

Report

IAEG Work Group 9

Global Packaging Regulations and Implications for the Aerospace and Defense Industry



Report

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Prepared for IAEG Work Group 9

8 April 2026

Version 1

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DEFINITIONS

Term	Definition
A&D	Aerospace and defense
B2B	Business to business
CPCB	Central Pollution Control Board (India)
DoC	Declaration of Conformity
DOT	Department of Transportation (United States)
DRS	Deposit Return Schemes (United Kingdom)
EAEU	Eurasian Economic Union
EC	European Commission
EPA	Environmental Protection Agency
EPR	Extended Producer Responsibility
EU	European Union
FOD	Foreign object debris
FPR	Federal Plastics Registry (Canada)
GHS	The Globally Harmonized System of Classification and Labelling of Chemicals
HCS	Hazard Communication Standards
IAEG	International Aerospace Environmental Group
LCA	Life Cycle Assessment
MRO	Maintenance, repair, and operations
NEPM-UPM	National Environment Protection (Used Packaging Materials) Measure 2011 (Australia)
OEM	Original equipment manufacturers
OSHA	Occupational Safety and Health Administration (United States)
PCR	Post-consumer recycling
PET	Polyethylene terephthalate
PFAS	Per- and polyfluoroalkyl substances
ppb	Parts per billion
ppm	Parts per million
PPWR	Plastics and Packaging Waste Regulations
PRO	Producer Responsibility Organization
PVC	Polyvinyl chloride
UK	United Kingdom
UN	United Nations
WMA	Waste Minimization Act (New Zealand)
VMP	Variable Monetary Penalties (United Kingdom)

EXECUTIVE SUMMARY

Aerospace and Defense (A&D) companies operate across complex multi-jurisdictional value chains. Global packaging regulatory obligations can be triggered by facility operations, product portfolios, and supply chain relationships. This report, sponsored by IAEG Work Group 9, provides IAEG members and their supply chain with a structured, global inventory of packaging regulations relevant to the A&D sector.¹ The contents provided in this report reflect information captured by the end of December 2025. The report supports IAEG Work Group 9's objectives for:

- » maintaining an updated list of key recurring global requirements;
- » understanding potential compliance and operational risk; and
- » communicating timelines and practical impacts to member companies and their supply chains.

Scope and Focus

This report provides a high-level strategic analysis for IAEG members and their supply chains to evaluate emerging global packaging regulations and their impact on compliance and potential operational risk for member companies and their supply chains. The analysis focuses on regulations affecting firms within the Aerospace & Defense (A&D) sector. In some jurisdictions, packaging regulations are not yet established or are in a state of development. The latter were considered out of scope and excluded from the report.

Emergence of Packaging Extended Producer Responsibility Frameworks

As of January 2026, the global regulatory landscape for packaging is shifting fundamentally from voluntary guidelines to binding Extended Producer Responsibility (EPR) frameworks. Governments are transitioning from simple waste management models to circular economy mandates.

For the A&D industry, the critical finding of this report is the absence of "Defense Exemptions." Most new regulations analyzed, including the European Union's Plastics and Packaging Waste Regulations (PPWRs) and US State Packaging EPR laws, contain no blanket/broad exclusions for defense, armaments, or national security supply chains. In the US and Canada, with the absence of strong national level frameworks, local state/provincial authorities are setting EPR mandates and requirements.

Note

In the United States and Canada, there are several analogous state and provincial level packaging regulations. This report provides some examples of state and provincial reporting requirements but is not meant to be comprehensive at those levels. A subset of examples has been provided to inform on the general landscape.

This report aims to capture the major global packaging regulations in priority countries as defined by IAEG WG9. This analysis is for informational purposes only and does not constitute legal or technical advice. It does not constitute legal advice, and applicability can vary. Deadlines and thresholds may change through amendments and regulator updates. Users should verify final applicability and submission details using the official links provided, particularly when preparing filings for a specific reporting year. Reporting expectations are dynamic and as such this report should be treated as a living reference with periodic refresh and confirmation against official sources prior to submissions. Because the regulatory landscape is subject to change and interpretation by local authorities, please consult with your legal counsel or regulatory specialist regarding compliance obligations.

¹ For additional deliverables from WG9, please check the [WG9 Page](#) on IAEG.com.



