
GS1 Canada Barcoding Guidelines:

For Consumer and Inner Level Cannabis Products

April 2018



Barcoding Guidelines & Requirements:

For Consumer and Inner Level Cannabis Products

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Barcoding Guidelines & Requirements:

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The information contained within GTINs and other GS1 identifiers are based on global standards. GS1 barcodes are the only globally recognized barcode. Using global standards means your GS1 barcodes can be used all over the world, across multiple sectors and industries.

More than 6 billion GS1 barcodes
are scanned around the world every day



Key Standards for Barcoding Cannabis



All Cannabis suppliers must go through [GS1](#) to secure their barcode symbology and use the following format for Inners and the Retail Pack providing each package level with a unique barcode.



The product size variants will also need their own barcodes ex. 1g, 3.5g, 7g, 14g, etc.



There should be no truncation of any of the barcodes on any level of packaging.



All products purchased by the OCS must have a retail barcode that scans at first pass through the register.



Barcodes must be clear, legible, scannable, and display the human readable numeric code located beneath or beside the barcode.

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GS1 Company Prefix

The first part of most barcodes features your unique Company Prefix, a set of numbers common to all the GTINs you produce. The second part refers to a specific product variation. You will need one barcode for each of your products and another barcode for each packaging format, such as pallet or case.



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GS1 Company Prefix



The Global Language of Business

Once you have successfully registered, you will receive your company prefix and company prefix license. This globally unique prefix will begin your barcode numbers and represent your company globally throughout the supply chain.



GS1 Canada
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1 800 567 7084
www.gs1ca.org

Annual GS1 Canada Licence

This document certifies that

Steve's Cannabis Co.

has exclusive rights to use the following globally-unique Company Prefix(es) below to create Global Trade Identification Numbers in accordance with the terms and conditions of the GS1 Canada Licence Agreement. For a period of 12 months, this licence provides your organization with the opportunity to access GS1 Canada standards and a full range of value-added services, including ECCnet Registry, GS1 Canada Images, GS1 Canada Product Recall, Item Centre, ECCnet Item Certification - Nutrition and ECCnet Item Certification - Pharmaceutical.

GS1 Canada Company Prefix(es): **123456**

Legal Entity Global Location Number (GLN) **0123456000018**

Expires: **April 20, 2019**

This Annual GS1 Canada Licence is for the sole use of the subscriber named on this licence. Transfer of numbers formed from this prefix to other companies is prohibited, including but not limited to selling, renting, leasing or donating all or a portion of these numbers. The licence to this prefix is valid for as long as the company named is a subscriber of GS1 Canada.

This licence and its associated schedules remain the property of GS1 Canada.



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GS1 Company Prefix

GS1 Canada's Barcode Prefixes vary in length from 6-9 digits. The prefix length determines how many GTINs can be created using each prefix.

Prefix Length	GTINs	Item Numbers
6 Digits	100,000 items	00000-99,999
7 Digits	10,000 items	0000-9,999
8 Digits	1,000 items	000-999
9 Digits	100 items	00-99

Barcoding Guidelines & Requirements:

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Assigning your Item Numbers – Each(base) or Consumer Level Items.

Each strain variation, quantity or size variation will require its own unique GTIN. An example using a 6 digit prefix for Point of Sale items would be below:

Strain A – 1 gram = Item number 00001
Strain A – 3.5 grams = Item number 00002
Strain A – 7 grams = Item number 00003
Strain A – 14 grams = Item number 00004

Strain B – 1 gram = Item number 00005
Strain B – 3.5 grams = Item number 00006
Strain B – 7 grams = Item number 00007
Strain B – 14 grams = Item number 00008



*If you are selling edibles or oils etc. flavor would also be a variant that would require a unique GTIN.

Barcoding Guidelines & Requirements: For Consumer and Inner Level Cannabis Products

Assigning your Item Numbers – Inner packaging

Each strain variation, quantity or size variation will require its own unique GTIN. An example using a 6 digit prefix for inner pack items (6 packs, 12 packs, 20 packs etc.) would be below:

Strain A – 1 gram X 12 packs = Item number 00010
Strain A – 3.5 grams X 12 packs = Item number 00011
Strain A – 7 grams X 12 packs = Item number 00012
Strain A – 14 grams X 12 packs = Item number 00013

Strain B – 1 gram X 20 packs = Item number 00014
Strain B – 3.5 grams X 20 packs = Item number 00015
Strain B – 7 grams X 20 packs = Item number 00016
Strain B – 14 grams X 20 packs = Item number 00017



*If you are selling edibles or oils etc. flavor would also be a variant that would require a unique GTIN.

