Version: V03.50

Oklahoma Department of Transportation Mix Design Report

Asphalt Concrete, Type S3 (PG 70-28 OK) Mat'l. Code: asco008
(Material Full Name and Material Code)

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

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

S3pv0441801100
(Mix ID)

Highway Contractors Co #8828 - 400TPH 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 70-28 OK, acem002, Coastal Energy (Clinton, OK), m01042
(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)	58	100	100	100	100				85	85	78	92	7
3/8 in (9.5 mm)	30	100	100	100	100				76	76	69	83	7
#4 (4.75 mm)	3	62	100	98	100				58	58	51	65	7
#8 (2.36 mm)	2	11	86	85	100				42	42	37	47	5
#16 (1.18 mm)	2	6	62	61	100				30	30	26	34	4
#30 (.600 mm)	2	4	45	36	100				21	21	17	25	4
#50 (.300 mm)	2	3	31	15	100				14	14	10	18	4
#100 (.150 mm)	1	2	18	3	100				8	8	5	11	3
#200 (.075 mm)	1.1	1.6	9.7	1.9	99.8				5.2	5.2	3.2	7.2	2
AC Content %									4.9	4.9	4.5	5.3	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

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

Tests on Compressed Mixtures (@ Design AC)

	# Gyr.	% Density of Gmm	% Density Required
Nini	7	88.7	85.5 - 90.5
Ndes	65		96.0

Tests on Aggregates		Required		Units
Contabro		N/A		%
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	93.4	40	min.	%
LA Abrasion	27.5	40	max.	%
Micro-Deval	6.3	N/A		%
Permeability	11	12.5	max.	10^{-5}cm/s
Sand Equivalent	66	45	min.	%
IOC	0.01			%
Gse	2.653			
Gsb	2.601			
Specimen Weight	4735			g

Tests on Compressed Mixtures

%AC	Gmb	Gmm	% Density of Gmm	% Density Required Design / Field	% VMA	% VMA Required Design / Field	% VFA	% VFA Required
4.5	2.343	2.472	94.8		14.0		62.9	
5.0	2.359	2.453	96.2	96.0 / 94.5 - 97.4	13.8	13.5 / 13.0	72.5	70 - 75
5.5	2.389	2.435	98.1		13.2		85.6	

Dust Prop.	Dust Prop. Req.
1.4	
1.2	0.6 - 1.6
1.1	

ITS (PSI) 114.1 N/A min.

TSR 0.86 0.80 / 0.75 min. (Design / Field)

Compacted Wt. (lbs/sy/1" thick) = 108.1 @ 4.9 % Asphalt Cement

Hamburg Rut Test Depth (mm) 2.16 12.50 max. @ 15,000 cycles

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: 9/24/2018
(mm/dd/yyyy)