Version: V03.40

Oklahoma Department of Transportation Mix Design Report

Asphalt Concrete, Type S3 (PG 64-22 OK) Mat'l. Code: asco009
(Material Full Name and Material Code)

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

Highway Contr Co P/S # m00559
(Producer/Supplier Name and Producer/Supplier Code)

S3pv0441600600
(Mix ID)

Highway Contr Co (Guymon, OK)- 250TPH PLANT ID # m00559-03
(Plant Name and Plant ID)

Aggregate	Producer/Supplier	% USED
3/4" Chips	XIT Sand & Gravel (Channing, TX) P/S # m008077825	35
5/16" Chips	XIT Sand & Gravel (Channing, TX) P/S # m008077825	20
Scrns.	XIT Sand & Gravel (Channing, TX) P/S # m008077825	34
Sand	J & R Sand Co, Winchell Pit (Beaver Co., OK) P/S # m002050402	10
Hydrated Lime	U.S. Lime Co. - St. Clair (Marble City, OK) P/S # m00316	1

Asphalt Cement: Asphaltic Cement Type PG 64-22 OK, acem003, Valero Mckee (Sunray, TX), m00311
(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:	XIT Sand & Gravel (Channing, TX) P/S # m008077825	XIT Sand & Gravel (Channing, TX) P/S # m008077825	XIT Sand & Gravel (Channing, TX) P/S # m008077825	J & R Sand Co, Winchell Pit (Beaver Co., OK) P/S # m002050402	U.S. Lime Co. - St. Clair (Marble City, OK) P/S # m00316								
Sieve Size	3/4" Chips	5/16" Chips	Scrns.	Sand	Hydrated Lime				Comb. Agg.	JMF	Min.	Max.	% Tol. (±)
1 in (25 mm)	100	100	100	100	100				100	100	100	100	0
3/4 in (19 mm)	100	100	100	100	100				100	100	93	100	7
1/2 in (12.5 mm)	59	100	100	100	100				86	86	79	93	7
3/8 in (9.5 mm)	29	99	100	100	100				75	75	68	82	7
#4 (4.75 mm)	2	63	99	99	100				58	58	51	65	7
#8 (2.36 mm)	1	6	93	88	100				43	43	38	48	5
#16 (1.18 mm)	1	2	69	60	100				31	31	27	35	4
#30 (.600 mm)	1	1	51	36	100				22	22	18	26	4
#50 (.300 mm)	1	1	35	14	100				15	15	11	19	4
#100 (.150 mm)	1	1	21	3	100				9	9	6	12	3
#200 (.075 mm)	0.8	0.8	10.7	2.0	99.8				5.3	5.3	3.3	7.3	2
AC Content %									5.0	5.0	4.6	5.4	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	89.3	85.5 - 91.5
Ndes	50		96.0

Tests on Aggregates		Required		Units
Durability Index	87	40	min.	%
F.A.A. %U		N/A		%
Flat and Elongated	2	10	max.	%
Fractured Faces	95/90	85/80	min.	%
Insoluble Residue	93.3	30	min.	%
LA Abrasion	27.5	40	max.	%
Micro-Deval	6.3	N/A		%
Permeability	1.4	12.5	max.	10^{-5}cm/s
Sand Equivalent	63	40	min.	%
IOC	0.05			%
Gse	2.637			
Gsb	2.612			
Specimen Weight	4740			g

Tests on Compressed Mixtures

%AC	Gmb	Gmm	% Density of Gmm	% Density Required Design / Field	% VMA	% VMA Required Design / Field	% VFA	% VFA Required
4.7	2.328	2.451	95.0	96.0 / 94.5 - 97.4	15.1	13.5 / 13.0	66.9	70 - 75
5.2	2.351	2.433	96.6		14.7		76.9	
5.7	2.374	2.415	98.3		14.3		88.1	

Dust Prop.
1.2
1.1
1.0

Dust Prop. Req. 0.6 - 1.6

ITS (PSI) 112.5 N/A min.
TSR 0.97 0.80 / 0.75 min. (Design / Field)
Compacted Wt. (lbs/sy/1" thick) = 107.4 @ 5.0 % Asphalt Cement

Hamburg Rut Test Depth (mm) 6.19 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: 5/9/2016
(mm/dd/yyyy)