

Global Packaging Standards --A Comprehensive Guide to International Compliance

Introduction

For purchasing professionals sourcing packaging materials and equipment globally, navigating international regulations and standards represents a complex but essential responsibility. Different countries and regions enforce vastly different packaging requirements regarding food safety, material composition, labeling, sustainability, and waste management. Failure to comply with these requirements results in costly consequences including product recalls, customs delays, fines, and market access restrictions. Understanding global packaging standards and establishing systematic compliance processes protects company interests while ensuring consumer safety.^{[1][2][3][4][5][6]}

The regulatory landscape is rapidly evolving, with increasingly stringent requirements emerging across major markets. The European Union, United States, China, Japan, and India each enforce distinct standards reflecting regional priorities and consumer protection approaches. For purchasing professionals, the challenge is understanding these diverse requirements and ensuring suppliers and products meet all applicable standards before commitments are made.^{[7][6-1][8][9][1-1]}

Understanding the Global Regulatory Framework

The packaging industry operates under multiple overlapping regulatory systems reflecting different geographical regions and market priorities.^{[4-1][8-1][1-2]}

European Union Requirements establish the most comprehensive regulatory framework. EU regulations cover food contact materials safety through Regulation (EC) 1935/2004, plastic-specific requirements through EU 10/2011, and waste management through the Packaging and Packaging Waste Regulation (PPWR). These regulations apply not just to European manufacturers but to all companies selling products in EU markets.^{[2-1][1-3][4-2]}

United States Requirements under FDA jurisdiction mandate compliance with Title 21 Code of Federal Regulations (21 CFR) establishing approved food contact substances, migration limits, and substance restrictions. The Food Safety Modernization Act (FSMA), particularly Rules 204 and 206 effective in 2025-2026, dramatically expand traceability and documentation requirements.^{[10][11][12][1-4]}

Regional Variations across Asia, including China, Japan, and India, impose distinct requirements reflecting local priorities. China mandates IPPC marking for wood packaging, requires degradable and recyclable materials, and specifies that labels must include Chinese language information and locally registered distributor details. Japan enforces strict food

contact material specifications that recently expanded mandatory migration testing requirements. India requires BIS certification for certain products and mandates specific labeling including the importer's name, net quantity, and maximum retail price on all pre-packaged imports. [\[13\]\[9-1\]\[14\]\[15\]\[16\]](#)

Food Contact Material Regulations and Testing

Food contact materials (FCMs)—packaging actually touching food—face particularly stringent requirements because they directly affect consumer health. [\[17\]\[18\]\[19\]\[4-3\]](#)

FDA Requirements (United States) mandate that all substances in food contact materials must meet one of four conditions. [\[11-1\]\[10-1\]](#)

1. Be listed in 21 CFR as approved indirect food additives
2. Be GRAS (Generally Recognized as Safe) for intended use
3. Be covered by Threshold of Regulation (TOR) exemption
4. Have Food Contact Substance Notification (FCN) approval from FDA

Additionally, substances cannot migrate to food in harmful amounts. Migration testing verifies that chemicals from packaging materials don't transfer excessively into food products. [\[19-1\]\[20\]\[10-2\]\[11-2\]](#)

EU Requirements (Regulation 1935/2004) establish a different approach with more centralized safety assessment. All substances must be safety assessed by the European Food Safety Authority (EFSA) before approval for food contact use. Migration limits are established for overall migration (10 mg/dm²) and specific substances, with detailed testing protocols specified in DIN EN 1186. [\[21\]\[4-4\]\[17-1\]\[19-2\]](#)

Migration Testing Standards differ by region but serve identical purposes—verifying that packaging materials don't release harmful substances into food. Overall migration testing measures total non-volatile substances that migrate from packaging into food simulants under specified conditions. Specific migration testing measures individual hazardous substances like heavy metals, banned substances, or other regulated chemicals. [\[20-1\]\[19-3\]\[21-1\]](#)

Japan's Updated Standards (effective 2025) mandate total migration testing for all food contact apparatus, containers, and packaging—a requirement previously less common in Japanese regulation. This expansion reflects global harmonization toward stricter testing standards. [\[14-1\]\[16-1\]\[13-1\]](#)

Key International Standards and Certifications

Multiple international standards have emerged as globally recognized benchmarks for packaging safety, quality, and compliance. [\[3-1\]\[22\]\[23\]\[24\]\[25\]](#)

BRC Global Standard for Packaging Materials (Issue 7, effective 2025) represents the most widely accepted international packaging standard. BRC certification demonstrates that packaging companies maintain food safety, quality, and legal compliance systems meeting rigorous criteria. The standard includes requirements for HACCP systems, quality management, traceability, and ongoing audits.^{[26][24-1][25-1][3-2]}

Achieving BRC certification follows a defined process:^{[27][26-1]}

- **Pre-audit:** Initial assessment of compliance readiness
- **Certification audit:** Comprehensive review against BRC requirements
- **Verdict:** Certification issued upon successful compliance demonstration
- **Annual audits:** Ongoing surveillance ensuring continued compliance^[26-2]

