



## Oklahoma Department of Transportation Mix Design Report

Asphalt Concrete, Type S4 (PG 70-28 OK) Mat'l. Code: asco011

(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)

S4pv0441600500

(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	23
5/16" Chips	XIT Sand & Gravel (Channing, TX)	P/S # m008077825	31
Scrn.	XIT Sand & Gravel (Channing, TX)	P/S # m008077825	33
Sand	J & R Sand Co, Winchell Pit (Beaver Co., OK)	P/S # m002050402	12
Hydrated Lime	U.S. Lime Co. - St. Clair (Marble City, OK)	P/S # m00316	1
<b>Asphalt Cement:</b>		Asphaltic Cement Type PG 70-28 OK, acem002, Valero (Halstead, KS), m00964	
(Material Full Name, Material Code, Producer/Supplier Name, Producer/Supplier Code)			

Sieve Size	Producer/Supplier:						Comb. Agg.	Tol. (%)		
	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			JMF	Min.	Max.
3/4 in (19 mm)	100	100	100	100	100	100	100	100	100	0
1/2 in (12.5 mm)	59	100	100	100	100	91	91	84	98	7
3/8 in (9.5 mm)	29	99	100	100	100	83	83	76	90	7
#4 (4.75 mm)	2	63	99	99	100	66	66	59	73	7
#8 (2.36 mm)	1	6	93	88	100	44	44	39	49	5
#16 (1.18 mm)	1	2	69	60	100	32	32	28	36	4
#30 (.600 mm)	1	1	51	36	100	23	23	19	27	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	5.2	5.2	3.2	7.2	2
AC Content %						5.6	5.6	5.2	6.0	0.4

Requires Form 93-E0  
signed by the Department  
for production use.  
-Oklahoma D.O.T. Materials-

Mix temperature @ discharge from mixer: 325 (163) ± 20 °F (± 10 °C) **Required**  
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	7	87.5	85.5 - 90.5
Ndes	65		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	95/90 min. %
Insoluble Residue	92.3	40 min. %
LA Abrasion	27.5	40 max. %
Micro-Deval	6.3	N/A %
Permeability	3.2	12.5 max. 10 <sup>-5</sup> cm/s
Sand Equivalent	61	45 min. %
IOC	0.01	%
Gse	2.639	
Gsb	2.616	
Specimen Weight	4767	g

Tests on Compressed Mixtures						
%AC	Gmb	Gmm	% Density of Gmm	% Density Required	% VMA	% VMA Required
5.2	2.264	2.435	93.0	Design / Field	18.0	Design / Field
5.7	2.324	2.417	96.2	96.0 / 94.5 - 97.4	16.2	14.5 / 14.0
6.2	2.349	2.399	97.9		15.8	76.5 / 72 - 77
						86.7

Dust Prop.	Dust Prop. Req.	ITS (PSI)	TSR	Compacted Wt. (lbs/sy/1" thick) =	@	% Asphalt Cement
1.1		111.6	0.94	106.5	5.6	
1.0	0.6 - 1.6	N/A min.	0.80 / 0.75 min. (Design / Field)			
0.9						

Hamburg Rut Test Depth (mm) 2.23 12.50 max. @ 15,000 cycles

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

Comments:

Last Modified By:

Schrattwieser, Edward P. eschrattw

(User Name and User ID)

Date: 4/20/2016

(mm/dd/yyyy)