Version: V03.40

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)

S4pv0261800100
(Mix ID)

Overland Corp # ASTEC-1 (Ardmore, OK) - 250TPH PLANT ID # m00433-01
(Plant Name and Plant ID)

Aggregate	Producer/Supplier	% USED
5/8" Chips	Hanson Aggregates, WRP Inc (Davis, OK) P/S # m001985008	20
5/8" Chips	Dolese Co (Ardmore, OK) P/S # m002701001	12
Scrns.	Dolese Co (Ardmore, OK) P/S # m002701001	30
C-33 Scrns.	Martin-Marietta (Mill Creek, OK) P/S # m002303502	23
Sand	Thackerville Sand & Gravel (Thackerville, OK) P/S # m001974301	15

Asphalt Cement: Asphaltic Cement Type PG 70-28 OK, acem002, Valero (Ardmore, OK), m00352
(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-

Producer/Supplier:	Hanson Aggregates, WRP Inc (Davis, OK) P/S # m001985008	Dolese Co (Ardmore, OK) P/S # m002701001	Dolese Co (Ardmore, OK) P/S # m002701001	Martin-Marietta (Mill Creek, OK) P/S # m002303502	Thackerville Sand & Gravel (Thackerville, OK) P/S # m001974301								
Sieve Size	5/8" Chips	5/8" Chips	Scrns.	C-33 Scrns.	Sand				Comb. Agg.	JMF	Min.	Max.	% Tol. (±)
3/4 in (19 mm)	100	100	100	100	100				100	100	100	100	0
1/2 in (12.5 mm)	78	95	100	100	100				95	95	88	100	7
3/8 in (9.5 mm)	57	61	100	100	100				87	87	80	94	7
#4 (4.75 mm)	19	8	95	98	100				71	71	64	78	7
#8 (2.36 mm)	7	4	56	80	99				52	52	47	57	5
#16 (1.18 mm)	5	3	34	53	98				38	38	34	42	4
#30 (.600 mm)	2	3	21	30	94				28	28	24	32	4
#50 (.300 mm)	2	2	15	13	66				18	18	14	22	4
#100 (.150 mm)	1	2	11	5	21				8	8	5	11	3
#200 (.075 mm)	1.0	1.5	9.1	2.8	3.7				4.3	4.3	2.3	6.3	2
AC Content %									5.1	5.1	4.7	5.5	0.4

	°F (°C)	Required
Mix temperature @ discharge from mixer:		± 20 °F (± 10 °C)
Optimum roadway compaction temperature:		
Laboratory mixing temperature:		
Laboratory compaction temperature:		

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	89.0	85.5 - 90.5
Ndes	65		96.0

Tests on Aggregates		Required		Units
Durability Index	74	40	min.	%
F.A.A. %U		N/A		%
Flat and Elongated	0	10	max.	%
Fractured Faces	100/100	95/90	min.	%
Insoluble Residue	48	40	min.	%
LA Abrasion	31	40	max.	%
Micro-Deval	12.6	N/A		%
Permeability	2.5	12.5	max.	10^{-5}cm/s
Sand Equivalent	84	45	min.	%
IOC	0.35			%
Gse	2.684			
Gsb	2.635			
Specimen Weight	4830			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	2.486	95.0		14.7		66.0	
5.3	2.384	2.467	96.6	96.0 / 94.5 - 97.4	14.3	14.5 / 14.0	76.2	72 - 77
5.8	2.401	2.449	98.0		14.2		85.9	

Dust Prop.	Dust Prop. Req.
1.0	0.6 - 1.6
0.9	
0.8	

ITS (PSI) 104.1 N/A min.
TSR 0.89 0.80 / 0.75 min. (Design / Field)
Compacted Wt. (lbs/sy/1" thick) = 108.9 @ 5.1 % Asphalt Cement

Hamburg Rut Test Depth (mm) 10.32 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: 3/12/2018
(mm/dd/yyyy)