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)

S4pv0261800900
(Mix ID)

Overland Corp #Astec-4 (Portable) - 400TPH PLANT ID # m00433-05
(Plant Name and Plant ID)

Aggregate	Producer/Supplier	% USED
5/8" Chips	Hanson Aggregates, WRP Inc (Davis, OK) P/S # m001985008	35
1/2" Chips	Hanson Aggregates, WRP Inc (Davis, OK) P/S # m001985008	20
3/16" Scrns.	Hanson Aggregates, WRP Inc (Davis, OK) P/S # m001985008	30
Sand (Unlisted Source)	Ingram Sand Pit	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	Hanson Aggregates, WRP Inc (Davis, OK) P/S # m001985008	Hanson Aggregates, WRP Inc (Davis, OK) P/S # m001985008	Ingram Sand Pit									
Sieve Size	5/8" Chips	1/2" Chips	3/16" Scrns.	Sand (Unlisted Source)					Comb. Agg.	JMF	Min.	Max.	% Tol. (±)
3/4 in (19 mm)	100	100	100	100					100	100	100	100	0
1/2 in (12.5 mm)	90	100	100	100					97	97	90	100	7
3/8 in (9.5 mm)	72	72	100	100					85	85	78	92	7
#4 (4.75 mm)	25	13	99	100					56	56	49	63	7
#8 (2.36 mm)	6	2	81	100					42	42	37	47	5
#16 (1.18 mm)	4	2	58	99					34	34	30	38	4
#30 (.600 mm)	3	2	41	92					28	28	24	32	4
#50 (.300 mm)	3	2	32	61					20	20	16	24	4
#100 (.150 mm)	2	1	19	7					8	8	5	11	3
#200 (.075 mm)	1.8	1.2	13.5	1.0					5.1	5.1	3.1	7.1	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

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Tests on Compressed Mixtures (@ Design AC)

	# Gyr.	% Density of Gmm	% Density Required
Nini	7	89.6	85.5 - 90.5
Ndes	65		96.0

Tests on Aggregates		Required		Units
Contabro		N/A		%
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	96.9	40	min.	%
LA Abrasion	11	40	max.	%
Micro-Deval	9.5	N/A		%
Permeability	1.9	12.5	max.	10^{-5}cm/s
Sand Equivalent	70	45	min.	%
IOC	0.56			%
Gse	2.700			
Gsb	2.660			
Specimen Weight	4865			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	2.385	2.499	95.4		14.6		68.5	
5.3	2.406	2.480	97.0	96.0 / 94.5 - 97.4	14.3	14.5 / 14.0	79.0	72 - 77
5.8	2.425	2.461	98.5		14.1		89.4	

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

ITS (PSI) 89.8 N/A min.
TSR 0.85 0.80 / 0.75 min. (Design / Field)
Compacted Wt. (lbs/sy/1" thick) = 109.6 @ 5.0 % Asphalt Cement

Hamburg Rut Test Depth (mm) 3.25 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: 10/1/2018
(mm/dd/yyyy)