Version: V03.50

Oklahoma Department of Transportation Mix Design Report

Asphalt Concrete, Type S4 (PG 64-22 OK) Mat'l. Code: asco012
(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)

S4pv0261800600
(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	25
3/8" Chips	Martin-Marietta (Mill Creek, OK) P/S # m002303502	25
Man. Sand	Martin-Marietta (Mill Creek, OK) P/S # m002303502	15
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 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	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				94	94	87	100	7
3/8 in (9.5 mm)	45	92	100	100	100				84	84	77	91	7
#4 (4.75 mm)	8	16	99	99	100				56	56	49	63	7
#8 (2.36 mm)	2	3	76	80	100				44	44	39	49	5
#16 (1.18 mm)	1	2	49	57	99				34	34	30	38	4
#30 (.600 mm)	1	2	29	41	93				27	27	23	31	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:	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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-Oklahoma D.O.T. Materials-

Tests on Compressed Mixtures (@ Design AC)

	# Gyr.	% Density of Gmm	% Density Required
Nini	6	89.5	85.5 - 91.5
Ndes	50		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	85/80	min.	%
Insoluble Residue	94.1	30	min.	%
LA Abrasion	31.126	40	max.	%
Micro-Deval	12.6	N/A		%
Permeability	0.4	12.5	max.	10^{-5}cm/s
Sand Equivalent	59	40	min.	%
IOC	0.51			%
Gse	2.696			
Gsb	2.653			
Specimen Weight	4855			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	2.380	2.496	95.4		14.6		68.5	
5.3	2.399	2.477	96.9	96.0 / 94.5 - 97.4	14.4	14.5 / 14.0	78.5	72 - 77
5.8	2.415	2.458	98.3		14.3		88.1	

Dust Prop.
1.4
1.2
1.1

Dust Prop. Req. 0.6 - 1.6

ITS (PSI) 160.6 N/A min.

TSR 0.85 0.80 / 0.75 min. (Design / Field)

Compacted Wt. (lbs/sy/1" thick) = 109.5 @ 5.0 % Asphalt Cement

Hamburg Rut Test Depth (mm) 3.14 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: 8/24/2018
(mm/dd/yyyy)