Version: V03.50

Oklahoma Department of Transportation Mix Design Report

Asphalt Concrete, Type S4 (PG 70-28 OK) Mat'l. Code: asco011
(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)

S4pv0261800700
(Mix ID)

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

Aggregate	Producer/Supplier	% USED
5/8" Chips	Martin-Marietta (Mill Creek, OK) P/S # m002303502	17
3/8" Chips	Martin-Marietta (Mill Creek, OK) P/S # m002303502	25
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	13

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. (±)
	5/8" Chips	3/8" Chips	Man. Sand	Scrns.	Sand								
3/4 in (19 mm)	100	100	100	100	100				100	**100**	100	100	0
1/2 in (12.5 mm)	75	100	100	100	100				96	**96**	89	100	7
3/8 in (9.5 mm)	45	92	100	100	100				89	**89**	82	96	7
#4 (4.75 mm)	8	16	99	99	100				63	**63**	56	70	7
#8 (2.36 mm)	2	3	76	80	100				49	**49**	44	54	5
#16 (1.18 mm)	1	2	49	57	99				37	**37**	33	41	4
#30 (.600 mm)	1	2	29	41	93				28	**28**	24	32	4
#50 (.300 mm)	1	2	14	31	65				19	**19**	15	23	4
#100 (.150 mm)	1	2	4	25	22				10	**10**	7	13	3
#200 (.075 mm)	0.5	1.0	1.5	20.2	7.8				5.8	**5.8**	3.8	7.8	2
AC Content %									5.0	**5.0**	4.6	5.4	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

Requires Form 93-E0 signed by the Department for production use.
-Oklahoma D.O.T. Materials-

Tests on Compressed Mixtures (@ Design AC)

	# Gyr.	% Density of Gmm	% Density Required
Nini	7	89.0	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	91.7	40	min.	%
LA Abrasion	31.126	40	max.	%
Micro-Deval	12.6	N/A		%
Permeability	4.2	12.5	max.	10^{-5}cm/s
Sand Equivalent	65	45	min.	%
IOC	0.41			%
Gse	2.671			
Gsb	2.641			
Specimen Weight	4815			g

Tests on Compressed Mixtures

%AC	Gmb	Gmm	% Density of Gmm	% Density Required Design / Field	% VMA	% VMA Required Design / Field	% VFA	% VFA Required
4.8	2.361	2.476	95.4		14.9		69.1	
5.3	2.379	2.457	96.8	96.0 / 94.5 - 97.4	14.7	14.5 / 14.0	78.2	72 - 77
5.8	2.397	2.438	98.3		14.5		88.3	

Dust Prop.
1.3
1.2
1.1

Dust Prop. Req. 0.6 - 1.6

ITS (PSI) 94.9 N/A min.
TSR 0.81 0.80 / 0.75 min. (Design / Field)
Compacted Wt. (lbs/sy/1" thick) = 108.6 @ 5.0 % Asphalt Cement

Hamburg Rut Test Depth (mm) 2.62 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: 9/4/2018
(mm/dd/yyyy)