

**SUPERPAVE GYRATORY COMPACTION – PLANT MIX – BC MB NB NL NS PE SK**

**IMPORTANT NOTE:** Type A Superpave Mix Design laboratories are required to carry out Gyrotory Compaction and appropriate subsequent testing using **only** Lab Mix Samples as the starting material, consequently **no** testing on Mix compliance samples (plant mixes) is required.

**1. PLANT SUPERPAVE SAMPLES (PSS)**

Two boxes of Superpave Plant Mix for two different mixes (A and B), namely **PSS-A-X-a and PSS-A-X-b for the 19.0mm mix** and **PSS-B-X-a and PSS-B-X-b for the 12.5mm mix** have been provided

**2. SAMPLE PREPARATION**

The content of each pair of boxes (**A and B**) for each mix contain the same type of mix. In preparation for testing the two portions of each mix type are combined to represent one uniform sample for all required tests.

**3. MAXIMUM SPECIFIC GRAVITY (G<sub>mm</sub>)**

Determine the G<sub>mm</sub> of each mix type using D2041. Report the value of each of the two replicates (i) and (ii) to three decimal places.

**4. GYRATORY COMPACTION**

The specimen preparation parameters for this testing are as follows:

<b>Material</b>	<b>19.0mm (PSS-A)</b>	<b>12.5mm (PSS-B)</b>
Mass of individual gyrotory specimen, g	4810± 40	4810 ± 40
Recompaction temperature, °C	142	142
Initial number of gyrations, N <sub>ini</sub>	8	9
Design number of gyrations, N <sub>des</sub>	100	125
Maximum number of gyrations, N <sub>max</sub>	160	205

- 4.1 Prepare TWO specimens to the **design number of gyrations**
- 4.2 For each mix type, prepare two specimens to the **maximum number of gyrations** (one specimen is acceptable if sample size is insufficient to prepare two) using the same re-compaction temperature.

**5. BULK DENSITY AND %G<sub>mm</sub> (Compaction Degree)**

Measure the bulk density of the specimens and complete all necessary calculations, **using**

**Year 2021 CCIL Correlation**

***applicable ASTM and AASHTO procedures*** to obtain %G<sub>mm</sub> at N<sub>ini</sub>, %G<sub>mm</sub> at N<sub>max</sub> and the % air voids at N<sub>des</sub>.

Report the values of bulk densities to three decimal places.

Report the values of %G<sub>mm</sub> to one decimal place

The Gyrotory Plant Mix test results shall be reported online and submitted by **January 8 2021**. An example of a completed report form is shown below.

Hard copies of the report forms and work sheets must be submitted by **January 8 2021** by mail or courier to:

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CCIL Program Manager

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**DO NOT** send reports and worksheets by fax



## 2020 Asphalt Reporting Form Gyratory Plant Mix

### Gyratory Plant Mix Report - Certification Program

► **CCIL Confidential Lab #** CCIL 999

► **Lab Name:** Demo Lab

► **Tested by:**

- Lab Technician
- Supervisor / Manager
- Not listed

**Please specify**

Super Technician

### Gyratory Plant Mix Report

Test	A-PS-xxx (i)	A-PS-xxx (ii)	- Avg	B-PS-xxx (i)	B-PS-xxx (ii)	- Avg
MSG (G <sub>mm</sub> )	2.615	2.625	2.620	2.600	2.610	2.605
BRD @ N <sub>des</sub>	2.525	2.535	2.530	2.520	2.526	2.523
BRD @ N <sub>max</sub>	2.546	2.566	2.556	2.540	2.550	2.545
% G <sub>mm</sub> @ N <sub>ini</sub>	89.2	89.6	89.4	88.8	89.2	89.0
% G <sub>mm</sub> @ N <sub>max</sub>	97.4	97.8	97.6	97.7	97.7	97.7
% Air Voids (@ N <sub>des</sub> )	3.4	3.4	3.4	3.1	3.2	3.2

**Compactor Calibration**

Internal Angle (1.16 deg.)

**Comments**