1.0 EUROPE

1.1 European Union (EU) - Regulation (EU) 2025/40-Packaging and Packaging Waste Regulation

Status: In force (published 22 January 2025)

Jurisdiction: European Union (directly applicable in all Member States)

Compliance Trigger: The Regulation's mandates apply universally to all packaging and packaging waste placed on the Union market, regardless of the material used or its origin (industrial, commercial, retail, or household). Enterprises classified under Commission Recommendation 2003/361/EC as “microenterprises” benefit from regulatory relief. For example: Exemption from the mandatory re-use targets for transport, grouped, and sales packaging if volumes made available are less than 1,000 kilograms. The Regulation will become directly applicable from 12 August 2026, without the need for a national implementing regulation (General Application).²

Summary

Regulation (EU) 2025/40 replaces Directive 94/62/EC, shifting EU packaging law to a directly applicable regulation that applies to all packaging regardless of the material used or its industrial source. The regulation contains no blanket exemption for the A&D industries. The regulation affects how packaging must be designed, managed, and reported when products are placed on the EU market — impacting supply chains, compliance costs, and sustainability strategy. General supply chain packaging, including films, spare parts protection, and non-hazardous logistics, must meet binding design-for-recycling criteria and recycled content targets by 1 January 2030, or face market restrictions.

Context and Background

Regulation (EU) 2025/40 comes into effect on 12 August 2026 to harmonize national measures and mitigate the increase in packaging waste. The regulation enforces a circular economy transition by mandating that all packaging placed on the market be recyclable by 1 January 2030, subject only to narrow exemptions for medicinal products, contact-sensitive medical devices, and packaging used for the transport of dangerous goods.³ Additionally, it introduces strict minimization requirements, prohibiting packaging designed only to increase perceived volume and capping the empty space ratio for grouped and transport packaging at 50%.

Scope and Applicability

- » Affected Products:
 - All packaging placed on the market, regardless of material, including sales, grouped, and transport packaging.

² Regulation (EU) 2025/40 does not provide a blanket exemption for micro, small, or medium-sized enterprises based on number of employees or turnover. All companies that place packaging on the EU market must comply with the Regulation's basic requirements irrespective of company scale.

³ Dangerous goods are substances and articles that pose risks to health, safety, property, or the environment during transport. These goods are classified according to hazard types (e.g., explosives, flammable liquids, toxic substances, corrosives, etc.) aligned with the international UN Recommendations on the Transport of Dangerous Goods.

- Plastic parts of packaging, subject to mandatory recycled content targets of 10% to 35%.
- Food-contact packaging, specifically regarding per- and polyfluoroalkyl substances (PFAS) bans effective 12 August 2026.
- » A&D Exclusions:
 - Defense/Military: No explicit exclusion. The regulation applies to all packaging used in industry or services. The text contains no keywords for defense, armaments, or national security, and provides no blanket exemption for military supply chains.
 - Transport Safety (dangerous goods): Explicit exclusion. Packaging used for the transport of dangerous goods in accordance with Directive 2008/68/EC is explicitly exempt from:
 - Recyclability requirements (Grades A–C).⁴
 - Recycled content targets (plastic).
 - Re-use targets (transport packaging).
- » Aviation Specific: No airworthiness-based exclusions exist for general aircraft parts packaging.

Critical Timeline and Deadlines

- » 12 August 2026: Regulation goes into effect; Directive 94/62/EC is repealed. Food-contact packaging containing PFAS above specific limits (e.g., 50 parts per million [ppm] total) is prohibited.
- » 1 January 2028: European Commission (EC) deadline to adopt delegated acts establishing "design for recycling" criteria and performance grades.
- » 1 January 2030:
 - Packaging placed on the market must be recyclable to at least Grade C ($\geq 70\%$).
 - Mandatory recycled content targets apply to plastic parts of packaging (35% for general plastics; 10% to 30% for contact-sensitive).
 - Economic operators must ensure the maximum empty space ratio in grouped, transport, and e-commerce packaging is 50%.
 - Restrictions on single-use plastic grouped packaging (e.g., collation films at point of sale) take effect, excluding packaging necessary for handling.
- » 1 January 2038: Packaging must be recyclable to at least Grade B ($\geq 80\%$).
- » 1 January 2040: Recycled content targets increase (e.g., 65% for general plastics; 50% for contact-sensitive polyethylene terephthalate [PET]).

