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How Digital Product Passport Standardization Will Impact Exporters



As the EU Battery Regulation (EUBR) and Ecodesign for Sustainable Products Regulation (ESPR) advance, the Digital Product Passport (DPP) has moved from concept to mandatory enforcement, making compliance a mandatory prerequisite for manufacturing exporters in batteries, electronics, textiles, and furniture, etc. Beyond Europe, DPP standardization is also sweeping the globe.

The EU DPP Implementation Window & Global Standards

1. The Decentralized System Design

The EU DPP is not a single, centralized database. Instead, it relies on a hybrid "central index + distributed storage" framework:

- **Official EU DPP Registry:** Functions solely as an index directory storing mappings between unique product identifiers (UIDs) and data access addresses.
- **Distributed Enterprise Storage:** Actual lifecycle data and compliance documents are hosted on enterprise private servers or authorized DPP service providers, connected via standardized APIs.



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2. Critical Timelines & Standard Protocols

- February 18, 2027: Mandatory enforcement begins for EV, industrial, and light transport (LMT) batteries. Obligations will subsequently expand to electronics, textiles, furniture, and tires under ESPR.
- CEN-CENELEC JTC 24 Standards: Eight EN 18XXX standards define the technical foundation—covering identifiers, QR code carriers, data exchange, and lifecycle APIs. Newly released EN 18239 (security permissions) and EN 18246 (data authentication) safeguard business secrets while ensuring tamper-proof integrity.

3. The Global Standardization Framework

The ISO/IEC JTC 5 committee, formed in 2026 with 48 member nations, is establishing a universal international DPP framework. To avoid redundant, costly retrofits, exporters must adopt flexible systems that satisfy EU requirements today while seamlessly adapting to global standards and local systems (such as Chinese MA-DPP) tomorrow.

Strategic Recommendations for Exporters

- Start Early:** With the February 2027 battery deadline approaching, supply chain sorting and system integration require immediate pilot testing.
- Prioritize Core Compliance:** Separate mandatory regulatory requirements from optional value-added supply chain tracing.
- Focus on System Design:** Choose future-proof providers that respect decentralized structures and global standards.

Pain Points & The SGS DPP Solution

Exporters frequently struggle with decentralized framework demands, data sovereignty versus hosting duties, tracking multi-coding systems (like GS1 and MA codes), and avoiding sunk costs from frequent standard updates.

Backed by SGS expertise, SGS DPP solutions fully aligns with all eight CEN-CENELEC JTC 24 standards using a flexible dual-storage model:

- Client Self-Storage:** Keeps original technical documents on client servers while structured fields sit on the SGS platform, balancing sovereignty and verification.
- SGS Hosted Storage:** An out-of-the-box cloud solution designed for small and medium-sized enterprises.
- Core Capabilities:** Supports multi-ID compatibility (GS1 and MA codes), 10-year data retention, anti-tampering hash functions, standardized ERP/MES system integration, third-party data verification, and multi-category template configurations.

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