Version: V03.40

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)

Swift Construction Co. P/S # m00907
(Producer/Supplier Name and Producer/Supplier Code)

S4pv0441600200
(Mix ID)

Swift Construction Co. (Joplin, MO) PLANT ID # m00907-01
(Plant Name and Plant ID)

Aggregate	Producer/Supplier	% USED
3/4" Chips	Anchor Stone (Jasper Co.Quarry, Joplin, MO) P/S # m002118301	18
Mine Chat	Mine Chat @ Tri City Area P/S # MineChat	27
Sand	Muskogee Sand - West Plant (Muskogee, OK) P/S # m007067309	12
Drag Sand	Mine Chat @ Tri City Area P/S # MineChat	15
Scrns.	Anchor Stone (Jasper Co.Quarry, Joplin, MO) P/S # m002118301	28

Asphalt Cement: Asphaltic Cement Type PG 64-22 OK, acem003, HollyFrontier (Catoosa, OK), m01028
(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:	Anchor Stone (Jasper Co.Quarry, Joplin, MO) P/S # m002118301	Mine Chat @ Tri City Area P/S # MineChat	Muskogee Sand - West Plant (Muskogee, OK) P/S # m007067309	Mine Chat @ Tri City Area P/S # MineChat	Anchor Stone (Jasper Co.Quarry, Joplin, MO) P/S # m002118301								
Sieve Size	3/4" Chips	Mine Chat	Sand	Drag Sand	Scrns.				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)	55	100	100	100	100				92	92	85	99	7
3/8 in (9.5 mm)	31	98	100	100	100				87	87	80	94	7
#4 (4.75 mm)	4	50	98	99	98				68	68	61	75	7
#8 (2.36 mm)	3	17	93	77	73				48	48	43	53	5
#16 (1.18 mm)	3	9	84	50	53				35	35	31	39	4
#30 (.600 mm)	3	5	69	29	39				25	25	21	29	4
#50 (.300 mm)	2	4	40	14	29				16	16	12	20	4
#100 (.150 mm)	2	3	6	5	21				9	9	6	12	3
#200 (.075 mm)	1.5	1.9	0.9	2.8	15.8				5.7	5.7	3.7	7.7	2
AC Content %									5.8	5.8	5.4	6.2	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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Tests on Compressed Mixtures (@ Design AC)

	# Gyr.	% Density of Gmm	% Density Required
Nini	6	88.4	85.5 - 91.5
Ndes	50		96.0

Tests on Aggregates		Required		Units
Durability Index	71	40	min.	%
F.A.A. %U		N/A		%
Flat and Elongated	2	10	max.	%
Fractured Faces	100/100	85/80	min.	%
Insoluble Residue	54.8	30	min.	%
LA Abrasion	25.8	40	max.	%
Micro-Deval	17.8	N/A		%
Permeability	6.2	12.5	max.	10^{-5}cm/s
Sand Equivalent	84	40	min.	%
IOC	0.22			%
Gse	2.616			
Gsb	2.555			
Specimen Weight	4775			g

Tests on Compressed Mixtures

%AC	Gmb	Gmm	% Density of Gmm	% Density Required Design / Field	% VMA	% VMA Required Design / Field	% VFA	% VFA Required
5.5	2.284	2.406	94.9		15.5		67.1	
6.0	2.310	2.388	96.7	96.0 / 94.5 - 97.4	15.0	14.5 / 14.0	78.0	72 - 77
6.5	2.327	2.371	98.1		14.8		87.2	

Dust Prop.
1.2
1.1
1.0

Dust Prop. Req. 0.6 - 1.6

ITS (PSI) 78.4 N/A min.
TSR 0.84 0.80 / 0.75 min. (Design / Field)
Compacted Wt. (lbs/sy/1" thick) = 105.4 @ 5.8 % Asphalt Cement

Hamburg Rut Test Depth (mm) 5.66 12.50 max. @ 10,000 cycles

MEETS SPECIFICATION REQUIREMENTS PER SPECIAL PROVISION 708-26(a-f) 09

Comments:

Last Modified By: Schratwieser, Edward P. eschratw
(User Name and User ID)

Date: 2/22/2016
(mm/dd/yyyy)