Key Regulatory Provisions

- » Extended Producer Responsibility: Producers are obliged to register in national databases and assume the full financial and organizational costs of their packaging's end-of-life management, including collection and treatment. The mandatory financial contributions are eco-modulated, meaning fees are adjusted based on the specific packaging's recyclability performance grade and percentage of recycled content. Producers may fulfil these rigorous obligations either independently or collectively through authorized Producer Responsibility Organizations (PROs).

⁴ The recyclability grades (A, B and C) classify packaging according to the percentage of the packaging unit (by weight) that is recyclable, based on European Commission-adopted design-for-recycling criteria. Grade A (very highly recyclable) means $\geq 95\%$ of the packaging (by weight) must be recyclable under the design-for-recycling criteria. Grade B (high to medium recyclable) means at least $\geq 80\%$ of the packaging (by weight) must be recyclable. Grade C (medium recyclable) means that at least $\geq 70\%$ of the packaging (by weight) must be recyclable. Packaging that falls below Grade C (i.e., $< 70\%$ recyclable) is generally considered *technically non-recyclable* under the regulation's criteria and cannot be placed on the EU market after 1 January 2030.

- » Recycled Content (plastic):
 - By 1 January 2030: Minimum post-consumer recycling (PCR) content of 35% for general plastic packaging, 30% for contact-sensitive PET (excluding single-use bottles), and 10% for contact-sensitive non-PET plastics.
 - By 1 January 2040: Increases to 65% for general plastic packaging.
- » Banned Formats (From 1 Jan 2030):
 - Grouped Packaging: Single-use plastic packaging used to group goods at the point of sale (e.g., collation films/rings). Exemption: Packaging necessary to facilitate handling/transport remains permitted.
 - Carrier Bags: Very lightweight plastic carrier bags (<15 microns), unless required for hygiene or loose food.
- » Reporting: Producers, or their designated producer responsibility organizations, must submit comprehensive annual reports to the national competent authority by 1 June for the preceding calendar year. Producers making less than 10 tonnes of packaging available per year are permitted to submit a simplified annual report to strategically reduce their administrative burden.
- » Declaration of Conformity (DoC) and technical documentation:
 - Both manufacturers and importers are legally mandated to retain the EU DoC and the associated technical documentation based on the specific packaging type.
 - For single-use packaging, these compliance documents must be kept available for five years from the date the packaging is placed on the market.
 - For reusable packaging, the mandatory retention period is extended to ten years from the date of market placement.
- » Labeling and Traceability:
 - Material Composition: From 12 August 2028, packaging must bear a harmonized label with pictograms to facilitate sorting.
 - Reusable Packaging: Must bear a QR code/digital data carrier to facilitate tracking and the calculation of trips and rotations.
- » Chemical Limits:
 - Heavy Metals: The sum of lead, cadmium, mercury, and hexavalent chromium shall not exceed 100 milligrams per kilograms.
 - PFAS: From 12 August 2026, banned in food-contact packaging if >25 parts per billion (ppb; targeted), >250 ppb (sum), or >50 ppm (total fluorine).

Note 1: *The regulation does not currently establish mandatory minimum recycled content percentages for packaging materials other than plastics, such as glass, paper/cardboard, or metal. The framework focusses its mandatory recycled content targets exclusively on plastic packaging because the uptake of recycled materials in plastics has historically been the lowest.*

Note 2: *The European Commission has introduced a targeted legislative proposal as part of its environmental "omnibus" package. For the packaging sector, this proposal suspends the mandatory requirement for EU-established producers to appoint an authorized PRO for EPR when making products available in other Member States where they are not established. By suspending Article 45(3) of the Packaging Regulation (EU) 2025/40 until 1 January 2035, the measure grants packaging producers the immediate flexibility to choose whether to maintain these representative arrangements. The mandatory representative requirements are maintained for third-country producers to ensure continued compliance and traceability.*

