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# GS1 US Guidance for Extended Producer Responsibility (EPR) Packaging Requirements

Recommendations for Leveraging GS1 Standards for U.S. State-level Reporting

*Release 1.0, May 30, 2026*



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## About GS1

GS1® is a neutral, not-for-profit, global organization that develops and maintains the most widely used supply chain standards system in the world. GS1 Standards improve the efficiency, safety, and visibility of supply chains across multiple sectors. With local Member Organizations in over 110 countries, GS1 engages with communities of trading partners, industry organizations, governments, and technology providers to understand and respond to their business needs through the adoption and implementation of global standards. GS1 is driven by over a million user companies, which execute more than six billion transactions daily in 150 countries using GS1 Standards.

## About GS1 US

GS1 US®, a member of GS1 global, is a not-for-profit information standards organization that facilitates industry collaboration to help improve supply chain visibility and efficiency through the use of GS1 Standards, the most widely used supply chain standards system in the world. Nearly 300,000 businesses in 25 industries rely on GS1 US for trading partner collaboration that optimizes their supply chains, drives cost performance and revenue growth, while also enabling regulatory compliance. They achieve these benefits through solutions based on GS1 global unique numbering and identification systems, barcodes, Electronic Product Code (EPC®)-based RFID, data synchronization, and electronic information exchange.

## Document Summary

Document Item	Value
<b>Document Title</b>	GS1 US Guidance for Extended Producer Responsibility (EPR) Packaging Requirements
<b>Date Last Modified</b>	May 30, 2026
<b>Document Description</b>	The purpose of this document is to provide guidelines on how to utilize GS1 Standards and sharing mechanisms for EPR reporting. It also presents a data model for using these attributes effectively.

## Log of Changes

Release Number - Date	Change
<b>R1.0 – May 30, 2026</b>	Initial publication

## Glossary of Acronyms

Acronym	Meaning
AI	GS1 Application Identifiers
API / APIs	Application Programming Interface(s)
B2B	Business-to-Business
B2C	Business-to-Consumer
BI	Business Intelligence (e.g., Power BI)
BMS	Business Message Standard (as used by GS1; "BMS ID")
CAA	Circular Action Alliance
CD	Committee Draft (ISO draft stage; e.g., "ISO CD 18601")
CSV	Comma-Separated Values
EPC	Electronic Product Code
EPR	Extended Producer Responsibility
ERP / ERPs	Enterprise Resource Planning system(s)
EU	European Union
FDA	U.S. Food and Drug Administration
GDSN	Global Data Synchronization Network
GLN / GLNs	Global Location Number(s)
GPC	Global Product Classification
GTIN / GTINs	Global Trade Item Number(s)
ID	Identifier
ISO	International Organization for Standardization
IT	Information Technology
JSON	JavaScript Object Notation
LCL	Local Code List (appears as "U.S. LCL" in the document)
MDM / MDMs	Master Data Management system(s)
PIM / PIMs	Product Information Management system(s)
PRO	Producer Responsibility Organization
R&D	Research & Development
RFID	Radio-Frequency Identification
SPC	Sustainable Packaging Coalition
SFTP	Secure File Transfer Protocol
U.P.C. / UPC	Universal Product Code
xPath	XML Path Language

## 1 Introduction

Over the past 25 years, Extended Producer Responsibility (EPR) laws have been enacted in multiple states across the U.S. More recently, states such as California, Oregon, and Colorado have introduced new requirements specifically focused on packaging EPR for all industries, including paper products generally found in foodservice as well as printed materials. Additional states are expected to follow suit. As a result, producers are now required to report packaging data to relevant Producer Responsibility Organizations (PRO), with each state having its own distinct requirements.

With the need for data collection to be streamlined for EPR reporting, GS1 US created the Cross Industry Extended Producer Responsibility Workgroup in May 2025. This workgroup consisted of brands, retailers, associations, and solution providers across all the industries that GS1 US serves, including Retail Grocery, Foodservice, Apparel & General Merchandise, and Healthcare.

The purpose of this document is to provide guidelines on how to utilize GS1 Standards, including identifiers such as the Global Trade Item Number® (GTIN®) and Global Location Number (GLN), attributes, and sharing mechanisms, for EPR reporting. It also presents a data model for using these attributes effectively.

This document provides tools to help:

- Streamline data collection and reporting for EPR by offering a standardized set of data attributes that are mapped to state requirements.
- Facilitate the accurate and consistent sharing of product and packaging information among trading partners, enhancing traceability and transparency in supply chains.
- Help companies adapt to evolving EPR laws in various states by providing a unified approach, thereby reducing the complexity of meeting different regulatory obligations.
- Support cross-functional collaboration among packaging, supply chain, legal, and sustainability teams, ensuring that all stakeholders have access to reliable and actionable data for EPR reporting.

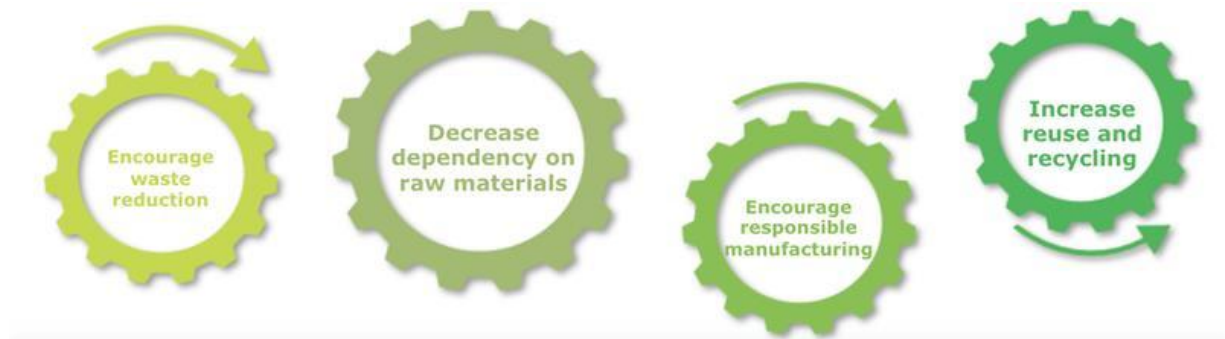
## 2 EPR Overview

### 2.1 What is EPR?

EPR is a policy approach that shifts the financial responsibility for managing a product’s end-of-life—such as collection, recycling, and disposal—from municipalities and consumers to the producer. Under EPR laws, brand owners, manufacturers, or importers must register, report data, and often pay fees to a Producer Responsibility Organization (PRO) or similar entity. These laws are designed to reduce waste, improve recycling systems, and encourage sustainable product design through mechanisms like eco-modulated fees, which reward products that are easier to recycle or have a lower environmental impact.

There are multiple types of EPR programs, with packaging and textiles being two of the most prominent. Packaging EPR covers consumer packaging materials such as plastic, paper, glass, and metal, requiring producers to fund recycling and recovery programs. Textile EPR applies to apparel, footwear, and home textiles, mandating take-back schemes and responsible disposal, with emerging legislation in regions like the EU, Canada, and U.S. states. Both types aim to increase circularity and transparency, making accurate product and packaging data essential for reporting—an area where GS1 Standards play a critical role in enabling reporting and traceability.

This GS1 US guideline will focus on packaging EPR for all industries, including foodservice ware and printed materials, at the U.S. state level. As EPR laws continue to take shape, they can shift more costs and obligations onto producers.



### 3 GS1 US Scope of Work

#### 3.1 Objective

The goal of the workgroup that created this guideline was to establish a unified approach to utilizing GS1 Standards, particularly the GS1 US Extended Producer Responsibility Data Model. This involved mapping standardized data attributes needed for EPR reporting. By standardizing these data attributes, companies working to meet state-level EPR requirements can collect the essential data required for calculating key metrics for EPR reporting.

