Canadian Council of Independent Laboratories
Conseil canadien des laboratoires indépendants

2025 CCIL Asphalt Correlation

BC MB NB NL NS PE SK Mix Compliance (MC) Instructions

Review your shipping address shown in the portal and update it if there are any changes through the request for services. When you receive your samples, review the shipment before signing off with the shipper.

SAMPLES

In your shipment, you should have received only 2 of the following bulk samples,
(With no duplicates e.g., **MC-A-N** & **MC-A-N**):
MC-A-N,
MC-B-N,
MC-C-N,
MC-D-N.
Each of these samples shall be tested individually, i.e., do not combine them.

TESTING

On receipt, each sample shall be warmed, and a representative portion obtained by quartering or using a riffle splitter. 2 replicates of this representative portion shall then be tested as per ASTM D2041 (latest revision) "Theoretical Maximum Specific Gravity and Density of Asphalt Mixtures".

Sufficient material from each sample shall then be heated to the appropriate temperature to prepare 3 briquettes. The briquette specimens shall be prepared for each sample as per Laboratory test method ASTM D6926 (latest revision) "Preparation of Asphalt Mixtures Specimens Using Marshall Apparatus".

Trough, moulds and hammers shall be preheated to 135 ± 5°C.

For **MC-A-N**, use a briquette mass **1250 ± 25 g** and the compaction temperature of **135°C**
For **MC-B-N**, use a briquette mass **1235 ± 25 g** and the compaction temperature of **135°C**

For **MC-C-N**, use a briquette mass **1235 ± 25 g** and the compaction temperature of **135°C**
For **MC-D-N**, use a briquette mass **1240 ± 25 g** and the compaction temperature of **140°C**

Note 1: With the manual hammer, the following should be noted: (a) the compaction effort shall be **75 blows per side**; (b) the timing of blows should be 60 blows per minute (plus or minus 5 blows); (c) the hammer should be allowed to rebound between successive blows.

Note 2: For mechanical hammers, the lab shall determine its own equivalency to the 75 blows of the manual hammer.

Thereafter the specimens shall be tested for:

1. Bulk relative density, D2726 (latest revision), "Bulk Specific Gravity and Density of Non-Absorptive Compacted Bituminous Mixtures"
2. Marshall stability and flow, D6927 (latest revision), "Marshall Stability and Flow of Asphalt Mixtures".

Note 3: Stability must be reported in Newtons and Flow in 0.25mm units.
If your jurisdiction typically uses flow measurement in mm, convert to 0.25mm units by multiplying by 4.

Note 4: Please identify the method used for the determination of flow by selecting from the dropdown feature on the Reporting Form.

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3. Air voids, D3203 (latest revision) “Percent Air Voids in Compacted Dense and Open Bituminous Pavement Mixtures”
4. Voids in mineral aggregate, AI MS-2 (latest revision), "Percent VMA in Compacted Mixture" (Total Mixture Basis)

Note 5: For calculation of the VMA. use the values for aggregate bulk relative densities and asphalt cement provided on Page 3 and/or 4. An example of a completed work sheet is shown on Page 5. A copy of this sheet must be submitted with the laboratory work sheets. The VMA values shall be reported in the designated spaces on the Mix Compliance Report form.

An example of a completed report form is shown on Page 6.

All test results shall be reported **online** by **2025 January 10, Friday**.

Remember: Your lab’s worksheets must be submitted through the portal with your correlation report. Please combine all worksheets for each portal report into a single pdf prior to uploading. You are required to keep all original worksheet hard copies in a secure dedicated location such as a sealed envelope that is available to CCIL upon request. Do not courier/mail/fax/e-mail the worksheets to CCIL.

DO NOT send reports and worksheets by fax.