Additional note for the A&D Industry

- » Defense & National Security: The regulation applies to all packaging used in industry or services. The text contains no explicit exclusion for defense material, armaments, or national security:
- » Transport of Dangerous Goods: The text of the regulation states that if requirements of the regulation conflict with Directive 2008/68/EC (which lays out rules for the safe and secure transport of dangerous goods within and between EU countries by road, rail or inland waterway), Directive 2008/68/EC would take precedence. Beyond the general conflict provision, this category is explicitly exempt from the three primary compliance pillars:
 - Recyclability: The design-for-recycling mandates and performance grades (A–C) do not apply.
 - Recycled Content: The mandatory post-consumer recycled content targets for plastic packaging do not apply.
 - Re-use Targets: The obligation to use reusable transport packaging within a system of re-use does not apply.
- » The Empty Space⁵ Rule: By 1 January 2030, economic operators filling grouped, transport, or e-commerce packaging must ensure the maximum empty space ratio is 50%.
- » Grouped Packaging: The restriction on single-use plastic grouped packaging (e.g., shrink wrap) applies only when used at the point of sale to encourage consumers to buy more than one product.
- » Preservation Standards vs. Recyclability: From 1 January 2030, all packaging placed on the market must meet recyclability performance grade A, B, or C ($\geq 70\%$ recyclability by weight). No derogation exists for defense or preservation standards. The exemptions to recyclability requirements are strictly limited to medicinal products, contact-sensitive medical devices, and packaging used for the transport of dangerous goods.
- » To support the implementation of the Regulation, the European Commission will develop a Q&A to support implementation measures.

Key Risks & Penalties

- » Financial: Mandate: Member States lay rules on penalties.
- » Operational: Market Withdrawal: Where non-compliance persists, competent authorities shall take measures to prohibit the packaging from being made available on the market or ensure it is recalled or withdrawn.

Horizon Scanning

- » 1 January 2028: European Commission to adopt delegated acts establishing detailed "design for recycling"⁶ criteria and recyclability performance grades.

⁵ "Empty Space" is the difference between the total volume of the outer packaging (e.g., grouped, transport, or e-commerce packaging) and the volume of the sales packaging contained inside it. In other words, it is the *unused internal volume* of the packaging once the packaged product(s) are accounted for.

⁶ "Design for recycling" means that packaging must be conceived, made, and placed on the market in a way that allows it to be effectively collected, sorted, and recycled at scale in real EU waste systems. For example, i) the packaging must use compatible materials that do not disrupt recycling streams, ii) recycling should result in secondary raw materials of sufficient quality to replace virgin materials, iii) labels, inks, adhesives, caps, sleeves, and closures must be removable or compatible with recycling and not interfere with sorting or washing processes, and iv) packaging must be designed with the end-of-life in mind.

- » 1 January 2035: EC to review the exceptions to recyclability requirements (including the dangerous goods exception) and assess the appropriateness of continuing them. In addition, EC to review minimum thresholds for packaging to be considered "recycled at scale."⁷

Note 3: While Regulation (EU) 2025/40 is a single, binding regulation that applies uniformly across the EU, its day-to-day administration and enforcement operates through a two-layer governance model. At the EU level, the PPWR sets harmonized product and waste rules across the packaging life cycle (from design and placing on the market through to waste management), including obligations that will be operationalized via EU-level delegated/implementing acts over time. At the Member State level, the PPWR requires each country to put the procedural and institutional requirements in place: designating one or more competent authorities, defining administrative processes, and executing market surveillance and enforcement. These national measures do not rewrite the PPWR's substantive rules; they determine where and how you register, report, and get audited locally.

The table below identifies, for each of the 27 Member States, the competent authority and the relevant national enforcement/implementation measures governing the PPWR's local administration. For operational compliance, the national producer register is the primary interface: producers (or, where applicable, their authorized representative) must register in each Member State where they first make packaging/packaged products available (or where they unpack packaged products without being end users) and submit the required periodic data to the competent authority responsible for that register.

