

West Virginia Division Of Highways

Hot-Mix Asphalt Volumetric Property Worksheet

Lab Number:	Material Type:
Source:	Project:
T400 Design Number:	Field Sample Number:
Compaction Temperature: °C	Gyrations at $N_{initial}$:
Percent Binder:	Gyrations at N_{design} :
Percent Aggregate (Y):	Gyrations at N_{max} :
Bulk Aggregate Sp. Gr. (Z):	Date Sampled:
Technician:	Date Completed:

Maximum Specific Gravity - Bowl Method (AASHTO T-209)		
A	Sample Weight	
B	Bowl + Sample in Water Weight	
C	Bowl in Water (Calibration Weight)	
D	Surface Dry Sample Weight (For Dry-Back Procedure Only)	
E	Max. Sp. Gr. = $A / [A - (B - C)]$ or Dry-Back Max. Sp. Gr. = $A / [D - (B - C)]$	

Bulk Specific Gravity At N_{design} - (AASHTO T-166)					
Compacted Specimens		1	2	N_{max} Sample	Average Bulk Specific Gravity At N_{design}
F	Weight in Air				
G	Saturated Surface Dry Weight				
H	Weight in Water				
J	Bulk Specific Gravity = $F / (G - H)$				
Unit Weight (kg/m^3) = $J \times 1000$					

Void Analysis (AASHTO T-269 And PP-28)		
K	Percent Air Voids (AV) at ' N_{design} ' = $[(E - J) / E] \times 100$	
L	Percent Voids in Mineral Aggregate (VMA) at ' N_{design} ' = $100 - [(J \times Y) / Z]$	
Percent Voids Filled With Asphalt (VFA) at ' N_{design} ' = $[(L - K) / L] \times 100$		

Percent of Maximum Specific Gravity of Compacted Specimens				
	1	2	N_{max} Sample	N_{design} Average
Percent of Max. Spec. Gravity at $N_{initial}$:				
Percent of Max. Spec. Gravity at N_{design} :				
Percent of Max. Spec. Gravity at N_{max} :				