Version: V03.50

Oklahoma Department of Transportation Mix Design Report

Asphalt Concrete, Type S5 (PG 76-28 OK) Mat'l. Code: asco013
(Material Full Name and Material Code)

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

PMI-Silver Star P/S # m00565
(Producer/Supplier Name and Producer/Supplier Code)

S5pv0261800200
(Mix ID)

PMI-Silver Star (Moore, OK) - 400TPH PLANT ID # m00565-01
(Plant Name and Plant ID)

Aggregate	Producer/Supplier	% USED
1/2" Chips	Hanson Aggregates, WRP Inc (Davis, OK) P/S # m001985008	30
Man. Sand	Martin-Marietta (Davis, OK) P/S # m002285005	30
Scrns.	Hanson Aggregates, WRP Inc (Davis, OK) P/S # m001985008	25
Sand (Unlisted Source)	GMI @ OKC, OK	15

Asphalt Cement: Asphaltic Cement Type PG 76-28 OK, acem001, 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-

Producer/Supplier:	Hanson Aggregates, WRP Inc (Davis, OK) P/S # m001985008	Martin-Marietta (Davis, OK) P/S # m002285005	Hanson Aggregates, WRP Inc (Davis, OK) P/S # m001985008	GMI @ OKC, OK									
Sieve Size	1/2" Chips	Man. Sand	Scrns.	Sand (Unlisted Source)					Comb. Agg.	JMF	Min.	Max.	% Tol. (±)
1/2 in (12.5 mm)	100	100	100	100					100	100	100	100	0
3/8 in (9.5 mm)	92	100	100	100					98	98	91	100	7
#4 (4.75 mm)	41	94	100	97					80	80	73	87	7
#8 (2.36 mm)	17	53	75	96					54	54	49	59	5
#16 (1.18 mm)	10	29	48	94					38	38	34	42	4
#30 (.600 mm)	8	16	32	89					29	29	25	33	4
#50 (.300 mm)	7	10	23	60					20	20	16	24	4
#100 (.150 mm)	6	6	16	10					9	9	6	12	3
#200 (.075 mm)	4.7	3.9	11.9	1.5					5.8	5.8	3.8	7.8	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	8	88.0	85.5 - 89.0
Ndes	80		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	98/95	min.	%
Insoluble Residue	66	40	min.	%
LA Abrasion	27	40	max.	%
Micro-Deval	12.1	25	max.	%
Permeability	3.8	12.5	max.	10^{-5}cm/s
Sand Equivalent	76	50	min.	%
IOC	0.55			%
Gse	2.688			
Gsb	2.639			
Specimen Weight	4805			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	2.355	2.470	95.3		15.5		69.7	
5.8	2.370	2.452	96.7	96.0 / 94.5 - 97.4	15.4	15.5 / 15.0	78.6	73 - 78
6.3	2.383	2.433	97.9		15.4		86.4	

Dust Prop.
1.3
1.1
1.0

Dust Prop. Req. 0.6 - 1.6

ITS (PSI) 135.9 75 min.
TSR 0.88 0.80 / 0.75 min. (Design / Field)
Compacted Wt. (lbs/sy/1" thick) = 108.3 @ 5.5 % Asphalt Cement

Hamburg Rut Test Depth (mm) 3.20 12.50 max. @ 20,000 cycles
Ifit 9.6

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: 6/28/2018
(mm/dd/yyyy)