Version: V03.50

Oklahoma Department of Transportation Mix Design Report

Asphalt Concrete, Type S3 (PG 70-28 OK) Mat'l. Code: asco008
(Material Full Name and Material Code)

Binder ID: B1
(Design Type and Design Type ID)

Overland Corp P/S # m00433
(Producer/Supplier Name and Producer/Supplier Code)

S3pv0261801100
(Mix ID)

Overland Corp #ASTEC-3 (Portable) PLANT ID # m00433-04
(Plant Name and Plant ID)

Aggregate	Producer/Supplier	% USED
#67 Rock	Martin-Marietta (Mill Creek, OK) P/S # m002303502	12
5/8" Chips	Martin-Marietta (Mill Creek, OK) P/S # m002303502	36
Man. Sand	Martin-Marietta (Mill Creek, OK) P/S # m002303502	25
Scrns.	Vulcan Materials Co. (North Troy, OK) P/S # m007003506	15
Sand	Engel Sand Co. (Ada, OK) P/S # m001896201	12

Asphalt Cement: Asphaltic Cement Type PG 70-28 OK, acem002, 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				Comb. Agg.	JMF	Min.	Max.	% Tol. (±)
Producer/Supplier:	Martin-Marietta (Mill Creek, OK) P/S # m002303502	Martin-Marietta (Mill Creek, OK) P/S # m002303502	Martin-Marietta (Mill Creek, OK) P/S # m002303502	Vulcan Materials Co. (North Troy, OK) P/S # m007003506	Engel Sand Co. (Ada, OK) P/S # m001896201								
1 in (25 mm)	100	100	100	100	100				100	**100**	100	100	0
3/4 in (19 mm)	98	100	100	100	100				100	**100**	93	100	7
1/2 in (12.5 mm)	58	75	100	100	100				86	**86**	79	93	7
3/8 in (9.5 mm)	32	45	100	100	100				72	**72**	65	79	7
#4 (4.75 mm)	7	8	99	99	100				55	**55**	48	62	7
#8 (2.36 mm)	3	2	76	80	100				44	**44**	39	49	5
#16 (1.18 mm)	2	1	49	57	99				33	**33**	29	37	4
#30 (.600 mm)	2	1	29	41	93				25	**25**	21	29	4
#50 (.300 mm)	2	1	14	31	65				17	**17**	13	21	4
#100 (.150 mm)	2	1	4	25	22				8	**8**	5	11	3
#200 (.075 mm)	1.6	0.5	1.5	20.2	7.8				4.7	**4.7**	2.7	6.7	2
AC Content %									4.5	**4.5**	4.1	4.9	0.4

	°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	7	89.7	85.5 - 90.5
Ndes	65		96.0

Tests on Aggregates		Required		Units
Contabro		N/A		%
Durability Index	76	40	min.	%
F.A.A. %U		N/A		%
Flat and Elongated	0	10	max.	%
Fractured Faces	100/100	95/90	min.	%
Insoluble Residue	94.2	N/A		%
LA Abrasion	31	40	max.	%
Micro-Deval	12.6	N/A		%
Permeability	0.1	12.5	max.	10^{-5}cm/s
Sand Equivalent	74	45	min.	%
IOC	0.50			%
Gse	2.676			
Gsb	2.639			
Specimen Weight	4860			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	2.383	2.499	95.4		13.6		66.2	
4.8	2.402	2.480	96.9	96.0 / 94.5 - 97.4	13.3	13.5 / 13.0	76.7	70 - 75
5.3	2.416	2.461	98.2		13.3		86.5	

Dust Prop.	Dust Prop. Req.
1.2	0.6 - 1.6
1.1	
1.0	

ITS (PSI) 132.5 N/A min.

TSR 0.83 0.80 / 0.75 min. (Design / Field)

Compacted Wt. (lbs/sy/1" thick) = 109.6 @ 4.5 % Asphalt Cement

Hamburg Rut Test Depth (mm) 2.45 12.50 max. @ 15,000 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)