Who Should Read this Guideline:

A diverse group of stakeholders within an organization should review these guidelines, as there are many touchpoints related to EPR reporting. The list of stakeholders provided below is not exhaustive. It is crucial to establish business processes that ensure all stakeholders understand the importance of preparing for EPR reporting.

Stakeholder	Definition
Packaging Teams	Focus on designing, sourcing, and managing packaging materials to ensure product protection, branding, regulatory compliance, and sustainability goals.
Supply Chain Teams	Oversee the movement of goods from suppliers to customers, including procurement, logistics, inventory management, and distribution efficiency.
Legal/Regulatory Affairs/ Regulatory Compliance	Ensure the organization adheres to laws, regulations, and internal policies, including product safety, labeling, environmental standards, and contractual obligations.
Sustainability Teams	Drive initiatives to reduce environmental impact, improve resource efficiency, and meet corporate social responsibility and regulatory sustainability targets.
R&D (Research & Development)	Innovate and develop new products or improve existing ones, focusing on functionality, quality, and compliance with technical and market requirements.
Master Data Teams	Manage and maintain accurate, standardized product and business data across systems to support operations, analytics, and regulatory reporting.

#### 3.2 What Type of Packaging is Impacted by EPR?

Each relevant state sets its own rules for which products are covered by EPR programs. Often, these rules for packaging EPR programs also include paper items used for food service and printed materials as part of the overall packaging. Generally speaking, foodservice ware and printed material information are shared independently of the packaging information; however, the GS1 US EPR Data Model can be used for both, using a standardized categorization for packaging. Industries often utilize ISO CD 18601 standards to communicate environmentally focused packaging guidelines and requirements. For the purposes of this guideline and the GS1 US EPR Data Model, the same ISO standards will be used to share

packaging information in addition to trade item information for foodservice ware and printed materials. These standards organize packaging into primary, secondary, and tertiary categories.

The three packaging levels include:

- **Sales packaging**, the packaging handed to the end consumer, corresponds to **primary packaging**. This is the first layer that surrounds the product itself, such as a bottle, box, or wrapper.
- **Grouped packaging** translates to **secondary packaging**, where multiple sales units are bundled together for easier handling or retail presentation—examples include a shrink-wrapped pack of cans or a cardboard tray holding several units.
- **Transport packaging** is equivalent to **tertiary packaging**, which protects goods during logistics and storage, such as cartons, crates, and pallets that move products in bulk through the supply chain.

When it comes to state EPR programs for packaging, printed materials, and foodservice ware, different states may require reporting at one or more of these three packaging levels. Some focus only on **primary (sales) packaging**, since it is the material that reaches the consumer and becomes waste most directly. Others extend their requirements to **secondary (grouped)** and **tertiary (transport) packaging**, requiring that companies report and account for all materials used throughout the distribution process. This variability means manufacturers and distributors should pay close attention to each state's EPR rules to ensure they track and report packaging materials appropriately, aligning both with ISO CD 18601 and relevant regulations.

### 3.3 How Do These Packaging Requirements Impact Supply Chain Stakeholders?

Data sharing must take place at various points along the supply chain and be organized in specific ways to meet each state's requirements.

Raw materials packaging suppliers, copackers and repackers will need to share information about raw material packaging components with the manufacturer or brand owner of a product.

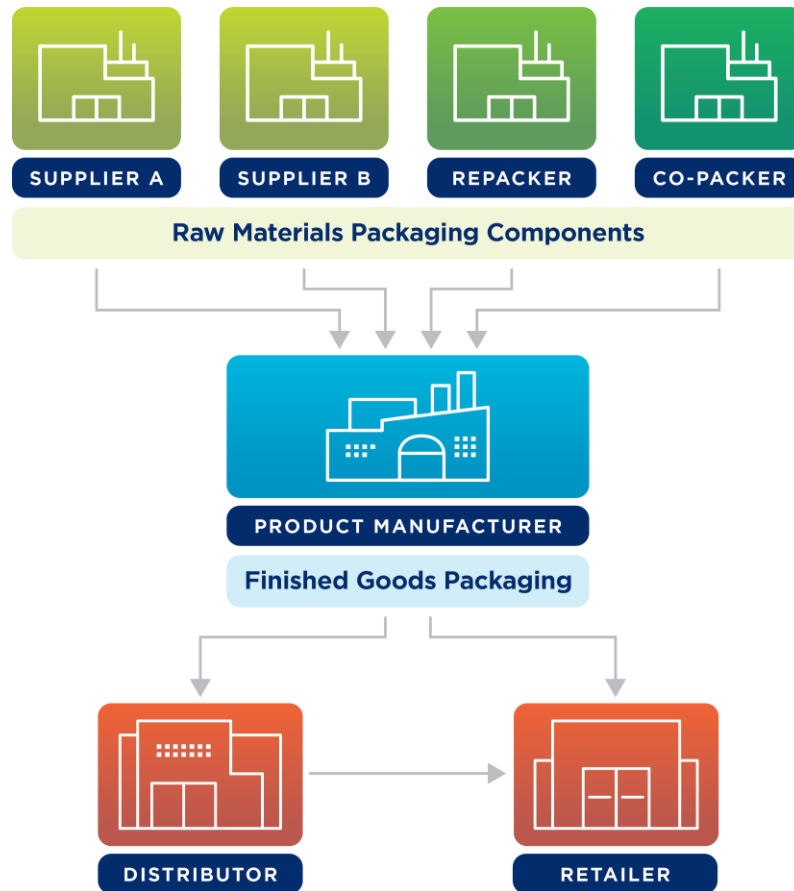
The reporting requirements for raw material packaging differ by state and may also change based on customer requests. Generally, most raw material suppliers, copackers, and repackers are only required to provide information about primary packaging to product manufacturers. However, some states require suppliers to report information about grouped and transport packaging as well. In these states, suppliers must send all three sets of data directly to the PRO and must also share details about the primary packaging with their customers.

If the product manufacturer is not designated as the "EPR Producer" for the finished product, they must share the packaging information for the finished good with the Brand Owner or Trade Item Licensee. The Brand Owner or Trade Item Licensee is responsible for collecting and consolidating the packaging information for all three levels of packaging used for the product. They must also report the annual volume of this packaging information to the PRO approved to implement a state's EPR program. If the product manufacturer is the Brand Owner or Trade Item Licensee, they will report the packaging information directly to the PRO.

Since state requirements can vary, the collected and aggregated information must be organized according to the EPR classifications specified by each state, along with the eco-modulated characteristics of the packaging, in order to reduce fees.

The GS1 US Extended Producer Responsibility Data Model outlined in this guide enables users to share all levels of packaging by GTIN and share the necessary information required by each state. This tiered assignment of GTINs across packaging hierarchies ensures that each level of packaging—consumer, grouped, or transport—is identifiable and traceable in data systems. This detailed identification can help companies streamline EPR reporting by linking packaging data to specific reporting requirements for each state.

**Image 3-1 Packaging Supply Chain Example**



### 3.4 What is the GS1 US Data Model?

The GS1 US EPR Data Model provides a standardized framework that promotes transparent and efficient communication of product data required for EPR reporting. By centralizing key product attributes such as packaging materials, weights, eco-modulation attributes, and brand ownership, this model can help organizations consistently meet regulatory requirements across different jurisdictions. This framework allows product information to be shared with customers, referred to as recipients, in the same manner that suppliers exchange information within their supply chains. This enables recipients to gather all the necessary information to calculate their EPR fees accurately or to forward it to brand owners, also known as EPR producers, who are impacted by EPR state requirements.

Adopting this data model fosters interoperability among stakeholders and streamlines reporting processes. Ultimately, it helps companies demonstrate accountability and maintain up-to-date reporting records as laws and regulations change.