Member State	EPR Operator/Registry (PRO)	Competent Authority (Regulator)	National Enforcement Act	Official National Link
Austria	ARA (Altstoff Recycling Austria)	Ministry for Climate Action (BMK)	Waste Management Act (AWG 2002) & Packaging Ordinance 2014	https://www.ara.at/
Belgium	FOST PLUS (Household), Valipac (Industrial)	Interregional Packaging Commission (IVC/CIE)	Cooperation Agreement on Packaging Waste	https://www.fostplus.be/
Bulgaria	Various (e.g., Ecopack, Ecobulpack)	Ministry of Environment and Water (MOEW)	Waste Management Act & Packaging Ordinance	https://www.moew.government.bg/
Croatia	FZOEU (Env. Protection & Energy Efficiency Fund)	Ministry of Economy and Sustainable Development	Act on Sustainable Waste Management	https://www.fzoeu.hr/
Cyprus	Green Dot Cyprus	Dept. of Environment (Ministry of Agriculture)	Packaging and Packaging Waste Law (N. 32(I)/2002)	https://greendot.com.cy/

⁷ The regulation defines "packaging waste recycled at scale" as packaging that is collected, sorted and recycled using installed facilities and established, operational recycling processes which, at EU level, produce an annual quantity of recycled material equal to or greater than specific thresholds: 55 % for all materials except wood, and 30 % for wood. This includes packaging waste exported from the EU for recycling if it can be documented to meet the same conditions.

Member State	EPR Operator/Registry (PRO)	Competent Authority (Regulator)	National Enforcement Act	Official National Link
Czechia	EKO-KOM	Ministry of the Environment (MoE)	Act on Packaging (Act No. 477/2001 Coll.)	https://www.eko-kom.cz/
Denmark	Vana (Packaging), Dansk Retursystem	Danish Environmental Protection Agency	Environmental Protection Act & Statutory Order on Packaging	https://vana.dk/
Estonia	ETO (Estonian Recovery Org), TVO	Environmental Board (Keskkonnaamet)	Packaging Act (Pakendiseadus)	https://eto.ee/
Finland	Suomen Pakkaustuottajat Oy (SPT) and Sumi Oy	Pirkanmaa ELY Centre	Waste Act (646/2011) & Decree on Packaging	https://www.rinki.fi/
France	CITEO (eco-organization), Adelphe, Léko	ADEME (Agence de la Transition Écologique)/ Ministry of Ecological Transition	AGEC Law (Anti-waste for a Circular Economy)	https://www.citeo.com/
Germany	ZSVR (Central Agency Packaging Register) / Dual Systems (e.g., Green Dot)	Umweltbundesamt (UBA)	Packaging Act (VerpackG)	https://www.verpackungsregister.org/
Greece	HERRCO (The Hellenic Recovery Recycling Corporation)	EOAN (Hellenic Recycling Agency)	Law 2939/2001 (as amended by Law 4819/2021)	https://www.herrco.gr/
Hungary	MOHU (MOL Waste Management)	Ministry of Technology and Industry	Act CLXXXV of 2012 on Waste	https://mohu.hu/
Ireland	Repak	Environmental Protection Agency (EPA)	Waste Management Act 1996 & Packaging Regs 2014	https://repak.ie/
Italy	CONAI (National Packaging Consortium)	MASE (Ministry of Environment and Energy Security)	Legislative Decree 152/2006	https://www.conai.org/
Latvia	LIZ (Green Dot Latvia), Zala Josta	State Environmental Service (VVD)	Packaging Law (Iepakojuma likums)	https://www.zalais.lv/
Lithuania	PTO (Pakuociu Tvarkymo Organizacija), Žaliasis taškas	Ministry of Environment	Law on Packaging and Packaging Waste	https://www.zaliasistaskas.lt/
Luxembourg	Valorlux	Environment Agency (Administration de l'environnement)	Law of 21 March 2012 on Packaging Waste	https://www.valorlux.lu/

