Version: V03.40

Oklahoma Department of Transportation Mix Design Report

Asphalt Concrete, Type S4 (PG 76-28 OK) Mat'l. Code: asco010
(Material Full Name and Material Code)

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

Tulsa Asphalt Co P/S # m00355
(Producer/Supplier Name and Producer/Supplier Code)

S4c00931490300
(Mix ID)

Tulsa Asphalt Co #2 (Tulsa, OK) 300TPH PLANT ID # m00355-02
(Plant Name and Plant ID)

Aggregate	Producer/Supplier	% USED
3/4" Chips	Anchor Stone (Owasso, OK) P/S # m001156603	23
Mine Chat	Mine Chat @ Tri City Area P/S # MineChat	28
Man. Sand	Anchor Stone (Owasso, OK) P/S # m001156603	15
Scrns.	Anchor Stone (Owasso, OK) P/S # m001156603	19
Sand	Anchor Sand, Delaware Ave. (Jenks, OK) P/S # m001137217	14
B. H. Fines	Contractor / Project Site P/S # Contractor	1

Asphalt Additive, Anti-Strip AD-HERE HP-PLUS addi003 ARR-MAZ Products, LP (Winter Haven, FL) m00070
(Product Name, Material Code, Producer/Supplier Name, Producer/Supplier Code)

Asphalt Cement: Asphaltic Cement Type PG 76-28 OK, acem001, 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 (Owasso, OK) P/S # m001156603	Mine Chat @ Tri City Area P/S # MineChat	Anchor Stone (Owasso, OK) P/S # m001156603	Anchor Stone (Owasso, OK) P/S # m001156603	Anchor Sand, Delaware Ave. (Jenks, OK) P/S # m001137217	Contractor / Project Site P/S # Contractor								
Sieve Size	3/4" Chips	Mine Chat	Man. Sand	Scrns.	Sand	B. H. Fines			Comb. Agg.	JMF	Min.	Max.	% Tol. (±)	
3/4 in (19 mm)	100	100	100	100	100	100			100	100	100	100	0	
1/2 in (12.5 mm)	78	100	100	100	100	100			95	95	88	100	7	
3/8 in (9.5 mm)	56	100	100	100	100	100			90	90	83	97	7	
#4 (4.75 mm)	16	45	93	96	98	100			63	63	56	70	7	
#8 (2.36 mm)	4	8	66	74	87	100			40	45	40	50	5	xx
#16 (1.18 mm)	3	3	40	50	70	100			28	28	24	32	4	
#30 (.600 mm)	2	1	21	35	46	100			18	18	14	22	4	
#50 (.300 mm)	2	1	10	27	17	100			11	11	7	15	4	
#100 (.150 mm)	2	1	5	22	2	100			7	7	4	10	3	
#200 (.075 mm)	1.6	0.6	3.3	18.4	0.3	100.0			5.6	5.6	3.6	7.6	2	
AC Content %									5.4	5.1	4.7	5.5	0.4	x
Asphalt Additive, Anti-Strip %									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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-Oklahoma D.O.T. Materials-

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
Durability Index	46	40	min.	%
F.A.A. %U		N/A		%
Flat and Elongated		10	max.	%
Fractured Faces	98/100	98/95	min.	%
Insoluble Residue	42.5	40	min.	%
LA Abrasion	30.2	40	max.	%
Micro-Deval	22.6	25	max.	%
Permeability	9.3	12.5	max.	10^{-5}cm/s
Sand Equivalent	86	50	min.	%
IOC	0.26			%
Gse	2.639			
Gsb	2.585			
Specimen Weight	4725			g

Tests on Compressed Mixtures

%AC	Gmb	Gmm	% Density of Gmm	% Density Required	% VMA	% VMA Required	% VFA	
5.0	2.299	2.442	94.1	Design / Field	15.5	Design / Field	61.9	% VFA Required
5.5	2.330	2.424	96.1	96.0 / 94.5 - 97.4	14.8	14.5 / 14.0	73.6	72 - 77
6.0	2.327	2.406	96.7		15.4		78.6	

Dust Prop.	Dust Prop. Req.
1.3	0.6 - 1.6
1.2	
1.1	

ITS (PSI) 112.1 75 min.
TSR 0.83 0.80 / 0.75 min. (Design / Field)
Compacted Wt. (lbs/sy/1" thick) = 107.3 @ 5.4 % Asphalt Cement

xx 2nd JMF Revision

Hamburg Rut Test Depth (mm) 2.73 #N/A

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

Comments:

Last Modified By: Williams, Bobby Ray bwilli01
(User Name and User ID)

Date: 5/11/2017
(mm/dd/yyyy)