ARIZONA DEPARTMENT OF TRANSPORTATION

ASPHALTIC CONCRETE TABULATION – IGNITION FURNACE

Clear

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USE CAPITAL LETTERS

LAB NUMBER | UNIT NUMBER | MATL | TYPE | PUR-POSE | TEST LAB | SIZE | SIZE %

TEST NO. | LOT OR SUFFIX | SAMPLED BY | MO | DAY | YEAR | TIME (MILITARY TIME)

SAMPLED FROM | LIFT NO. | RDWY | STATION (IF MILEPOST, INPUT DECIMAL)

ORIGINAL SOURCE | PROJECT ENGINEER / SUPERVISOR | PROJECT NUMBER | TRACS NUMBER

REMARKS

CONTACT NUMBER

COARSE FACTOR = 100 / COARSE SIEVE TOTAL

WEIGHTS RETAINED		% RET	% PASS	SPECS
3″				
2 1/2″				
2″				
1 1/2″				
1″				
3/4″				
1/2″				
3/8″				
1/4″				
#4				
#8				
- #8				
Total	= i (Rounded)			

Weight of Pass # 8 Split = p

FINE FACTOR = % Pass #8 / Wt. of Pass #8 Split

WEIGHTS RETAINED		% RET	% PASS	SPECS
#10				
#16				
#30				
#40				
#50				
#100				
#200				
-#200		r		
Total	q = Dry Weight			
Elutri-ation	= p - q			

r - s = Corrected % Pass No. 200

% Pass No. 200 Correction Factor (±) s

IGNITION FURNACE

ARIZ. 427☐ ARIZ. 428☐

a. Wet Mass of Moisture Sample — g

b. Dry Mass of Moisture Sample — g

c. Moisture Content (ARIZ 406) [(a - b) / a] x 100 — %

d. Mass of Basket Assembly — g

e. Mass of Sample and Basket Assembly — g

f. Initial Mass of Sample (e - d) — g

g. Ignition Furnace Set Temperature — ˚C

h. Mass of Sample and Basket Assembly After Ignition — g

i. Mass of Sample After Ignition (h - d) — g

j. Uncorrected Asphalt Binder Content [(f - i) /f] x 100 — %

k. Asphalt Binder Content Calibration Factor (±) — %

l. Ignition Furnace Correction (Tank Slab Correction) (±) — %

m. Corrected Asphalt Binder Content (j - k - c - l) — %

n. Design Asphalt Binder Content — %

o. Elapsed Time of Test (minutes)

COMPACTION

Marshall = M Gyratory = G Core = C ☐

RICE

Sample Max. Sp. Gr. (Gmm)

Sample Max. Density [(Gmm) x (62.3)] — pcf

MARSHALL

Average Bulk O.D. Sp. Gr. (Gmb)

Average Bulk Density [(Gmb) x (62.3)] — pcf

Air Voids = — %

$$\left[1 - \frac{\text{Average Bulk Density}}{\text{Max Density From Rice Test}}\right] \times 100$$

Stability — lbs

Flow — 0.01 in

GYRATORY

Average Relative Density (% Gmm) at Ndesign — pcf

Air Voids = — %

$$100 - \left[\text{Average Relative Density \% (Gmm) at Ndesign}\right]$$

WHITE ☐

YELLOW ☐

BLUE ☐

RECEIVED DATE | TEST OPERATOR AND DATE | SUPERVISOR AND DATE

SEE BACK ALSO

If samples were fan dried, the maximum density is determined utilizing "Wsd" weights shown below:

Rice Test (ARIZ 417)

FLASK NUMBER OR I.D.	**"Wf"** WT. OF FLASK	**"Wmm"** WT. OF SAMPLE IN AIR Wfs - Wf	**"B"** WT. OF FLASK + WATER	**"C"** WT. OF FLASK + SAMPLE + WATER Wa - Wp	**"Vvm"** VOLUME OF VOIDLESS MIX Wmm + B - C	**"Gmm"** MAXIMUM SPECIFIC GRAVITY Wmm / Vvm	MAXIMUM DENSITY (lbs./cu. ft.) Gmm x 62.3	**"Wsd"** SURFACE DRY WEIGHT	**"Vvm"** VOLUME OF VOIDLESS MIX Wsd + B - C	**"Gmm"** MAXIMUM SPECIFIC GRAVITY Wmm / Vvm	MAXIMUM DENSITY (lbs./cu. ft.) Gmm x 62.3
AVERAGE											