## 4 How to Leverage GS1 Standards for EPR

### 4.1 How GS1 Standards Help with EPR

GS1 Standards offer a structured framework for identifying, capturing, and sharing information across the supply chain, which can significantly support companies in meeting EPR requirements. By utilizing GS1 identifiers and barcodes, organizations can accurately track products from production through to end-of-life, ensuring greater transparency and traceability in their operations. This enhanced visibility allows companies to efficiently collect and report data on product composition, packaging materials, and eco-modulation attributes, all of which are critical to demonstrating compliance with EPR regulations.

Furthermore, GS1 Standards facilitate interoperability among supply chain partners, making it easier to share essential EPR-related information with regulatory bodies and stakeholders. Standardized data exchange helps reduce errors and inconsistencies by streamlining reporting processes and enabling timely reporting.

### 4.2 How GTINs Can Assist Companies with EPR Reporting









The GTIN is a unique identifier assigned to products, allowing for precise identification and tracking throughout the supply chain. By utilizing GTINs, companies can efficiently capture and report detailed product information necessary for sharing requirements associated with EPR regulations. GTINs enable organizations to:

- Uniquely identify each product and its variations, ensuring accurate data collection regarding product composition, packaging materials, and recycling requirements.
- Facilitate seamless data sharing among supply chain partners, producer responsibility organizations, and other stakeholders, supporting transparent and consistent EPR reporting.
- Enhance traceability from production to end-of-life, making it easier to monitor product lifecycle outcomes and demonstrate compliance with EPR regulations.

Assigning GTINs to different packaging hierarchies is essential for ensuring accurate product identification and traceability throughout the supply chain. For each level—such as individual items, inner packs, cases, and pallets—a unique GTIN should be assigned. The process starts by assigning a GTIN to the base product, like a single retail item. When multiple units are combined into a larger package, such as an inner pack or case, a separate GTIN is allocated to represent that specific configuration. Similarly, pallets or shipping containers are assigned to their own GTINs to distinguish them from smaller packaging units.

Per the GS1 Standard, a GTIN-14 should be used for higher levels of packaging (inner packs, cases, and pallets), not crossing the point of sale. For items crossing point of sale, a GTIN-12 is the standard.

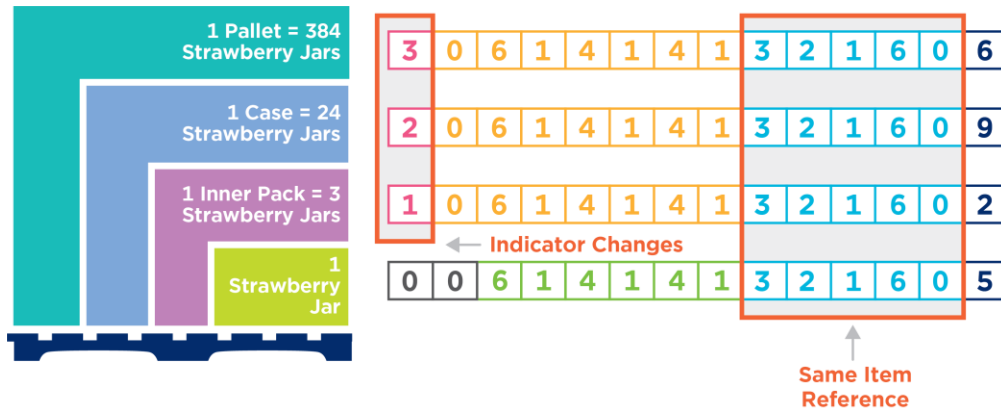
**Table 4-1 GTINs for Each Packaging Hierarchy**

Level	Example	Description
Each		The lowest level of the item hierarchy intended or labeled for individual resale. Generally, this is the consumer unit sold at checkout or online. This item would be assigned as a GTIN-12 (U.P.C.).  Example: a jar of jam
Inner Pack		An intermediate package of multiples of the same trade item or a predefined assortment of trade items (representing a single GTIN).  Example: Three jars of jam for shipping/receiving only.
Case		A standard shipping unit that contains "eaches" (packaged either individually or grouped as an inner pack). All the items in a case must have the same GTIN. Example: a case containing 8 jars of strawberry jam.
Mixed Case		Contains more than one type of "each," and must contain more than one GTIN. The case can contain eaches or inner packs.  Example: a case that holds 4 jars of strawberry jam and 4 jars of blueberry jam.
Pallet		A shipping unit that contains either cases, inner packs, or eaches. It must contain one GTIN regardless of the number of items in the grouping.  Example: a pallet containing 18 cases of strawberry jam.
Mixed Pallet		A shipping unit that can contain any combination of cases, inner packs, and/or eaches and must contain more than one GTIN.  Example: a pallet containing 9 cases of strawberry jam and 9 cases of blueberry jam.
Display Shipper		A shipping unit that is a self-contained display. It can contain a single type of "each" or multiple types of eaches.  Example: a promotional display containing both strawberry jam and blueberry jam.
Case as Each		Designed for goods that are shipped as a case, but the contents of the case are NEVER offered for sale on their own. This is used by industries such as foodservice that need to designate the case as its lowest orderable unit. The contents inside are neither assigned GTINs nor are they sold at checkout or online.  Example: a 25 lb. pack of bulk mushrooms.

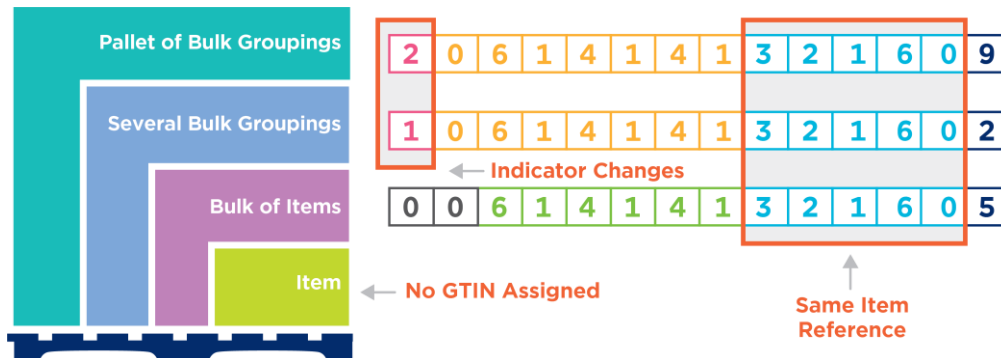
The GS1 US Data Hub® platform can be used to monitor all GTINs sold to consumers (B2C) as well as those intended for business purposes. See sections [4.5](#) and [4.6](#) below for more information.

**The following GTIN hierarchies illustrate different methods for assigning GTINs to packaging structures.**

- Consumer Unit (UPC: GTIN- 12) + Higher Levels of Packaging (GTIN 14s) - this is the recommended method for assigning packaging hierarchy. Indicator digits 1–8 must only denote packaging hierarchy.



- Unit Level with No GTIN + Higher Levels of Packaging using GTIN-14s – Mainly used in foodservice and distribution.



- Consumer Unit + Higher Levels of Packaging using GTIN-12s – Will utilize your prefix capacity with this method.



### 4.3 Who Should Assign a GTIN to a Product

GTINs should be assigned by the brand owner or the "GTIN allocator". This is the organization responsible for the product's specifications, design, and labeling. In the case of private label products, the retailer or distributor owning the brand and product specifications is accountable for assigning the GTINs. If a third-party manufacturer produces a product under another company's brand, but owns the product specifications, then the manufacturer is responsible for assigning the GTIN.

Businesses that package products for resale or create mixed cases are also responsible for assigning GTINs to their configurations. It is important for only one entity to assign GTINs to prevent duplication and confusion.

