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 - Recycled ID: I2
(Design Type and Design Type ID)

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

S5pv0261800100
(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	18
Sand (Unlisted Source)	GMI @ OKC, OK	7
Fine R.A.P.	Contractor / Project Site P/S # Contractor	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	Contractor / Project Site P/S # Contractor								
Sieve Size	1/2" Chips	Man. Sand	Scrns.	Sand (Unlisted Source)	Fine R.A.P.				Comb. Agg.	JMF	Min.	Max.	% Tol. (±)
1/2 in (12.5 mm)	100	100	100	100	100				100	**100**	100	100	0
3/8 in (9.5 mm)	92	100	100	100	98				97	**97**	90	100	7
#4 (4.75 mm)	41	94	100	97	81				77	**77**	70	84	7
#8 (2.36 mm)	17	53	75	96	59				50	**50**	45	55	5
#16 (1.18 mm)	10	29	48	94	45				34	**34**	30	38	4
#30 (.600 mm)	8	16	32	89	36				25	**25**	21	29	4
#50 (.300 mm)	7	10	23	60	28				18	**18**	14	22	4
#100 (.150 mm)	6	6	16	10	17				10	**10**	7	13	3
#200 (.075 mm)	4.7	3.9	11.9	1.5	11.0				6.5	**6.5**	4.5	8.5	2
AC Content %					5.5				5.6	**5.6**	5.2	6.0	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	87.3	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	57.3	40	min.	%
LA Abrasion	27	40	max.	%
Micro-Deval	12.1	25	max.	%
Permeability	6.5	12.5	max.	10^{-5}cm/s
Sand Equivalent	73	50	min.	%
IOC	0.56			%
Gse	2.691			
Gsb	2.642			
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	2.350	2.473	95.0		15.8		68.4	
5.8	2.374	2.454	96.7	96.0 / 94.5 - 97.4	15.4	15.5 / 15.0	78.6	73 - 78
6.3	2.395	2.436	98.3		15.1		88.7	

Dust Prop.	Dust Prop. Req.
1.4	0.6 - 1.6
1.3	
1.2	

ITS (PSI) 160 75 min.
TSR 0.95 0.80 / 0.75 min. (Design / Field)
Compacted Wt. (lbs/sy/1" thick) = 108.3 @ 5.6 % Asphalt Cement
4.8 % New Asphalt Cement

Hamburg Rut Test Depth (mm) 2.98 12.50 max. @ 20,000 cycles
Ifit 9.0

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: 6/25/2018
(mm/dd/yyyy)