

SUPERPAVE GYRATORY COMPACTION – PLANT MIX (Ontario)

PLEASE 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 **I-PSS-(N)-a** and **I-PSS-(N)-b** for the **19.0mm mix** and **II-PSS-(N)-a** and **II-PSS-(N)-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 are combined to represent one uniform sample for all required tests.

3. MAXIMUM SPECIFIC GRAVITY (G_{mm})

Determine the G_{mm} of each mix type using LS-264. 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 (I-PSS)	12.5mm (II-PSS)
Mass of individual gyratory specimen, g	4950±40	4835±40
Recompaction temperature, °C	150	150
Initial number of gyrations, N_{ini}	9	9
Design number of gyrations, N_{des}	125	125
Maximum number of gyrations, N_{max}	205	205
Internal angle of gyration, °	1.16°±0.02°	1.16°±0.02°

4.1 For each mix type, 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).

5. BULK DENSITY AND % G_{mm} (Compaction Degree)

Prepare specimens, determine the bulk density and complete all necessary calculations, **using applicable Ontario LS 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 values of % G_{mm} to one decimal place.

The Gyratory Report Form must be completed **online and submitted by January 5 2018**. An example of a completed report form is shown below.

Year 2018 CCIL Correlation

Hard copies of the report forms and work sheets must be submitted by **January 5 2018** by mail or courier to:

Nabil Kamel, M.A.Sc., P.Eng.
CCIL Program Manager
3410 South Service Road, Suite 104
Burlington ON L7N 3T2

Tel: 289-337-8888: Fax: 289-337-8889: email: nkamel@ccil.com

DO NOT send reports and worksheets by fax

2018 CCIL CORRELATION - EXAMPLE REPORT ONTARIO

Testing Admin Information

your assigned CCIL Asphalt Lab
No.: ON999

<ul style="list-style-type: none"> • Lab Name (include Branch or Mobile #) • E-mail Address • Reported by (Contact Name) • Phone Number (Contact) • Tested by (Name(s)) • Results Reporting Date 	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td style="text-align: center;">Apex Construction</td></tr> <tr><td style="text-align: center;">enstein@apex.com</td></tr> <tr><td style="text-align: center;">Frank Enstein</td></tr> <tr><td style="text-align: center;">(999) 999-9999</td></tr> <tr><td style="text-align: center;">Jim Dandy</td></tr> <tr><td style="text-align: center;">January 5 2018</td></tr> </table>	Apex Construction	enstein@apex.com	Frank Enstein	(999) 999-9999	Jim Dandy	January 5 2018
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January 5 2018							

Gyratory Compaction - Plant Mix

Manufacturer:	Best	Model:	1234	S/N:	12345
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Results for:	I-PSS			II-PSS		
	(i)	(ii)	Average	(i)	(ii)	Average
• <i>M S G (G_{mm} by LS-264)</i>	2.615	2.625	2.620	2.600	2.610	2.605
• <i>B R D @ N_{des}</i>	2.525	2.535	2.530	2.52	2.526	2.523
• <i>B R D @ N_{max}</i>	2.546	2.566	2.556	2.540	2.550	2.545
• <i>% G_{mm} @ N_{ini}</i>	89.2	89.6	89.4	88.8	89.2	89.0
• <i>% G_{mm} @ N_{max}</i>	97.4	97.8	97.6	97.7	97.7	97.7
• <i>% Air Voids (@ N_{des})</i>	3.4	3.4	3.4	3.1	3.2	3.2

Compactor Calibration (Indicate with an "X" the applicable setting).

Internal Angle (1.16 deg.)	X	
External Angle (1.25 deg.)		