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)

Cummins Const Co P/S # m00556
(Producer/Supplier Name and Producer/Supplier Code)

S4qc0101300600
(Mix ID)

Cummins Const Co #2 (Portable) - 400TPH PLANT ID # m00556-08
(Plant Name and Plant ID)

Aggregate	Producer/Supplier	% USED
5/8" Chips	Dolese Co (Cooperton, OK) P/S # m002723801	30
'D' Rock	Martin-Marietta (Snyder, OK) P/S # m002323802	15
Man. Sand	Martin-Marietta (Snyder, OK) P/S # m002323802	15
Scrns.	Dolese Co (Cooperton, OK) P/S # m002723801	25
Sand	Kline Sand (Camargo, OK) P/S # m005932206	15

Asphalt Cement: Asphaltic Cement Type PG 64-22 OK, acem003, Asphalt Terminals and Transp LLC (Muskogee, OK), m00783
(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-

Sieve Size	Producer/Supplier: Dolese Co (Cooperton, OK) P/S # m002723801 — 5/8" Chips	Martin-Marietta (Snyder, OK) P/S # m002323802 — 'D' Rock	Martin-Marietta (Snyder, OK) P/S # m002323802 — Man. Sand	Dolese Co (Cooperton, OK) P/S # m002723801 — Scrns.	Kline Sand (Camargo, OK) P/S # m005932206 — Sand				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)	98	99	100	100	100				99	99	92	100	7
3/8 in (9.5 mm)	57	82	100	100	100				84	84	77	91	7
#4 (4.75 mm)	3	20	95	91	100				56	56	49	63	7
#8 (2.36 mm)	2	4	70	59	100				41	41	36	46	5
#16 (1.18 mm)	1	2	47	37	100				32	32	28	36	4
#30 (.600 mm)	1	1	25	25	94				25	25	21	29	4
#50 (.300 mm)	1	1	14	20	47				15	15	11	19	4
#100 (.150 mm)	1	1	8	15	3				6	6	3	9	3
#200 (.075 mm)	0.9	1.1	4.0	12.5	2.2				4.5	4.5	2.5	6.5	2
AC Content %									4.9	4.9	4.5	5.3	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

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	6	89.5	85.5 - 91.5
Ndes	50		96.0

Tests on Aggregates		Required		Units
Durability Index	81	40	min.	%
F.A.A. %U		N/A		%
Flat and Elongated		10	max.	%
Fractured Faces	100/100	85/80	min.	%
Insoluble Residue	34.7	30	min.	%
LA Abrasion	24.7	40	max.	%
Micro-Deval	10.7	N/A		%
Permeability	0.5	12.5	max.	10^{-5}cm/s
Sand Equivalent	77	40	min.	%
IOC	0.24			%
Gse	2.690			
Gsb	2.661			
Specimen Weight	4800			g

Tests on Compressed Mixtures

%AC	Gmb	Gmm	% Density of Gmm	% Density Required Design / Field	% VMA	% VMA Required Design / Field	% VFA	% VFA Required
4.4	2.348	2.507	93.7	96.0 / 94.5 - 97.4	15.6	14.5 / 14.0	59.6	72 - 77
4.9	2.387	2.487	96.0		14.7		72.8	
5.4	2.394	2.468	97.0		14.9		79.9	

Dust Prop.
1.1
1.0
0.9

Dust Prop. Req. 0.6 - 1.6

ITS (PSI) 201.7 N/A min.

TSR 0.84 0.80 / 0.75 min. (Design / Field)

Compacted Wt. (lbs/sy/1" thick) = 109.4 @ 4.9 % Asphalt Cement

Hamburg Rut Test Depth (mm) 3.24 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: 3/13/2013
(mm/dd/yyyy)