Version: V03.50

Oklahoma Department of Transportation Mix Design Report

Asphalt Concrete, Type S5 (PG 70-28 OK) Mat'l. Code: asco014
(Material Full Name and Material Code)

Insoluble ID: I1
(Design Type and Design Type ID)

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

S5pv0261800500
(Mix ID)

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

Aggregate	Producer/Supplier	% USED
3/8" Chips	Martin-Marietta (Mill Creek, OK) P/S # m002303502	20
1/4" Chips	Martin-Marietta (Mill Creek, OK) P/S # m002303502	20
Man. Sand	Martin-Marietta (Mill Creek, OK) P/S # m002303502	25
Scrns.	Vulcan Materials Co. (North Troy, OK) P/S # m007003506	20
Sand	Engel Sand Co. (Ada, OK) P/S # m001896201	15

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	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				Comb. Agg.	JMF	Min.	Max.	% Tol. (±)
	3/8" Chips	1/4" Chips	Man. Sand	Scrns.	Sand								
1/2 in (12.5 mm)	100	100	100	100	100				100	**100**	100	100	0
3/8 in (9.5 mm)	96	100	100	100	100				99	**99**	92	100	7
#4 (4.75 mm)	20	54	96	100	100				74	**74**	67	81	7
#8 (2.36 mm)	3	15	64	79	100				50	**50**	45	55	5
#16 (1.18 mm)	2	7	37	41	98				34	**34**	30	38	4
#30 (.600 mm)	2	4	19	25	93				25	**25**	21	29	4
#50 (.300 mm)	1	3	8	21	66				17	**17**	13	21	4
#100 (.150 mm)	1	2	2	18	25				8	**8**	5	11	3
#200 (.075 mm)	0.8	1.8	1.2	15.2	9.2				5.2	**5.2**	3.2	7.2	2
AC Content %									5.5	**5.5**	5.1	5.9	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	88.1	85.5 - 90.5
Ndes	65		96.0

Tests on Aggregates		Required		Units
Contabro		N/A		%
Durability Index	87	40	min.	%
F.A.A. %U		N/A		%
Flat and Elongated	0	10	max.	%
Fractured Faces	100/100	95/90	min.	%
Insoluble Residue	90.5	40	min.	%
LA Abrasion	31	40	max.	%
Micro-Deval	13.2	N/A		%
Permeability	0.2	12.5	max.	10^{-5}cm/s
Sand Equivalent	80	45	min.	%
IOC	0.51			%
Gse	2.696			
Gsb	2.651			
Specimen Weight	4820			g

Tests on Compressed Mixtures

%AC	Gmb	Gmm	% Density of Gmm	% Density Required Design / Field	% VMA	% VMA Required Design / Field	% VFA	% VFA Required
5.3	2.360	2.477	95.3		15.7		70.1	
5.8	2.377	2.458	96.7	96.0 / 94.5 - 97.4	15.5	15.5 / 15.0	78.7	73 - 78
6.3	2.409	2.439	98.8		14.9		91.9	

Dust Prop.
1.1
1.0
0.9

Dust Prop. Req. 0.6 - 1.6

ITS (PSI) 107.6 N/A min.

TSR 0.93 0.80 / 0.75 min. (Design / Field)

Compacted Wt. (lbs/sy/1" thick) = 108.6 @ 5.5 % Asphalt Cement

Hamburg Rut Test Depth (mm) 2.40 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: 10/30/2018
(mm/dd/yyyy)