The brand owner or GTIN allocator is typically responsible for GTIN allocation because they hold the specifications, regardless of the manufacturer. When a brand owner joins a GS1 Member Organization, they receive a unique GS1 Company Prefix that is exclusive to them. GTINs should be assigned using this GS1 Company Prefix.

Brand owners can include:

- The manufacturer or supplier of a product
- The importer or wholesaler of a product
- The retailer of a private label
- The distributor of a private label
- A co-packer, who produces mixed cases
- A reseller of products

Exceptions to these rules exist for non-branded items, customer-specific items made for a single customer, and cases where an intermediary assigns a temporary GTIN. Temporary GTINs are not recommended; they should be assigned by the brand owner as soon as possible.

It is important to note that in some cases, GTINs may not be assigned by the brand owner. Instead, they are often incorrectly assigned by manufacturers, co-packers, wholesalers, or distributors of the product. If you encounter this issue, it is advisable to inform the brand owner of the GTIN allocation rules to ensure the GTIN is properly reassigned. For more information on proper GTIN allocation rules, please visit [Section 4.2.3 of the GS1 General Specification Standard](#) for details.

Organizations can utilize the GS1 US Data Hub Tool to effectively track and manage all assigned GTINs for both consumer (B2C) and business-to-business (B2B) products. Additionally, GS1 US Data Hub can help identify companies that are incorrectly assigning GTINs to their products. For more information on using the GS1 US Data Hub, refer to sections [4.5](#) and [4.6](#) below.

### 4.4 Is GTIN Brand Owner the Same as an EPR Producer?

The answer varies depending on the situation.

The purpose of the definitions of "producer" in EPR programs is to clarify who is responsible for covered products. This includes accountability for product reporting and financial contributions under state EPR programs.

Definitions of "producer" differ across various U.S. state EPR regulations, but they generally follow a similar hierarchy:

1. **Brand Owner:** The first obligated producer is typically the brand owner, which is usually the person or entity that manufactures the product. If the product is sold under a brand name, the brand requesting its manufacture is considered the obligated producer. If there is no brand identification, the manufacturer remains the obligated producer.
2. **Licensed Manufacturer:** If neither of the above applies, the next in line is the person licensed to manufacture the packaging for the brand or trademark.

3. **Importer:** Lastly, if neither a brand manufacturer nor a licensee is applicable, the obligated producer is the person who is the importer of record for the product.

Various types of businesses or entities may qualify as producers, but exemptions are available, especially for small businesses, government agencies, and charitable organizations. More information on producer definitions and exemptions relevant to state EPR requirements is available from the relevant state agency, as well as through resources such as the Circular Action Alliance (CAA) or the Sustainable Packaging Coalition (SPC) or the state websites. It is advisable to consult with legal counsel to determine if you qualify as an impacted producer.

The owner of the GTIN is generally the brand owner associated with the GS1 Company Prefix included within the GTIN. This owner is likely to be considered the EPR producer for the product, provided they follow the GTIN allocation rules mentioned earlier. However, these GS1 allocation rules are often applied inconsistently since they are voluntary and lack strict industry adherence.

To promote consistent use of GTINs for identifying brand owners of products, consider the following best practices:

- **Collaboration:** Engage with your trading partners to communicate the GTIN Management and GTIN Allocation Rules. Encourage them to utilize GS1 US Data Hub for effective GTIN assignment and management.
- **Master Data Attributes:** Utilize master data attributes in the GS1 US EPR U.S. Data Model to clearly differentiate between the Brand Owner, the Manufacturer, or the Trade Item Licensee. For more detailed information, refer to [Section 6.2: Trade Item Core Attributes](#).

## 4.5 How Can GS1 US Data Hub Support EPR Covered Products?

Once brand owner organizations purchase their GS1 Company Prefix or if they have an existing GTIN, one user will have free access to a GS1 US Data Hub Create/Manage subscription.

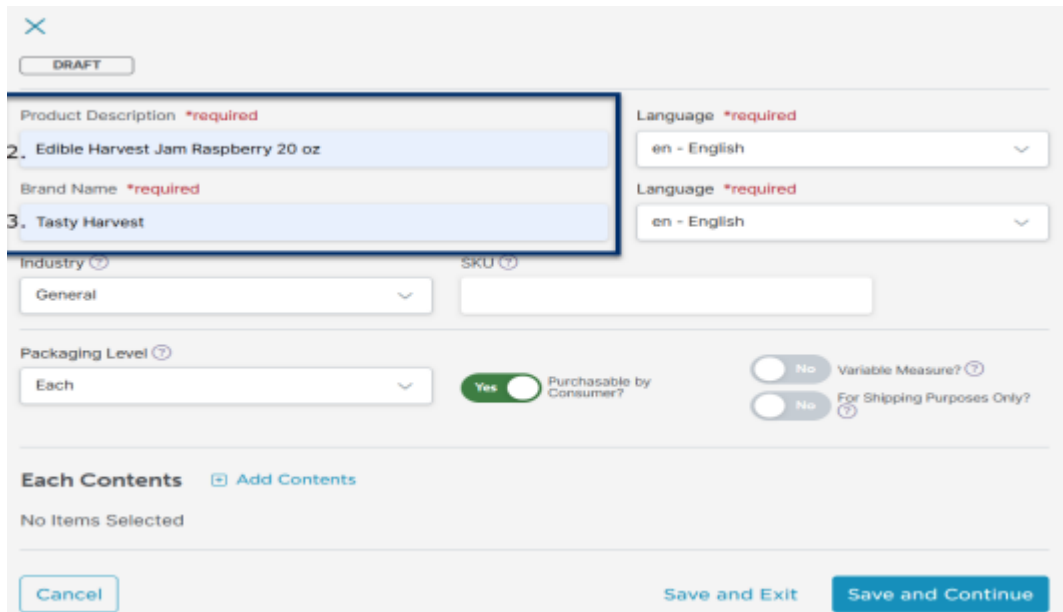
The GS1 US Data Hub Create/Manage subscription offers organizations comprehensive tools for assigning, managing, and maintaining GTINs and related product data throughout the product lifecycle. With this subscription, users can generate new GTINs, edit product information for existing GTINs, and ensure all records remain compliant with GS1 standards. Additionally, the platform provides intuitive dashboards and reporting features, making it easier for companies to monitor the status of their GTIN assignments, track changes, and generate audit trails for regulatory and internal compliance purposes.

Users also gain access to advanced search and validation features, which help prevent duplication of GTINs and ensure that each item's data is accurate and up to date across supply chain partners. The Create/Manage subscription supports collaboration by allowing multiple authorized users within an organization to access, update, and manage GTIN records securely. This centralized approach to GTIN management not only streamlines operations but also reduces the risk of misassignment, enabling organizations to maintain data integrity and support seamless product identification in both B2C and B2B environments.

For a step-by-step guide, please refer to [the GS1 US Data Hub | Product GTIN Creation and Barcode Generation Guide](#).

In some state EPR programs, "covered products" refer only to items that reach consumers, while other states may also include products sold in business-to-business (B2B) transactions. GS1 US Data Hub can help you monitor the sales channels of these products and calculate the quantity of each product identified by its GTIN that is shipped to each relevant state through various business channels. For more information on "covered products," please refer to information from the relevant state agency or the [CAA or SPC resources](#).

**Image 4-1 GS1 US Data Hub Screenshot**



The screenshot shows a 'DRAFT' product entry form. A blue box highlights the 'Product Description' field with the value '2. Edible Harvest Jam Raspberry 20 oz' and the 'Brand Name' field with the value '3. Tasty Harvest'. Other visible fields include 'Language' (en - English), 'Industry' (General), 'SKU' (empty), 'Packaging Level' (Each), and checkboxes for 'Purchasable by Consumer?' (Yes) and 'Variable Measure?' (No). At the bottom, there are buttons for 'Cancel', 'Save and Exit', and 'Save and Continue'.

