

44-9372 R10/25 azdot.gov

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									
ORIGINAL SOURCE						PROJECT ENGINEER / SUPERVISOR						PROJECT NUMBER				TRACS NUMBER									
REMARKS																									
CONTACT NUMBER																									

WEIGHTS RETAINED					100 COARSE SIEVE TOTAL		
					% 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)

WEIGHTS RETAINED				% RET	% PASS	% Pass #8 Wt. of Pass #8 Split	SPECS
#10							
#16							
#30							
#40							
#50							
#100							
#200							
−#200							
Total							
Elutriation							

$q = \text{Dry Weight}$
 $p = q$

$r =$

$r - s$

$\frac{\% \text{ Pass No. 200}}{\text{Correction Factor}} (\pm)$ s

Corrected % Pass No. 200

AASHTO T308

a. Wet Mass of Moisture Sample		g
b. Dry Mass of Moisture Sample		g
c. Moisture Content T329 [[a-b]/b] 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 (±)		%
i. Corrected Asphalt Binder Content (j-k-c-l)		%
m. Design Asphalt Binder Content		%
n. Elapsed Time of Test (minutes)		

COMPACTION

Marshall = M Gyrotory = 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

Air Voids =

100 -

Average Relative Density % (Gmm) at Ndesign

pcf

%

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

Rice Test (AASHTO T209)

FLASK NUMBER OR I.D.	"Wf" WT. OF FLASK	"Wmm" WT. OF SAMPLE IN AIR Wfs - Wf	"B" WT. OF FLASK WATER + OF	"C" WT. OF FLASK + SAMPLE + WATER Wa - Wp	"Vvm" VOLUME OF VOIDLESS MIX Wmm + B - C	"Gmm" MAXIMUM SPECIFIC GRAVITY $\frac{Wmm}{Vvm}$	"Wsd" SURFACE DRY WEIGHT	"Vvm" VOLUME OF VOIDLESS MIX Wsd + B - C	"Gmm" MAXIMUM SPECIFIC GRAVITY $\frac{Wmm}{Vvm}$
FLASK SAMPLE OR I.D.					REMARKS:				
WT. OF FLASK + SAMPLE, "Wfs"									
WT. OF FLASK + SAMPLE + WATER + GLASS PLATE, "Wa"									
WT. OF GLASS PLATE, "Wp"									

Marshall Compaction (AASHTO R67 and/or AASHTO R68) 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 = $\frac{B - A}{B - C} \times 100$ = _____

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

Marshall Stability Reading = _____

Stability Correlation Ratio = _____

Corrected Marshall Stability = _____ AVERAGE = _____

Marshall 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 =

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

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 = $\frac{B - A}{B - C} \times 100$ = _____ ()

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

AIR VOIDS =

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

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