			25	**25**	21	29	4
#30 (.600 mm)	1	2	27	23	71	30			17	**17**	13	21	4
#50 (.300 mm)	1	2	12	17	31	21			10	**10**	6	14	4
#100 (.150 mm)	1	2	5	13	4	15			6	**6**	3	9	3
#200 (.075 mm)	0.3	0.6	2.6	10.9	0.6	11.0			3.7	**3.7**	1.7	5.7	2
AC Content %						5.3			4.6	**4.6**	4.2	5.0	0.4
Asphalt Additive, Anti-Strip %									0.3				

	°F (°C)	Required
Mix temperature @ discharge from mixer:	325 (163)	± 20 °F (± 10 °C)
Optimum roadway compaction temperature:	305 (152)	
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	8	88.6	85.5 - 89.0
Ndes	80		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	98/95	min.	%
Insoluble Residue	6.3	N/A		%
LA Abrasion	23	40	max.	%
Micro-Deval	13.8	25	max.	%
Permeability	4.1	12.5	max.	10^{-5}cm/s
Sand Equivalent	69	50	min.	%
IOC	0.17			%
Gse	2.679			
Gsb	2.648			
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	2.385	2.501	95.4		13.8		66.7	
4.8	2.398	2.482	96.6	96.0 / 94.5 - 97.4	13.8	13.5 / 13.0	75.4	70 - 75
5.3	2.415	2.463	98.1		13.6		86.0	

Dust Prop.
0.9
0.8
0.8

Dust Prop. Req. 0.6 - 1.6

ITS (PSI) 184.8 75 min.
TSR 0.82 0.80 / 0.75 min. (Design / Field)
Compacted Wt. (lbs/sy/1" thick) = 109.5 @ 4.6 % Asphalt Cement
3.8 % New Asphalt Cement

Hamburg Rut Test Depth (mm) 2.00 12.50 max. @ 20,000 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: 9/26/2018
(mm/dd/yyyy)