Barcoding Guidelines & Requirements: For Consumer and Inner Level Cannabis Products

Calculating your Check Digits

You can now use your **company prefix** and **item number** to represent your items. The final step is to figure out each item's **check digit**. The last digit of a barcode number is a computer-generated check digit which makes sure the barcode is correctly composed.

Strain A – 1g	12345600001 ?
Strain A – 3.5g	12345600002 ?
Strain B – 1g	12345600005 ?
Strain B – 3.5g	12345600006 ?



Barcoding Guidelines & Requirements: For Consumer and Inner Level Cannabis Products

Calculating your Check Digits

Click this link to access the Check Digit Calculator  <https://www.gs1.org/services/check-digit-calculator>

Ex. Strain A – Quantity - 1g 12345600001?

Enter your company prefix, followed by the item number and click calculate.

Calculate a check digit

GS1 key without check digit

 [Calculate another check digit >](#)

123456000018

See this in GTIN 14 format **Your Check Digit** Copy this key

You've entered 11 digits, this corresponds with the GTIN-12 format.

Your check digit will appear below in orange.

Barcoding Guidelines & Requirements:

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Calculating your Check Digits

Continue the process for all Cannabis product for your company. Remember that each strain, product size variant, flavor etc. will require its own unique GTIN.

Strain A – 1g	123456000018
Strain A – 3.5g	123456000025
Strain B – 1g	123456000056
Strain B – 3.5g	123456000063

GS1 key without check digit

[Calculate](#) [Calculate another check digit >](#)

123456000063

See this in [GTIN 14 format](#) Your Check Digit [Copy this key](#)

You've entered 11 digits, this corresponds with the [GTIN-12](#) format.

Barcoding Guidelines & Requirements: For Consumer and Inner Level Cannabis Products

The GS1 Databar Expanded & Databar Expanded Stacked require 14 digits when printing the barcode graphic.

Adding 2 space filler 0's in front of your GS1 Canada issued prefix will allow your 12 digit GTIN to be printed in the required Databar formats. This will not affect your check digits.

Strain A – 1g 00123456000018
Strain A – 3.5g 00123456000025

Strain B – 1g 00123456000056
Strain B – 3.5g 00123456000063

You can do this manually or click the GTIN 14 option on the check digit calculator.

Calculate a check digit

GS1 key without check digit

[Calculate another check digit >](#)

123456000018

You've entered 11 digits, this corresponds with the GTIN-12 format.

See this in
GTIN 14 format

Your Check Digit
Copy this key

00123456000018

Barcoding Guidelines & Requirements:

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Recording and tracking your allocated GTINs

We recommend keeping an excel file to keep track of your assigned GTINs and the corresponding product.

In healthcare and pharmacy, the rules for how GTINs are allocated to products and how they are used are slightly different to other sectors. Products in healthcare and pharmacy are given what is known as a permanent GTINs. Permanent GTINs never expire. Each GTIN will always correspond to its original product, no matter how long it has been since that product was manufactured. This enables traceability of all medical products back to the patients that have used them.

Category	THC / CBD Content	Sativa / Indica	Filler Digits	Prefix	Item Number	Check Digit	Full GTIN
Dried Bud	18-19% / <1%	Hybrid	00	123456	00001	8	123456000018
Dried Bud	18-19% / <1%	Hybrid	00	123456	00002	5	123456000025
Dried Bud	18-19% / <1%	Hybrid	00	123456	00003	2	123456000032
Dried Bud	18-19% / <1%	Hybrid	00	123456	00004	9	123456000049
Dried Bud	16-18% / <1%	Sativa	00	123456	00005	6	123456000056
Dried Bud	16-18% / <1%	Sativa	00	123456	00006	3	123456000063
Dried Bud	16-18% / <1%	Sativa	00	123456	00007	0	123456000070
Dried Bud	16-18% / <1%	Sativa	00	123456	00008	7	123456000087
Oils/Tinctures	16-18% / <1%	Indica	00	123456	00009	4	123456000094
Oils/Tinctures	16-18% / <1%	Indica	00	123456	00010	0	123456000100
Oils/Tinctures	0-1% / <12%	CBD	00	123456	00011	7	123456000117
Oils/Tinctures	0-1% / <12%	CBD	00	123456	00012	4	123456000124
Edibles	3% / <1%	Indica	00	123456	00013	1	123456000131
Edibles	3% / <1%	Indica	00	123456	00014	8	123456000148

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GS1 Application Identifiers

GS1 Application Identifiers (AIs) are numeric prefixes used in barcodes to define the meaning and format of encoded data elements.