#### 4.6 Can Users Validate the Brand Ownership of a GTIN?

With a GS1 US Data Hub View/Use subscription, you can search for GS1 identifiers and related company data, or the reverse.

To verify the brand ownership of a GTIN, GS1 US Data Hub can be utilized. This resource provides access to company licensing information, ensuring accurate product identification across sales channels. It helps organizations comply with industry standards, prevents misassignment of GTINs, and maintains consistent product reporting, particularly in relation to EPR regulations.

This approach simplifies processes and increases transparency in the supply chain, enhancing data management and ensuring consistent awareness among brand owners and EPR producers.

#### 4.7 How Can GTINs Support EPR Data Exchange?

Once a company has licensed a GS1 Prefix and assigned GTINs to its products, it can share the product master data, or product specifications, at the GTIN level through various data-sharing channels. These channels include the Global Data Synchronization Network™ (GDSN®), product catalogs, Application Programming Interfaces (APIs), and standardized manual spreadsheets.

By utilizing these channels, users can benefit from the same GS1 US Data Model to share information about product composition, materials, and weights in a consistent manner. The GS1 US EPR Data Model enables stakeholders to communicate using a common language and standardized data formats, eliminating concerns about data compatibility across different operating systems.

#### 4.8 How Can GLNs Support EPR Data Exchange?

GLNs play a critical role in identifying distinct entities within a supply chain, such as brand owners, manufacturers, distributors, and physical locations like factories or warehouses. By assigning a unique GLN to each legal entity, functional department, or physical site, organizations can ensure clear attribution and traceability throughout the product lifecycle. This clarity is especially valuable for EPR reporting, as it enables stakeholders to determine which party is responsible for each stage of the product's journey.

Further, leveraging GS1 US Data Hub and GDSN enhances this visibility. These platforms allow users to associate GLNs with specific roles—such as designating which GLN is the brand owner, and which GLN is the manufacturer for a particular GTIN. In addition, attributes can be used to record all physical locations (each with its own GLN) where a GTIN is produced, packed, or stored. This systematic approach not only clarifies brand ownership versus manufacturing responsibility but also supports transparent supply chain operations and robust regulatory reporting. By using GS1 US Data Hub and GDSN attributes together, organizations can maintain an up-to-date, authoritative record of all parties involved in the supply chain and their respective responsibilities. To access GS1 US Data Hub and request specific GLN information from your trading partners, please start a subscription [here](#).

In addition to identifying the responsible parties within the supply chain, the GLN can be leveraged to provide granular plant-level information about the specific materials, weights, and eco-modulation attributes associated with each GTIN. By assigning a unique GLN to each production facility, organizations can record detailed data on the packaging materials and their respective weights used for the same product across different plants. This enables companies to reflect variations in product composition and packaging between manufacturing sites, which is critical for accurate reporting and compliance with EPR regulations.

Furthermore, capturing eco-modulation attributes at the plant level allows producers to proactively manage and calculate the EPR fees owed for each state. With this level of detail, companies can ensure that the data submitted for regulatory purposes is precise and tailored to the actual materials used and processes followed at each location. This approach supports more transparent and efficient fee management, reducing the risk of overpayment or underpayment, and helps maintain compliance as regulations evolve across different jurisdictions.

## 5 Data Sharing and Reporting Technologies

### 5.1 Data Sharing Channels

The GS1 US EPR Data Model is a technology-agnostic framework that can be utilized across various data-sharing channels, including standard Excel spreadsheets, APIs, data marketplaces, and platforms like GDSN. Although these channels employ different methods for data sharing, our goal is to standardize the "EPR language" with the release of this data model.

By leveraging standardized data models and interoperable sharing technologies, organizations can efficiently manage packaging data across diverse platforms and regulatory frameworks. These efforts not only facilitate streamlined reporting and compliance with evolving EPR mandates but also promote accuracy and consistency throughout the supply chain. As companies adapt to new requirements, the adoption of harmonized code lists and attribute definitions ensures that all stakeholders communicate using a common language, reducing the risk of miscommunication and enhancing the reliability of submitted information. Ultimately, integrating GS1 Standards into data collection and exchange processes empowers businesses to meet regulatory expectations while supporting broader sustainability goals and improving overall supply chain visibility.

To aid in implementation, we have developed a standardized Excel spreadsheet that can help provide component-level data and finished product packaging data. Additionally, we have created EPR state schemas via JSON files to assist with the categorization of EPR state classes and groups needed for reporting. Please review the links below and refer to [section 7](#) for more information.

#### 5.1.1 Standard Excel Spreadsheet

Please refer to [section 7](#) for the standardized Excel spreadsheet template for Raw Material Product Components and Finished Goods Packaging.

#### 5.1.2 JSON Files for Data Exchange Platforms

Please refer to [section 7](#) for JSON files related to the state-specific classification of packaging materials under EPR regulations. These files can be leveraged in data exchange platforms, including GDSN, to automate and streamline the appropriate EPR classifications and groupings of the packaging materials being reported.

#### 5.1.3 GS1 Global Data Synchronization Network

When sharing packaging data through GDSN, the following steps should be followed when publishing data to the network:

1. Enter packaging hierarchy data individually for each GTIN level. If the orderable Unit indicator is True for a GTIN, include all packaging details for that level. Alternatively, you may provide all packaging data at the highest hierarchy level (such as case, pallet, or display), but only if agreed upon with your trading partner. Generally, it's recommended to supply packaging data at the GTIN level.
2. For every orderable Unit, packaging parts and components must be categorized into primary, secondary, and tertiary packaging. Each category has a corresponding packaging level (packaging level 1, 2, and 3). Each packaging level should have an individual data segment that further details individual packaging components.
3. For each data segment, list the overall packaging part, including its materials and weights, and specify the relevant EPR state classification and required groups. Provide this information for every packaging component as well. If sharing only individual component details is clearer, ensure the total weight matches the overall packaging part.

4. Include all necessary supporting attributes and eco-modulation details ([see section 7 GS1 US EPR Data Model](#)).

Examples:

- Add manufacturing plant information as supplementary data for each packaging level.
- Specify coating or adhesive details to meet state regulations.
- Indicate composite material content when components have multiple materials.
- Document eco-modulation attributes (e.g., recycled content, recyclability, compostability, reusability) at every packaging level.

Please refer to [section 6.5](#) for a detailed overview of how packaging hierarchies are distinguished and packaging levels are displayed. Further, the *GS1 US Cross-Industry Extended Producer Responsibility Examples* can be found in [section 7](#).

## 5.2 Data Reporting Technologies

This guidance aims to assist users in utilizing GS1 Standards, including the GS1 US EPR Data Model and its "EPR language" framework. Previously, we discussed how this data model can be shared through various channels, which typically provide information to systems such as Master Data Management (MDMs), Product Information Management (PIMs), Enterprise Resource Planning (ERPs), and other internal platforms, including Power BI reports. Since reporting formats can vary widely and are challenging to standardize, it is essential for recipients of EPR data to collaborate with their IT teams or solution providers to create reports that fit their specific needs. While we recommend maintaining consistent data formats while sharing, it is ultimately up to users and recipients to design reports and interfaces that work best for them.

Building on these data-sharing and reporting technologies, the GS1 US EPR Data Model explained in Section 6 empowers organizations to enhance communication and data management processes by providing standardized methods for sharing and collecting critical packaging and EPR-related information. Through the collaboration of industry stakeholders, the model offers both flexibility and rigor, accommodating various state-specific requirements while maintaining a consistent set of core attributes and code lists. This promotes seamless interoperability between internal and external systems, supporting compliance with current and emerging regulations, and fostering long-term industry alignment and innovation. As more companies adopt these harmonized approaches, transparency and efficiency in the supply chain improve, facilitating better decision-making and advancing sustainability and circular economic goals.