Grade ratings (AA, A, B, C, D) reflect compliance levels, with Grade C or D receiving 6-monthly surveillance visits compared to 12-monthly for higher grades.^[27-1]

ISO 22000 and FSSC 22000 focus on food safety management systems applicable across supply chains. ISO 22000 provides the foundational framework, while FSSC 22000 (Food Safety System Certification 22000) adds additional requirements specific to food, feed, and packaging manufacturing sectors. FSSC 22000 has become particularly important for packaging manufacturers serving major retailers requiring supplier certification.^{[28][29][30][31][32]}

EN13432 Certification for compostable packaging is now mandatory in EU markets. Products labeled compostable or biodegradable must carry EN13432 certification from accredited bodies like TÜV Austria or DIN CERTCO. Without EN13432 certification, compostability claims are prohibited in the EU.^[1-5]

BPI (Biodegradable Products Institute) Certification serves as the North American equivalent, certifying that materials comply with ASTM D6400 standards for compostability. California, New York, and Washington mandate BPI certification for products labeled compostable.^[1-6]

Regional Compliance Requirements

Purchasing professionals must understand specific requirements varying significantly by major market regions.^{[9-2][15-1][7-1][1-7]}

European Union (EU) Requirements operate under multiple frameworks:^{[33][2-2][4-5]}

- **Design for Recyclability (DfR)** requirements mandate that all packaging be recyclable by 2030 and comply with specific criteria for material composition and design^[33-1]
- **Extended Producer Responsibility (EPR)** schemes require manufacturers to fund waste management. Registration with national EPR bodies (CITEO in France, LUCID in Germany) is mandatory^{[7-2][1-8]}

- **Packaging Waste Reduction** targets require reducing packaging volume, increasing recyclable content, and meeting minimum recycled material percentages^[2-3]
- **Plastic Packaging Tax** applies in some EU countries, taxing plastic packaging lacking sufficient recycled content^[7-3]

United States Requirements include:^{[10-3][1-9]}

- **FSMA Rule 204** (effective 2026) mandates enhanced traceability requiring detailed recordkeeping of critical tracking events^{[12-1][1-10]}
- **Plastic Packaging Tax** potentially applies to single-use plastic bags and other items^[1-11]
- **State-Specific Regulations:** California, New York, and other states enforce unilateral bans on unverified biodegradable claims and require certified compostable labeling^[1-12]
- **Migration Limits:** No formal overall migration limit exists, but substance-specific migration limits are regulated^[19-4]

China Requirements mandate:^[9-3]

- **IPPC Mark:** All wood packaging requires International Plant Protection Convention (IPPC) marking^[9-4]
- **Material Standards:** Packaging must be non-toxic, easily degradable, and recyclable^[9-5]
- **Language Requirements:** Primary language on packaging must be Simplified Chinese; English and other languages can be secondary^[9-6]
- **Distributor Information:** Name and address of locally registered distributor must appear on labels^[9-7]
- **Food Labeling:** Must include net weight, ingredient list, distributor address, production date, and expiry date^[9-8]

Japan Requirements include:^{[15-2][14-2]}

- **Food Contact Substance List:** Specific substances permitted in food contact applications—additives and polymers must be on approved lists^[14-3]
- **Language Requirements:** Japanese, English, and French permitted; all units must use metric system alongside Japanese measurements^[15-3]
- **Migration Testing:** Comprehensive testing required for all food contact packaging^{[13-2][14-4]}
- **Pharmaceutical Packaging:** Particularly strict visual standards and labeling precision for pharmaceutical applications^[34]

India Requirements for pre-packaged imports:^[9-9]

- **Importer Information:** Name and address of Indian importer must be displayed^[9-10]
- **Generic Name and Net Quantity:** Generic or common product name and standard unit measurements required^[9-11]
- **Language:** English and/or Hindi permitted on packaging^[9-12]
- **Maximum Retail Price (MRP):** Required on all packaged commodities^[9-13]
- **BIS Certification:** Government-endorsed optional certifications from Bureau of Indian Standards highly regarded but not always mandatory^[9-14]

Labeling and Claim Compliance

Packaging labeling requirements vary dramatically across markets, creating complexity for companies serving multiple regions.^{[35][36][37][38]}

Sustainability Claims require substantiation in most developed markets. The EU's Green Claims Directive restricts unsubstantiated environmental claims, requiring companies to provide evidence for sustainability assertions. Similar scrutiny in US states and Canada penalizes exaggerated or misleading sustainability claims.^{[39][36-1][38-1]}

Required Information Variations include:^{[35-1][15-4][9-15]}

- Country of origin requirements (varies by region—sometimes mandatory, sometimes optional)
- Language requirements (primarily English in English-speaking countries, local language requirements in non-English markets)
- Unit measurement standards (metric in most countries; US uses imperial)
- Distributor/manufacturer information (different countries require different levels of detail)