Member State	EPR Operator/Registry (PRO)	Competent Authority (Regulator)	National Enforcement Act	Official National Link
Malta	GreenPak, GreenMT	Environment and Resources Authority (ERA)	Waste Management Regulations (S.L. 549.43)	https://www.greenpak.com.mt/
Netherlands	Verpact (formerly Afvalfonds Verpakkingen)	ILT (Human Environment and Transport Inspectorate)	Packaging Management Decree 2014	https://www.verpact.nl/
Poland	BDO (Baza Danych o Odpadach) / Various PROs (e.g., Rekopol)	Ministry of Climate and Environment	Act on Management of Packaging and Packaging Waste	https://bdo.mos.gov.pl/
Portugal	Sociedade Ponto Verde (SPV), Novo Verde	APA (Portuguese Environment Agency)	Decree-Law 152-D/2017 (UNILEX)	https://www.pontoverde.pt/
Romania	Various OIREPs (Organizație care Implementează Obligațiile privind Răspunderea Extinsă a Producătorului; e.g., FEPR, Eco-Rom)	Administration of the Environment Fund (AFM)	Law 249/2015 on Packaging and Packaging Waste	https://fepra.ro/
Slovakia	ENVI-PAK, NATUR-PACK	Ministry of Environment	Waste Act No. 79/2015	https://www.envipak.sk/
Slovenia	Slopak, Interseroh	Ministry of the Environment Climate and Energy	Decree on Packaging and Packaging Waste	https://www.slopak.si/
Spain	Ecoembes (Household), Ecodivrio (Glass)	MITECO (Ministry for Ecological Transition)	Royal Decree 1055/2022 on Packaging	https://www.ecoembes.com/
Sweden	NPA (Näringslivets Producentansvar)	Swedish Environmental Protection Agency	Ordinance on Producer Responsibility for Packaging	https://npa.se/

The regulation is currently under scrutiny to extend its application to the three countries of the European Free Trade Association: Iceland, Liechtenstein, and Norway via the European Economic Area Agreement.

Links

- » [Regulation \(EU\) 2025/40 \(PPWR\)](#)
- » [European Free Trade Association - Factsheet - 32025R0040](#)
- » [Proposal suspending the application of the rules on the appointment of an authorized representative for EPR for PPWR](#)

1.2 United Kingdom - The Producer Responsibility Obligations (Packaging and Packaging Waste) Regulations 2024

Jurisdiction: United Kingdom (UK).

Status: Adopted - in force.

Compliance Trigger: A business established in the UK with an annual turnover exceeding £1 million and supplying more than 25 tonnes of packaging in a calendar year. Financial disposal cost obligations trigger at the large producer threshold of £2m turnover / 50 tonnes.

Summary

This regulation implements EPR, legally mandating that UK producers cover the full net costs of packaging waste disposal and submit granular data on all packaging supplied or imported. For the A&D sector, this creates significant administrative and financial risk regarding the import of components and logistics; firms must rigorously prove that transport and manufacturing packaging qualifies as "business packaging" to avoid the higher "household" disposal fees triggered by broad definitions. Crucially, the regulations contain no explicit exemptions for defense or military applications.

Context and Background

These regulations replace the 2007 producer responsibility regime to shift the financial burden of waste management from public authorities directly to producers. The framework solves the problem of under-funded recycling infrastructure by modulating fees to incentivize environmentally sustainable packaging design and harmonizing data reporting across the UK.

Scope and Applicability

- » Affected Products: The regulations apply to packaging defined as all products made of any materials of any nature used for the containment, protection, handling, delivery, or presentation of goods.⁸ This explicitly includes:
 - Primary Packaging: Sales units.
 - Secondary Packaging: Grouping packaging (e.g., cartons holding multiple fasteners).
 - Shipment Packaging: Transport packaging (e.g., pallets, crates, shrink wrap) preventing damage during handling and transport. Standard tertiary packaging does not attract disposal fees unless it falls under the "shipment" definition.
 - Imported Packaging: Any packaging around goods imported into the UK.

Critical Timelines and Deadlines

- » 1 April 2025:
 - Producer Registration Deadline: Large producers (turnover >£2m, >50 tonne packaging) and small producers (turnover >£1m, >25 tonne packaging) must submit applications for producer registration for the 2025 relevant year.
 - Transitional Data Reporting: Deadline for submitting packaging data reports for the period 1 January 2024 to 31 December 2024 (or July–Dec 2024).
- » 1 October 2025: Semi-Annual Data Reporting. Deadline for large producers to report packaging data for the period 1 January to 30 June 2025.

⁸ If being part of a group of companies, it is required to add up the turnover and the weight of packaging supplied or imported for all members of the group that supply or import any packaging at all.

- » Continuous reporting shall be done annually for a small producer (April 1) and every six months for a large producer (April 1 and October 1).⁹
- » 1 April 2026: Modulated Fees¹⁰ Implementation. The Scheme Administrator¹¹ begins modulating disposal fees based on environmental sustainability for the 2026 assessment year (impacting non-recyclable high-performance barrier films).