GS1 has defined over a 100 Application Identifiers (AIs). Each Application Identifier is a standard two, three, or four digit numeric code. For the full list of GS1 Application Identifiers and their definitions, please refer to section 3.2 of the [GS1 General Specifications](#).

For Cannabis products the following information and AI's are required:

(01) – GTIN (14 digits)

(17) – Expiry Date (6 digits YYMMDD)

(10) – Lot/Batch (up to 20 alpha-numeric characters)

Barcoding Guidelines & Requirements:

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GS1 Databar & GS1 Databar Extended

- ✓ The GS1 Databar Expanded & GS1 Databar Expanded Stacked allow additional data to be encoded including the LCBO/OCS mandatory information such as:
 - Expiry Date
 - Batch/Lot Number

GS1 DATABAR EXPANDED:

Up to 74 numeric or 41 alphabetic

- ✓ Linear symbol with OMNI-Directional Scanning



GS1 DATABAR EXPANDED STACKED

Up to 74 numeric or 41 alphabetic

- ✓ Stacked symbol with OMNI-Directional scanning



Barcoding Guidelines & Requirements:

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Expiry Date & Lot /Batch Number

The Lot Number will be an internal number for each batch/strain of Cannabis grown. This can be up to 20 alpha-numeric characters in length.

- * Expiry Date must be in YYMMDD format, as per GS1 Standards.
- * **If your product does not have an Expiry Date**, you will still need to keep the AI (Application Identifier) in the barcode symbology and replace the date with the default of **500723**.

GS1 DataBar Expanded



* Barcode symbol above is for example purposes only and will not scan

Barcoding Guidelines & Requirements:

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Human Readable Interpretation

The GS1 standard requires that a textual representation is included under the barcodes to support human readable interpretation. In this text the AI codes must be placed in parentheses. Please note that the AIs are encoded in the barcode without parentheses. If the GS1 Databar cannot be read or scanned due to damage, the Human Readable text can be used as backup information.

Below is an example of a GS1 Databar Expanded with Human Readable Text that includes the following required AIs:

GTIN (01) 123456000018

Expiry Date (17) 190420 (April 20th, 2019)

Lot Number (10) ABC123

GS1 DataBar Expanded



* Barcode symbol above is for example purposes only and will not scan

Barcoding Guidelines & Requirements:

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You can now combine your product GTIN, expiry date and Lot numbers to complete your Global Trade Item Numbers with the required information for LCBO/OCS using GS1 application identifiers.

(01) – GTIN (14 digits)

(17) – Expiry Date

(10) – Lot/Batch

Strain A , 1 gram =(01)00123456000018(17)190420(10)ABC123

Strain A , 3.5 grams =(01)00123456000025(17)190420(10)ABC123

Strain B , 1 gram =(01)00123456000056(17)190420(10)CAN127

Strain B , 3.5 grams =(01)00123456000063(17)190420(10)CAN127

Printing Your Barcodes

- ✓ You can [access Solution Providers for printing barcode symbols here](#)
- ✓ Provide your printer with the GTINs you need printed and the type of barcode symbology to use:

(01)00123456000018(17)190420(10)ABC123
(01)00123456000025(17)190420(10)ABC123
(01)00123456000056(17)190420(10)CAN127
(01)00123456000063(17)190420(10)CAN127

OR

GS1 DATABAR EXPANDED:

Up to 74 numeric or 41 alphabetic

- ✓ Linear symbol with OMNI-Directional Scanning



GS1 DATABAR EXPANDED STACKED

Up to 74 numeric or 41 alphabetic

- ✓ Stacked symbol with OMNI-Directional scanning



Barcode Printing Guidelines

- ✓ Ensure your barcode includes the required content for LCBO/OCS including Expiry and Lot/Batch information
- ✓ Ensure that the Human Readable Interpretation is included under or beside the barcode graphic
- ✓ Barcodes can be printed on the packaging or on labels.
- ✓ Use the correct Barcode Printing Format – GS1 Databar Extended or GS1 Databar Stacked Extended
- ✓ Create and follow a quality control procedure and test code quality at each stage of the design process.
- ✓ Choose printing substrates that avoid smudged ink and distortion of barcodes.
- ✓ Ensure the barcode shows crisp, clear well defined bars to avoid readability issues when scanned.