				REMARKS:
FLASK SAMPLE OR I.D.				
WT. OF FLASK + SAMPLE, **"Wfs"**				
WT. OF FLASK + SAMPLE + WATER + GLASS PLATE, **"Wa"**				
WT. OF GLASS PLATE, **"Wp"**				

Marshall Compaction (ARIZ 410 or 422) or Cores

Specimens compacted by: Hand ☐ Mechanical ☐ 4″ ☐ 6″ ☐; Core ☐

Specimen I.D. = _____ _____ _____

Specimen Height (0.001 in.) = _____ _____ _____

Bulk Specific Gravity, Bulk Density, & Absorption of Specimens (ARIZ 415, Method A ☐ or Method C ☐)

A = mass, in grams, of specimen in air = _____ _____ _____

B = mass, in grams, of SSD specimen in air = _____ _____ _____

C = mass, in grams, of specimen in water = _____ _____ _____

Bulk O.D. Sp. Gr = $\frac{A}{B - C}$ = _____ _____ _____ AVERAGE (Gmb) = _____

% Absorption = $\frac{B - A}{B - C}$ x 100 = _____ _____ _____

Bulk Density (lbs./cu.ft.) = _____ _____ _____ RANGE = _____

Marshall Stability Reading = _____ _____ _____

Stability Correlation Ratio = _____ _____ _____

Corrected Marshall Stability = _____ _____ _____ AVERAGE = _____

Marshal Flow Reading (0.01 in.) = _____ _____ _____ AVERAGE = _____

TEST OPERATOR & DATE PERFORMED

Coarse Sieve _____

Fine Sieve _____

Furnace _____

Moisture _____

Rice Test _____

Marshall Compaction _____

Gyratory Compaction _____

Bulk Sp. Gr. _____

Stability _____

Flow _____

AVERAGE BULK DENSITY = Gmb x 62.3 = _____

AIR VOIDS =

$$\left[1 - \frac{\text{Average Bulk Density}}{\text{Max. Density From Rice Test}}\right] \times 100 = \left[1 - \frac{(\quad)}{(\quad)}\right] \times 100 = \_\_\_\_\_ \%$$

Gyratory Compaction (AASHTO T312)

(Three specimens are used when referee testing is performed.)

Specimen I.D. = _____ _____ (_____)

Height (0.01mm), at Ninitial (_____ gyrations) = _____ _____ (_____)

Height, (0.01mm), at Ndesign (_____ gyrations) = _____ _____ (_____)

Height, (0.01mm), at Nmax (_____ gyrations) = _____ _____ (_____)

Gyratory Compactor

Make _____

Model _____

Bulk Specific Gravity, Bulk Density, & Absorption of Specimens (ARIZ 415, Method A ☐ or Method C ☐)

A = Mass, in grams, of specimen at Nmax in Air = _____ _____ (_____)

B = Mass, in grams, of SSD specimen at Nmax in Air = _____ _____ (_____)

C = Mass, in grams, of specimen at Nmax in Water = _____ _____ (_____)

Gmb = Bulk Specific Gravity of specimen at Nmax = $\frac{A}{B - C}$ = _____ _____ (_____)

% Absorption = $\frac{B - A}{B - C}$ x 100 = _____ _____ (_____)

**Relative Density (%Gmm) of each specimen at Ndesign = _____ _____ (_____) AVERAGE = _____

AIR VOIDS =

$$100 - \left[\text{Average Relative Density (\% Gmm) at Ndesign}\right] = 100 - (\_\_\_\_\_) = \_\_\_\_\_ \%$$

$$** \left[\text{Relative Density (\% Gmm) of each specimen at Ndesign}\right] = \left[\frac{\text{(Gmb at Nmax) x (Height at Nmax)}}{\text{(Maximum Specific Gravity "Gmm") x (Height at Ndesign)}}\right] \times 100$$