SUPERPAVE GYRATORY COMPACTION – PLANT MIX (Alberta and Yukon)

IMPORTANT NOTE: Type B Superpave laboratories are required to carry out Gyratory compaction and appropriate subsequent testing using Plant Mix samples as the starting material.

1. PLANT SUPERPAVE SAMPLES (PSS)

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

2. SAMPLE PREPARATION

The content of each pair of boxes 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 of each mix for all required tests.

3. MAXIMUM SPECIFIC GRAVITY (G_{mm})

Determine the G_{mm} 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:

	19.0mm (A-PSS)	**12.5mm (B-PSS)**
Mass of individual gyratory specimen, g	4860±40	4950±40
Recompaction temperature, ºC	144	142
Initial number of gyrations, N_{ini}	8	8
Design number of gyrations, N_{des}	100	100
Maximum number of gyrations, N_{max}	160	160
Internal angle of gyration, °	1.16°±0.02°	1.16°±0.02°

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_{mm} (Compaction Degree)

Prepare specimens, determine the bulk density of the specimens and complete all necessary calculations, ***using applicable ASTM and AASHTO procedures***, to obtain $\%G_{mm}$ at N_{ini}, $\%G_{mm}$ at N_{max}. and the % air voids at N_{des}.
Report the values of bulk densities to three decimal places.
Report the values of $\%G_{mm}$ to one decimal place

The Gyratory Plant Mix test results shall be reported online and submitted by **January 3 2020**. An example of a completed report form is shown below.

Year 2020 CCIL Correlation

Hard copies of the report forms and work sheets must be submitted by **January 3 2020** by mail or courier to:

Nabil Kamel, M.A.Sc., P.Eng.
CCIL Program Manager
3410 South Service Road, Suite 104
Burlington, Ontario, L7N 3T2
Tel: 289-337-8888: Fax: 289-337-8889: email: nkamel@ccil.com

DO NOT send reports and worksheets by fax

Canadian Council of Independent Laboratories

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_{mm})	2.615	2.625	2.620	2.600	2.610	2.605
BRD @ N_{des}	2.525	2.535	2.530	2.520	2.526	2.523
BRD @ N_{max}	2.546	2.566	2.556	2.540	2.550	2.545
% G_{mm} @ N_{ini}	89.2	89.6	89.4	88.8	89.2	89.0
% G_{mm} @ N_{max}	97.4	97.8	97.6	97.7	97.7	97.7
% Air Voids (@ N_{des})	3.4	3.4	3.4	3.1	3.2	3.2

Compactor Calibration

Internal Angle (1.16 deg.)

Comments