Key Regulatory Provisions

- » Recycling Targets (performance): Producers must meet increasing recycling targets by material type. By 2030, targets include 67% for aluminum, 85% for steel, 50% for wood, and 65% for plastic.
- » It is required to add "recycle" or "do not recycle" logo from 1 April 2026.
- » Banned Formats: No specific material bans (e.g., PFAS or specific polymers) are detailed in this text; however, the regulations prohibit issuing Packaging Waste Recycling Notes (PWRNs) unless the issuer is accredited and the packaging is recyclable.
 - Labeling & Traceability: Producers must collect and report detailed weights by packaging category (e.g., plastic, wood, steel), type (primary, shipment), and waste stream (household vs. non-household).
- » EPR/Financial:
 - Full Net Cost Recovery: Producers are liable for disposal fees covering the efficient costs incurred by local authorities for managing household packaging waste.
 - Fee Modulation: From 2026 assessment year, disposal fees will be modulated (increased or decreased) based on the packaging's recyclability and environmental impact, penalizing hard-to-recycle formats common in A&D.
 - Administration Fees: Producers must fund the Scheme Administrator's operating costs.

Additional note for the A&D Industry

- » Dangerous Goods: No exemptions found; packaging for dangerous goods remains within scope.
- » Preservation Standards: The "Green" fee modulation in Section 64 may create a conflict. The modulation is the process of adjusting the financial liability of a producer to incentivize the use of environmentally sustainable packaging. A&D packaging standards may mandate high-specification packaging for airworthiness that might be non-recyclable. This could trigger higher fees without relief.
- » Foreign object debris (FOD)¹² & Cleanliness: While the regulation incentivizes recycled content via fee modulation, flight safety standards often prohibit recycled plastics in contact with critical parts due to contamination risks. A&D firms may be forced to pay higher fees to retain virgin material standards.

⁹ Either the parent company or the subsidiaries can report.

¹⁰ Packaging waste fees that vary depending on how environmentally sustainable the packaging is. Instead of all packaging paying the same recycling fee, producers pay based on how easy their packaging is to recycle, reuse, or recover.

¹¹ A Scheme Administrator is the central, government-appointed organization that runs a packaging compliance scheme on behalf of the UK authorities. It is responsible for operating the system, collecting fees, managing data, and distributing money so that packaging waste is properly collected and recycled.

¹² For the purposes of packaging, handling, storage, and transport of aviation, space, and defense products, foreign object debris (FOD) means any substance, debris, or article alien to the product, its packaging system, or associated hardware that could potentially cause damage or contamination.

Risks & Penalties

- » Financial
 - Variable Monetary Penalties (VMP): The most significant financial risk is a VMP for failing to pay disposal fees by the due date. This penalty is calculated as the higher of 20% of the unpaid fees or 5% of the producer's annual turnover (calculated at 2% of collective turnover for holding companies acting for a group).
 - Criminal Fines: Non-compliance with registration, reporting, or recycling obligations constitutes a criminal offence punishable on summary conviction by a fine (statutory maximum) or on indictment by a fine.
- » Operational
 - Personal Liabilities: Offences committed by a corporate body with the consent, connivance, or attributable neglect of a director, manager, or similar officer render the individual personally liable to prosecution and punishment alongside the company.
 - Public Register & Reputational Risk: The regulations mandate a public register of producers and compliance schemes. The enforcement agency will publish details of civil sanctions imposed, including fixed penalties and enforcement undertakings, creating a public record of non-compliance.

Horizon Scanning

- » Modulated Fees (2026): While the base regulation is in force, the financial mechanism to "modulate" (increase or decrease) disposal fees based on environmental sustainability does not take effect until the year 2026 assessment.
- » Recyclability Methodology: The Scheme Administrator is legally required to develop and publish a specific methodology for assessing packaging recyclability.
- » Deposit Return Schemes¹³ (DRS) Interaction (2028): The regulations contain contingency clauses for the interaction with DRS. If a DRS is not operational by 1 January 2028, specific calculation provisions within these regulations will automatically be disapplied or modified.
- » Statutory Review (2028): The first full regulatory review and report on the effectiveness of the extended producer responsibility policy must be published by 31 December 2028.