Allergen and Ingredient Declarations follow country-specific rules. EU requires allergen highlighting in bold; US requires explicit allergen statements; some Asian markets have unique requirements.^{[38-2][35-2]}

Certification Bodies and Audit Processes

Independent certification bodies verify compliance with international standards, providing assurance to retailers and consumers.^{[40][41][26-3][27-2]}

Accreditation Requirements for certification bodies include:^{[41-1][40-1]}

- Technical competence in specific standards
- Auditor qualification and training
- Record-keeping and documentation procedures
- Audit frequency requirements based on certification grade

Major Certification Bodies include SGS, DNV, RINA, TÜV, Kiwa, and others providing BRC, FSSC 22000, ISO 22000, and other certifications. ^{[42][40-2][41-2]}

Audit Frequency depends on certification grade. ^[27-3]

- Grades AA, A, B: Annual audits
- Grades C, D: Semi-annual audits
- Failed audits require corrective actions before re-certification ^[27-4]

Developing Compliance Strategy

Purchasing professionals must establish systematic approaches ensuring suppliers meet all applicable standards. ^{[6-2][8-2][1-13]}

Step 1: Identify Applicable Standards by determining which markets your products enter and which regulations apply. Different products (food contact vs. non-food, compostable vs. conventional, pharmaceutical vs. cosmetic) face different requirements. ^{[6-3][1-14]}

Step 2: Audit Supplier Capabilities to verify they understand and can meet required standards. Request documentation showing certifications, test reports, and compliance procedures. ^[6-4]

Step 3: Specify Requirements in Contracts clearly stating all applicable standards, testing protocols, certifications, and documentation requirements. Ambiguous requirements lead to supplier non-compliance and unexpected problems. ^[6-5]

Step 4: Verify Compliance Through Documentation requesting migration test reports, certification documents, HACCP documentation, traceability records, and other evidence demonstrating compliance. ^{[6-6][1-15]}

Step 5: Conduct Regular Audits of suppliers' quality systems, testing procedures, and regulatory compliance. Audit frequency should align with risk—higher-risk suppliers warrant more frequent audits. ^{[26-4][27-5]}

Hidden Compliance Challenges

Several commonly overlooked compliance issues create problems despite apparent supplier certifications. ^{[8-3][1-16]}

Substance Migration and Food Contamination Risk occurs when packaging materials release unacceptable amounts of chemicals into food. Testing protocols differ by region—EU's stricter overall migration limits (10 mg/dm²) differ from US approaches. Suppliers must understand which testing standards apply to their customer's markets. ^{[20-2][19-5]}

Recycled Plastic Content Regulations prohibit certain recycled materials in food contact applications in some jurisdictions. EU regulations on recycled plastic and PFAS content

create additional complexities. Suppliers must track material sourcing ensuring compliance with recycled content regulations. [\[2-4\]\[13-3\]\[1-17\]](#)

Compostability Claims without proper certification cause serious compliance violations. EN13432 certification is mandatory in EU; BPI certification mandatory in some US states; lacking these certifications means compostability claims are prohibited and products may be rejected. [\[1-18\]](#)

Traceability Documentation required under FSMA and EU regulations must flow through entire supply chains. Packaging suppliers must maintain records enabling "one step forward, one step back" traceability—ability to identify previous and subsequent supply chain partners. [\[12-2\]\[1-19\]](#)

Future Regulatory Trends

Packaging regulations continue evolving, with stricter requirements emerging. [\[8-4\]\[2-5\]\[6-7\]\[1-20\]](#)

Increasing Sustainability Requirements extend beyond EU to other markets. Extended Producer Responsibility (EPR) schemes are spreading globally. Design for Recyclability requirements are expanding beyond EU. [\[33-2\]\[2-6\]\[7-4\]\[1-21\]](#)

Stricter Migration Testing requirements are becoming global standard. Japan's recent adoption of comprehensive migration testing signals movement toward universal testing requirements. [\[16-2\]\[13-4\]](#)

Traceability and Transparency Demands are intensifying. FSMA Rule 204 represents the beginning of enhanced traceability mandates likely to expand to other jurisdictions. [\[12-3\]\[1-22\]](#)

Plastic Reduction and Bans continue accelerating. Single-use plastic bans are spreading, and compostable/biodegradable alternatives face increasing regulatory scrutiny for legitimate credentialing. [\[1-23\]](#)

Conclusion

Global packaging standards and international compliance requirements represent essential considerations in procurement decision-making. Failure to comply creates serious business consequences including product recalls, customs delays, fines, and market access restrictions. [\[8-5\]\[6-8\]\[1-24\]](#)

For purchasing professionals, establishing systematic compliance processes is critical: (1) Identify all applicable standards and regulations based on product types and markets served; (2) Audit supplier capabilities and require appropriate certifications; (3) Specify compliance requirements clearly in purchase agreements; (4) Verify compliance through documentation and regular audits; (5) Stay informed about evolving regulations and emerging requirements. [\[8-6\]\[26-5\]\[6-9\]\[1-25\]](#)

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