## 6 GS1 US EPR Data Model

In 2025, GS1 US and its Cross Industry Extended Producer Responsibility Workgroup, which includes over 48 companies and 92 participants, established technology-neutral data attributes and code lists to create a common language for data exchange among supply chain partners. This unified framework promotes efficient resource use and facilitates straightforward data sharing among stakeholders, thereby advancing circular economy initiatives and sustainable packaging efforts.

This collaborative approach not only streamlines reporting for EPR regulations but also fosters the use of standardized terminology and procedures throughout the industry. This can help businesses effectively adapt to changing legislative requirements. By adopting the GS1 US EPR Data Model and actively participating in industry workgroups, organizations can keep their data management practices current and aligned with sustainability objectives. These initiatives highlight the importance of precise and consistent data exchange, as well as resource optimization, which together support the broader implementation of circular economy principles and enhance supply chain transparency and interoperability. Consequently, various technologies can utilize a unified language to support regulatory compliance.

A thorough review of state-specific EPR requirements was conducted, leading to the identification of relevant data attributes and code lists from the existing GS1 US Web Vocabulary, GDSN, and U.S. Code Lists. To cater to distinct state EPR classifications and corresponding groups, additional attributes and code lists were created. These elements were systematically organized to provide targeted recommendations for raw material component-level attributes, finished goods packaging attributes, and trade item core attributes. Definitions of attributes and code lists, along with code values and specific workgroup recommendations, are further detailed in the [GS1 US EPR Data Model Spreadsheet found in section 7](#).

### 6.1 Attribute and Code Lists Instructions

For Raw Material Packaging Components and Finished Goods Packaging attributes, the attributes are designated as follows:

1. **Main Attributes:** These attributes and corresponding code lists should be utilized when providing packaging information to recipients or customers. They are typically expected for all packaging parts and components associated with a product, including all GTIN packaging hierarchies.
2. **Supporting Attributes:** These attributes and code lists may be used by the supplier to offer additional details regarding packaging parts or components. Not all attributes may be used; the use of these attributes is at the supplier's discretion. Suppliers can also support the creation of supplementary data segments for location-specific information, such as various manufacturing facilities.
3. **Eco-modulation Attributes:** These attributes highlight packaging design elements related to recyclability, compostability, reusability, and efforts toward packaging reduction and optimization. This section also includes attributes pertaining to recycled content.

Please note that the BMS ID for the GS1 US Web Vocabulary and the GDSN are provided below for your convenience. Some attributes are organized into Classes, which means that multiple related attributes are grouped together to give a comprehensive overview of the information. This approach recognizes that a single attribute may not fully capture all aspects of a topic. You can find detailed individual attributes within each Class in the [GS1 US EPR Data Model Spreadsheet found in section 7](#).

### 6.2 Trade Item Core Attributes

These attributes can be used for all trade item's raw material packaging components and finished goods packaging. These attributes can be leveraged to communicate brand owner and manufacturer entities and specific contact information. When the brand owner and the manufacturer are the same, the same entity data should be added into these specific data fields. Separate attributes can also be used to show Trade Item License Information.

(BMS ID) 71	Brand Owner Class (the entity requesting the product be made and setting the specifications)	(BMS ID) 3662	Trade Item License Class (the entity that owns the title, or any trademarked assets used on the trade item)
75	GLN	3663	GLN
77	Party Name	3664	Party Name
76	Party Address	3698	Trade Item License Country
133	Communication Channel	133	Communication Channel
135	Communication Value	135	Communication Value

(BMS ID) 87	Manufacturer of Trade Item Class (the entity that makes the product at the request of a brand or under their own brand)	<i>**Specific manufacturing plant GLNs can be queried via GS1 US Data Hub: Location; a subscription can be purchased here. These GLNs may be shown in the Packaging Owner field (BMS 2169) when sharing plant-specific packaging information. **</i>
91	GLN	
93	Party Name	
92	Party Address	
133	Communication Channel	
135	Communication Value	

### 6.3 Raw Material Packaging Component Attributes and Code Lists

BMS ID	Main attributes	BMS ID	Supporting Attributes	BMS ID	Eco-modulation Attributes
2186	Packaging Type Code*	2169	Packaging Owner Identification (specific plant GLN)	6306	Packaging Raw Material Code*
2187	Packaging Type Description	2228	Packaging Material Colour Code*	6307	Packaging Raw Material Code Percentage
2178	Packaging Weight	2212	Packaging Material Coating Description	NEW	Packaging Total Raw Material Code*
2206	Packaging Material Type Code*	8536	Packaging Material Adhesive Type Code*	NEW	Packaging Total Raw Material Percentage

BMS ID	Main attributes	BMS ID	Supporting Attributes	BMS ID	Eco-modulation Attributes
2214	Packaging Material Composition Quantity	8531	Packaging Material Adhesive Amount	2171	Packaging Recycling Process Type Code*, specifies recyclability, compostability, or reusability.
2209	Packaging Material Applied Process Code*	8648	Packaging Material Density	7122	Packaging Recyclability Value
		2210	Packaging Composite Material Description	2588	Packaging Reuse Class, including Packaging Reuse Rate
		2237	compositeMaterialDetail/packagingMaterialTypeCode	2599	Packaging Weight Optimisation Class, including Packaging Weight Reduction
		2238	compositeMaterialDetail/packagingMaterialCompositionQuantity	2486	Packaging Weight Reduction Class
		8596	isPackagingElementIntendedForFoodContact		

\*Complete code lists and Recommended Code Values for State-Specific Covered Materials are available in the [GS1 US Extended Producer Responsibility \(EPR\) Data Model Spreadsheet found in section 7.](#)

## 6.4 Finished Goods Packaging Attributes and Code Lists

BMS ID	Main attributes	BMS ID	Supporting Attributes	BMS ID	Eco-modulation Attributes
3070	Regulation Type Code*	2169	Packaging Owner Identification (specific plant GLN)	6306	Packaging Raw Material Code*
5486	Regulation Restriction Community Identifier	2228	Packaging Material Colour Code*	6307	Packaging Raw Material Code Percentage
2186	Packaging Type Code*	2212	Packaging Material Coating Description	NEW	Packaging Total Raw Material Code*
2187	Packaging Type Description	8536	Packaging Material Adhesive Type Code*	NEW	Packaging Total Raw Material Percentage
2178	Packaging Weight	8531	Packaging Material Adhesive Amount	2171	Packaging Recycling Process Type Code*, specifies recyclability, compostability, or reusability

BMS ID	Main attributes	BMS ID	Supporting Attributes	BMS ID	Eco-modulation Attributes
2168	Packaging Level	8648	Packaging Material Density	7122	Packaging Recyclability Value
7115 or 2166	Packaging Element Code* or Packaging Feature Code*	2210	Packaging Composite Material Description	2588	Packaging Reuse Class, including Packaging Reuse Rate
2206	Packaging Material Type Code*	2237	compositeMaterialDetail/packagingMaterialTypeCode	2344	Packaging To Trade Item Weight Ratio
2209	Packaging Material Applied Process Code*	2238	compositeMaterialDetail/packagingMaterialCompositionQuantity	2599	Packaging Weight Optimisation Class
2214	Packaging Material Composition Quantity	8596	isPackagingElementIntendedForFoodContact	2486	Packaging Weight Reduction Class
6611	Tableware Type Code*	6280	Material Statement		
3443	Trade Item Material Designation Description	3455	Material Content		
3454	Material Code	3457	Material Percentage		
3460	Material Weight	3462	Material Treatment		
NEW (U.S LCL)	EPR Covered Material Class Code*				
NEW (U.S LCL)	EPR Covered Material Group Code*				