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MIX COMPLIANCE - % VMA WORK SHEET (Materials A and B)

LABORATORY No: _____ LABORATORY NAME: _____

MATERIAL A

Coarse Aggregate 1	(CA1)	41.0%
Fine Aggregate 1	(FA1)	44.3%
Fine Aggregate 2	(FA2)	14.8%
BRD Coarse Aggregate	(CA)	2.689
BRD Fine Aggregate 1	(FA1)	2.742
BRD Fine Aggregate 2	(FA2)	2.666

Compacted Mix BRD (Db) SAMPLE # _____

(1) _____
(2) _____
(3) _____

% AC 5.00 % (by mass of total mix)

Combined Aggregate BRD (Gb): _____
% VMA = (1) _____ (2) _____ (3) _____

MATERIAL B

Coarse Aggregate 1	(CA1)	42.0%
Fine Aggregate 1	(FA1)	25.0%
Fine Aggregate 2	(FA2)	23.0%
Fine Aggregate 3	(FA3)	10.0%
BRD Coarse Aggregate 1	(CA1)	2.671
BRD Fine Aggregate 1	(FA1)	2.662
BRD Fine Aggregate 2	(FA2)	2.681
BRD Fine Aggregate 3	(FA3)	2.758

Compacted Mix BRD (Db) SAMPLE # _____

(1) _____
(2) _____
(3) _____

%AC 5.00 % (by mass of total mix)

Combined Aggregate BRD (Gb): _____
% VMA = (1) _____ (2) _____ (3) _____

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BC MB NB NL NS PE SK Mix Compliance (MC) Instructions

MIX COMPLIANCE - % VMA WORK SHEET (Materials C and D)

LABORATORY No: _____ LABORATORY NAME: _____

MATERIAL C

Coarse Aggregate	(CA1)	27.0%
Fine Aggregate 1	(FA1)	57.0%
Fine Aggregate 2	(FA2)	16.0%
BRD Coarse Aggregate	(CA)	2.671
BRD Fine Aggregate 1	(FA1)	2.662
BRD Fine Aggregate 2	(FA2)	2.758

Compacted Mix BRD (Db) SAMPLE # _____

(1) _____
(2) _____
(3) _____

%AC 5.50 % (by mass of total mix)

Combined Aggregate BRD (Gb): _____
% VMA = (1) _____ (2) _____ (3) _____

MATERIAL D

Coarse Aggregate	(CA1)	44.0%
Fine Aggregate 1	(FA1)	15.0%
Fine Aggregate 2	(FA2)	29.0%
Fine Aggregate 3	(FA3)	12.0%
BRD Coarse Aggregate	(CA1)	2.767
BRD Fine Aggregate 1	(FA1)	2.662
BRD Fine Aggregate 2	(FA2)	2.681
BRD Fine Aggregate 3	(FA3)	2.775

Compacted Mix BRD (Db) SAMPLE # _____

(1) _____
(2) _____
(3) _____

% AC 5.00 % (by mass of total mix)

Combined Aggregate BRD (Gb): _____
% VMA = (1) _____ (2) _____ (3) _____

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MIX COMPLIANCE - % VMA WORK SHEET (EXAMPLE)

LABORATORY No: 175 LABORATORY NAME Apex Construction

MATERIAL A

Coarse Aggregate		(CA)	45.2%
Fine Aggregate #1		(FA1)	54.8%
BRD Coarse Aggregate	(CA)	BRD	2.697
BRD Fine Aggregate #1	(FA1)	BRD	2.659

Compacted Mix BRD (Db) SAMPLE MC-A-14

(1) 2.372
(2) 2.369
(3) 2.374

% AC 5.27% (by mass of total mix)

Combined Aggregate BRD (Gb): 2.676

% VMA = (1) 16.0 (2) 16.1 (3) 16.0

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Canadian Council of Independent Laboratories

Mix Compliance Report - Certification Program

- CCIL Confidential Lab # CCIL 999
- Lab Name: Demo Lab
- Tested by:
  - ( ) Lab Technician
  - ( ) Supervisor / Manager
  - (•) Not listed

Please specify: Super Technician

Mix Compliance Report

Test	A-MC-(N)(i)	A-MC-(N)(ii)	A-MC-(N)(iii)	- Avg	B-MC-(N)(i)	B-MC-(N)(ii)	B-MC-(N)(iii)	- Avg
BRD - *LS-262/D2726*	2.376	2.380	2.379	2.378	2.421	2.430	2.426	2.426
MRD - *LS-264/D2041*	2.485	2.484		2.484	2.501	2.504		2.503
% Voids				4.3				3.1
% VMA	15.6	15.8	15.7	15.7	14.2	14.4	14.3	14.3
Stability (N)	10864	11625	11425	11305	9424	9821	9655	9633
Flow (0.25mm units)	10.4	10.2	10.3	10.3	9.6	10.2	9.9	9.9

Flow Measurement: Automated Method

Comments