

Preparing for Sunrise 2027: Ensuring Compliance with GS1 Standards



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Getting your product codes ready for Sunrise 2027 with GS1 standards and 2D barcode compliance

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GS1 Sunrise 2027

Sunrise 2027 is a global initiative by GS1 to transition from traditional 1D barcodes to 2D barcode Sunrise 2027, such as QR Codes and Data Matrix codes, by the end of 2027.

Backed by retailers around the world it marks a global shift in product identification, requiring businesses to adopt GS1-standards based 2D barcodes for enhanced product information transparency, traceability and authentication, allowing consumers to access detailed product data via smartphone scans. Retailers and manufacturers must now prepare by upgrading systems and product packaging to support 2D barcodes, ensuring a smooth transition and improved supply chain efficiency.

By preparing now, businesses can take advantage of value creation opportunities presented by the move from 1D to 2D barcodes, including streamlining operations, improving consumer safety, and future-proofing their supply chains.

More than this, brand owners must now seize the opportunity to transform their products into owned digital channels. Understanding the impact of Sunrise 2027 is crucial for seamless compliance and long-term competitiveness in an evolving marketplace.

GS1 Standards: How to Check if Your Product Codes Are Registered

- **Search the GS1 GEPIR database:** Enter your GTIN or company name in GS1's GEPIR tool to check its registration. If valid, company ownership details will appear.
- **Check via your GS1 account:** Log in to your local GS1 portal to view your registered GTINs.
- **Validate with a Checksum calculation:** GTINs (8, 12, 13, or 14 digits) can be checked using GS1's free Check Digit Calculator.

If your codes are unregistered or fail validation, they may be internal SKUs or invalid GTINs, requiring updates.

Ensuring Your Codes Meet GS1 Sunrise 2027 Standards

Sunrise 2027 isn't just about using GTINs—it's about ensuring your product codes carry the right data for seamless retail and logistics integration.

GS1 compliance requirements:

- Do your codes support serialization? (SGTIN format, if required)
- Are batch/lot numbers and expiration dates included? (Essential for food, pharmaceuticals, and perishables)
- Are your codes in a scannable format like QR code powered by GS1 (also known as GS1 Digital Link) or such as GS1 Data Matrix or RFID?

GS1 Compliance Requirements: How to Check This for Your Products

- If your GTINs lack serialization, you should consider adding or preparing for serial numbers, especially for pharmaceuticals, cosmetics and any products in scope of upcoming EU digital product passport regulations.
- Products with expiration dates or batch numbers should start using the GS1 Digital Link structure for encoding these data into their product 2D barcodes (QR codes) or RFID tags.
- Internal SKUs may need mapping to GS1-compliant codes to prevent future supply chain or retail sale disruptions.



Updating Your Codes for Compliance

If your codes don't meet compliance standards, take these steps:

- **GS1 QR code deadline:** register with GS1 if you haven't yet. This provides a company prefix, enabling you to generate valid GTINs.
- **Update your product database** to include essential details like GTINs, batch numbers, and expiration dates.
- **GS1 2D barcode implementation:** implement serialization if needed, based on the GS1 Digital Link standard to unlock the most comprehensive value from 2D barcodes or for non-POS/non-consumer scenarios, consider SGTIN-96 for RFID or GS1 Data Matrix barcodes.
- **Ensure system compatibility** by verifying that your ERP, WMS, and traceability platforms can process the updated codes.

GS1 Compliance Requirements: Tools to Help You Get Started

- **GS1 GEPIR** – Check if your GTINs are officially registered.
- **GS1 Check Digit Calculator** – Ensure your GTINs are correctly formatted.
- **ERP & WMS Integration Guides** – Learn how to update your supply chain systems for GS1 compliance.

GS1 Global Standards: Next Steps

Preparing for Sunrise 2027 ensures a seamless transition to GS1-compliant product identification, preventing last-minute challenges.

Non-compliance can lead to supply chain disruptions, product rejections, and regulatory penalties, impacting operations and revenue. By updating GTINs, implementing serialization, and integrating GS1 serialization standards into your systems, your business stays ahead of industry changes. Take proactive steps today to safeguard efficiency, traceability, and compliance. Assess your current codes, leverage GS1 tools, and collaborate with supply chain partners to ensure readiness.

Acting early not only mitigates risks but also positions your business for long-term success in a rapidly evolving market.