\*Complete code lists and Recommended Code Values for State-Specific Covered Materials are available in the [GS1 US Extended Producer Responsibility \(EPR\) Data Model Spreadsheet found in section 7.](#)

## 6.5 Hierarchy Examples

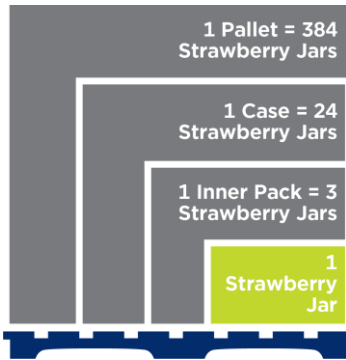
The following examples illustrate data segments for each of the four packaging levels: the GTIN for individual units (“each”), the GTIN for inner packs, the case GTIN, and the pallet GTIN. These hierarchies are sold to consumers through various channels. The scenarios covered include:

1. **GTINs produced at multiple facilities - in this case, two different locations.**
2. **Jar caps made from composite material - in this case, metal steel and metal tin.**
3. **Components with the same EPR group, but different EPR state classes.**

- 4. Components that share the same EPR class but belong to different EPR state groups.
- 5. Demonstrations of how eco-modulation attributes can differ between components.

Additional examples are available in the [GS1 US EPR Cross-Industry Examples Spreadsheet in section 7.](#)

### 6.5.1 GTIN for Individual Units (“each”)

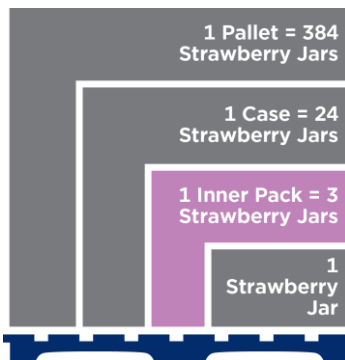



Level	Example	Description
Each		Product Name: Strawberry Jam Jar
		GTIN: 00614141321605
		GPC: 20000118

BMS ID	Attribute/ Code List	Strawberry Jam – NJ Plant	Strawberry Jam- AZ Plant
2169	packagingOwner	GLN 1	GLN 2
2186	packagingTypeCode	JR	JR
2187	packagingTypeDescription	One glass jar with tin plate steel lid (B2C)	One glass jar with tin plate steel lid (B2C)
2168	packagingLevel	1	1
2206	packagingMaterialType	GLASS	GLASS
2214	packagingMaterialCompositionQuantity	7.5lbs	8.5lbs
2593	packagingReuseRate	94%	90%
NEW	EPRCoveredMaterialClass (US Code List)	GLASS AND CERAMICS	GLASS AND CERAMICS
NEW	EPRCoveredMaterialClass (US Code List)	GLASS	GLASS
NEW	EPRCoveredMaterialGroup (US Code List)	GLASSCT	GLASSCT
NEW	EPRCoveredMaterialGroup (US Code List)	BOTT1	BOTT1
2166	packagingFeatureCode	CAP	CAP
2206	<i>packagingMaterialType</i>	<i>COMPOSITE</i>	<i>COMPOSITE</i>

BMS ID	Attribute/ Code List	Strawberry Jam – NJ Plant	Strawberry Jam- AZ Plant
2214	packagingMaterialCompositionQuantity	0.5lbs	0.7lbs
2237	compositeMaterialDetail/packagingMaterialTypeCode	METAL_STEEL	METAL_STEEL
2238	compositeMaterialDetail/packagingMaterialCompositionQuantity	0.2lbs	0.2lbs
2237	compositeMaterialDetail/packagingMaterialTypeCode	METAL_TIN	METAL_TIN
2238	compositeMaterialDetail/packagingMaterialCompositionQuantity	0.3lbs	0.5lbs
NEW	EPRCoveredMaterialClass (US Code List)	METAL	METAL
NEW	EPRCoveredMaterialGroup (US Code List)	STEE0	STEE0
NEW	EPRCoveredMaterialGroup (US Code List)	OTHE4	OTHE4
2593	packagingReuseRate	20%	20%

### 6.5.2 GTIN for Inner Packs



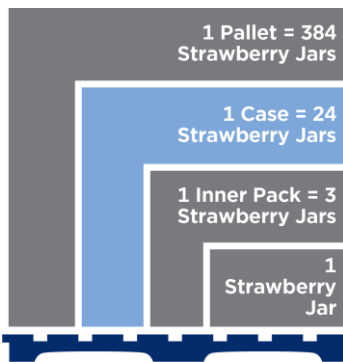
Level	Example	Description
Inner Pack		Product Name: Strawberry Jam 3-Pack
		GTIN: 10614141321602
		GPC: 20000118


BMS ID	Attribute/ Code List	Strawberry Jam Jars- NJ Plant	Paper Tray- NJ Plant
2169	packagingOwner	GLN 1	GLN 1
2186	packagingTypeCode	JR	PU

BMS ID	Attribute/ Code List	Strawberry Jam Jars- NJ Plant	Paper Tray- NJ Pant
2187	packagingTypeDescription	Three glass jars with tin plate steel lids (B2C)	One Paper Tray
2168	packagingLevel	1	2
2206	packagingMaterialType	GLASS	PAPER_PAPERBOARD
2214	packagingMaterialCompositionQuantity	22.5lbs	3.00LBS
2171	<i>packagingRecyclingProcessTypeCode</i>		RECYCLABLE
7122	<i>packagingRecyclabilityValue</i>		100%
2593	<i>packagingReuseRate</i>	94%	
NEW	EPRCoveredMaterialClass (US Code List)	GLASS AND CERAMICS	PAPER_FIBER
NEW	EPRCoveredMaterialClass (US Code List)	GLASS	
NEW	EPRCoveredMaterialGroup (US Code List)	GLASSCT	ALLF1
NEW	EPRCoveredMaterialGroup (US Code List)	BOTT1	
2166	packagingFeatureCode	CAP	
2206	<i>packagingMaterialType</i>	COMPOSITE	
2214	packagingMaterialCompositionQuantity	1.5lbs	
2237	<i>compositeMaterialDetail/packagingMaterialTypeCode</i>	METAL_STEEL	
2238	compositeMaterialDetail/packagingMaterialCompositionQuantity	0.6lbs	
2237	<i>compositeMaterialDetail/packagingMaterialTypeCode</i>	METAL_TIN	
2238	compositeMaterialDetail/packagingMaterialCompositionQuantity	0.9lbs	
NEW	EPRCoveredMaterialClass (US Code List)	METAL	

BMS ID	Attribute/ Code List	Strawberry Jam Jars- NJ Plant	Paper Tray- NJ Plant
NEW	EPRCoveredMaterialGroup (US Code List)	STEE0	
NEW	EPRCoveredMaterialGroup (US Code List)	OTHE4	
2593	packagingReuseRate	20%	

### 6.5.3 Case GTIN

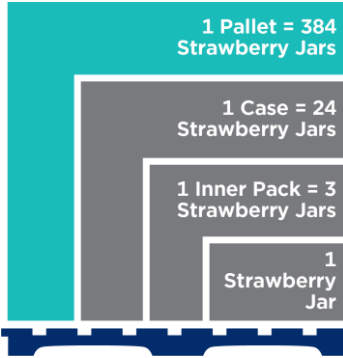


Level	Example	Description
Case		Product Name: Strawberry Jam Case (8 Inner Packs)
		GTIN: 20614141321609
		GPC: 20000118

BMS ID	Attribute/ Code List	Strawberry Jam Jars- NJ Plant	Paper Trays- NJ Plant	Cardboard Box- NJ Plant
2169	packagingOwner	GLN 1	GLN 1	GLN 1
2186	packagingTypeCode	JR	PU	BX
2187	packagingTypeDescription	24 glass jars with tin plate steel lids (B2C)	Eight Paper Trays	One Cardboard Box
2168	packagingLevel	1	2	2
2206	packagingMaterialType	GLASS	PAPER_PAPERBOARD	CORRUGATED_BOARD_OTHER
2214	packagingMaterialCompositionQuantity	180lbs	24lbs	5lbs
2171	packagingRecyclingProcessTypeCode		RECYCLABLE	RECYCLABLE
7122	packagingRecyclabilityValue		100%	76%
2593	packagingReuseRate	94%		
NEW	EPRCoveredMaterialClass (US Code List)	GLASS AND CERAMICS	PAPER_FIBER	PAPER_FIBER

BMS ID	Attribute/ Code List	Strawberry Jam Jars- NJ Plant	Paper Trays- NJ Plant	Cardboard Box- NJ Plant
NEW	EPRCoveredMaterialClass (US Code List)	GLASS		
NEW	EPRCoveredMaterialGroup (US Code List)	GLASSCT	ALLF1	CARD
NEW	EPRCoveredMaterialGroup (US Code List)	BOTT1		CORR
2166	packagingFeatureCode	CAP		
2206	packagingMaterialType	COMPOSITE		
2214	packagingMaterialCompositionQuantity	12lbs		
2237	compositeMaterialDetail/packagingMaterialTypeCode	METAL_STEEL		
2238	compositeMaterialDetail/packagingMaterialCompositionQuantity	4.8lbs		
2237	compositeMaterialDetail/packagingMaterialTypeCode	METAL_TIN		
2238	compositeMaterialDetail/packagingMaterialCompositionQuantity	7.2lbs		
NEW	EPRCoveredMaterialClass (US Code List)	METAL		
NEW	EPRCoveredMaterialGroup (US Code List)	STEE0		
NEW	EPRCoveredMaterialGroup (US Code List)	OTHE4		
2593	packagingReuseRate	20%		

### 6.5.4 Pallet GTIN



Level	Example	Description
Pallet		Product Name: Strawberry Jam Pallet (16 cases)
		GTIN: 30614141321606
		GPC: 20000118

BMS ID	Attribute/ Code List	Strawberry Jam Jars/ Paper Trays- NJ Plant	16 Cardboard Boxes- NJ Plant	Stretch Wrap	Wooden Pallet
2169	packagingOwner	<p>Because space is limited, please refer to the information provided for the GTIN above. For this pallet scenario, the following weights apply:</p> <p>384 jars= 2,880lbs of glass and 576lbs of composite caps. The caps have a total of 76.8lbs of metal steel and 115.2lbs of metal tin.</p> <p>128 Paper Trays= 384lbs of paperboard</p>	GLN 1	GLN 1	GLN 1
2186	packagingTypeCode		BX	STR	PX
2187	packagingTypeDescription		16 Cardboard Boxes	6 feet of plastic stretch wrap	One Wooden Pallet
2168	packagingLevel		2	3	3
2206	packagingMaterialType		CORRUGATED_BOARD_OTHER	POLYMER_LDPE	WOOD_OTHER
2214	packagingMaterialCompositionQuantity		80lbs	1.19lbs	63.934lbs
2171	packagingRecyclingProcessTypeCode		RECYCLABLE		
7122	packagingRecyclabilityValue		76%		
NEW	EPRCoveredMaterialClass (U.S Code List)		PAPER_FIBER	PLASTIC	WOOD_ORGMATERIALS
NEW	EPRCoveredMaterialClass (U.S Code List)			PLASTIC_FLEXIBLE	
NEW	EPRCoveredMaterialGroup (U.S Code List)	CARD	FLEX	WOOD1	
NEW	EPRCoveredMaterialGroup (U.S Code List)	CORR		ALLF1	

## 7 Ongoing Efforts & Resources

GS1 US is dedicated to advancing its efforts in supporting industry best practices related to EPR regulations. These ongoing initiatives aim to foster collaboration, support reporting, and streamline processes within the packaging sector. Below are key actions we will continue to pursue over the coming years:

- Assist industries in understanding the various EPR laws in the U.S., Canada, and Europe, via additional resources.
- Socialize the GS1 US EPR Data Model with producer responsibility organizations and other industry groups.
  - Promote streamlined state classifications and groups.
  - Encourage the use of the GS1 US Data Hub to validate ownership of GTINs and GLNs.
- Collaborate with industries to implement GS1 US identifiers and the GS1 US EPR Data Model as industry works to meet regulatory requirements.
- Work with packaging suppliers to adopt GS1 identifiers and identify proper solutions for data sharing.
- Continue updating the GS1 US EPR Data Model as EPR requirements evolve.

### 7.1 Resources

The following websites and documents provide additional background and relevant information:

- [GS1 US Extended Producer Responsibility \(EPR\) Data Model Spreadsheet](#): This document outlines the GS1 US Cross Industry EPR Workgroup Data Model and provides attribute definitions and code values for the relevant industry-agreed code lists.
- [GS1 US Cross Industry Extended Producer Responsibility \(EPR\) Examples](#): This document provides additional EPR data segment examples for various products in the Apparel, Grocery, Foodservice, and Healthcare industries.
- [GS1 US Data Sharing Spreadsheet](#): Standard Excel EPR data sharing spreadsheet with built-in code lists for packaging materials, state classifications, and state groups/forms.
- GS1 US EPR Schemas for Oregon, Colorado, and California: These JSON files can be leveraged in data exchange platforms to automate and streamline the appropriate Extended Producer Responsibility (EPR) classifications and groupings of the packaging materials being reported for California, Colorado, and Oregon.
  - [Combined States](#)
  - [Oregon](#)
  - [Colorado](#)
  - [California](#)
- [Circular Action Alliance Website](#): CAA is the approved Producer Responsibility Organization to implement EPR laws for paper and packaging across several U.S. states. Access to EPR resources, registration and registered Producer Portals for data submission are available here.
- [Sustainable Packaging Coalition Resources Hub](#): This resource hub has many microlearnings to help you understand EPR regulations in the United States, including a condensed overview regarding EPR Covered Products, EPR Producer Requirements and Exemptions, and the eco-modulation landscape for the different states.

- [GS1 US Data Hub | Product GTIN Creation and Barcode Generation Guide](#): This document provides step-by-step instructions on how to create and manage GS1 identifiers, including GTINs and GLNs in GS1 US Data Hub.
- [GS1 US Data Hub | Location- View/Use](#): Access location information from your trading partners by subscribing to Data Hub View/Use using this link.
- [GS1 General Specification Standard](#): This document provides the general guidelines that identify how identification keys, data attributes, and barcodes must be used in business applications. See section 4.2.3 for detailed GTIN allocation rules.
- [GS1 GDSN 3.1 Trade Item Implementation Guide \(or updated version\)](#): This guideline supplements GDSN with advice on attribute implementation and operation. It supports a variety of complicated issues encountered when implementing GDSN while increasing consistency and ease of implementation through real-world examples.
- [GDSN Navigator Tool](#): Use this database application to explore the set of attributes that are relevant for the trade item. The GDSN tab allows navigation through GDSN modules and classes, providing clear XPath info, attribute definitions, BMS ID, and attribute datatype info.
- [GS1 GDSN Attributes with BMS ID and XPath](#): Standard document used to identify BMS ID and XPath of GDSN attributes. To find the latest document, navigate through the "Latest Version" link.
- [GS1 GDSN Code List Document](#): Standard document containing an updated list of code values maintained by GS1. To find the latest document, navigate through the "Latest Version" link.
- [GTIN Management Standard](#): Provides the global supply chain for the identification of any item that is traded (priced, ordered, invoiced).

In addition, we recommend stakeholders review state agencies' websites for official updates, guidance, and resources on that state's specific EPR requirements.



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\*If applicable

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