Links

- » [The Producer Responsibility Obligations \(Packaging and Packaging Waste\) Regulations 2024](#)



2.0 NORTH AMERICA

2.1 Canada

Canada lacks a comprehensive federal packaging regulation equivalent to the EU's PPWR, with binding targets for recyclability, reuse, and waste reduction across the EU. Instead, packaging oversight occurs primarily through provincial EPR programs, with the federal government focusing on data collection via the Federal Plastics Registry (FPR).

¹³ A Deposit Return Scheme is an environmental policy designed to increase recycling rates and reduce litter by putting a small refundable deposit on certain drink containers.

The FPR, established under the Canadian Environmental Protection Act, requires producers to report annually on plastics placed on the market, including packaging. Reporting began for 2024 data in September 2025 and supports monitoring but does not impose EPR fees or replace provincial obligations; it harmonizes data across the value chain.

Currently, provincial-level packaging EPR laws have been enacted in Ontario, Quebec, [British Columbia](#), [New Brunswick](#), [Alberta](#), and [Nova Scotia](#). The specific laws in Ontario ([Resource Recovery and Circular Economy Act](#)) and Quebec ([Regulation Respecting the Recovery and Reclamation of Products by Enterprise](#)) are elaborated in the recently published IAEG WG 14 [Emerging Circular Economy Imperatives Report](#). The section below additionally describes requirements in Alberta as an example of provincial regulations in Canada.¹⁴

2.1.1 Alberta - Extended Producer Responsibility Regulation (Regulation 194/2022)

Jurisdiction: Province of Alberta, Canada

Status: In force (effective November 30, 2022; current consolidation as of June 11, 2025)

Compliance Trigger: The primary compliance trigger is the supply (sale, distribution, or transfer) of designated materials into Alberta by a “producer,” defined as brand holders (resident in Canada) or importers resident in Alberta.

Summary

The Alberta Regulation 194/2022 shifts the physical and financial responsibility for waste management from municipalities to "producers." Business to business (B2B) packaging is largely exempt due to a residential use restriction, however compliance risks may exist for maintenance, repair, and operations (MROs) supply chains regarding Hazardous and Special Products (HSP)¹⁵, which lack this specific residential restriction. There are no explicit exemptions for defense or national security activities.

Context and Background

Regulation 194/2022, effective November 30, 2022, operationalizes the Environmental Protection and Enhancement Act to transition Alberta to a full producer-pay model. It aims to standardize recycling systems and enforce waste diversion targets (Material Management Requirements), compelling producers to fund the end-of-life management of their products rather than relying on taxpayer-funded municipal programs.

Scope and Applicability:

- » Packaging & Paper: Only applies if supplied to a consumer and intended for residential use. Includes flexible and rigid plastics, paper, metal, and glass.
- » Functional Exclusion: Part 1 (Packaging) expressly applies *only* to material intended for residential use, effectively excluding B2B industrial transport packaging used in manufacturing and hangar operations.

¹⁴ As noted in the Executive Summary, there are several provincial level packaging regulations in Canada. This report provides Alberta as an example of provincial reporting requirements to inform on the general landscape, but this report is not meant to be comprehensive at a provincial level. Please refer to the provided links for the other Canada provinces or consult with your legal or regulatory expert for more details.

¹⁵ Hazardous and Special Products generally means consumer-sized products that are flammable, corrosive, toxic, or are specific hazardous materials such as batteries or pesticides.

Critical Timelines and Deadlines

- » 1 April 2025: Producers must provide common collection systems for Packaging (Part 1) and Hazardous/Special Products (Part 2) for registered communities.
- » 1 October 2026: Deadline to expand collection services to eligible communities not previously receiving service.
- » 31 October 2027: First enforceable material management (recycling performance) targets come into effect.

Key Regulatory Provisions

- » **Recycled Content:** The regulation currently mandates recycling performance rates (output) rather than recycled content (input). By 31 Oct 2027, producers must achieve recycling rates of 40% for batteries, 50% for rigid plastics, and 80% for paper products.
- » **Banned Formats:** No specific material bans are listed in the regulation; the focus is on mandatory collection and recycling rates (Material Management Requirements).
- » **Labeling & Traceability:** Registrants must keep records of supply and management transactions for inspection by the authority.
- » **EPR/Financial:** Producers must finance the collection and management of designated materials.

Additional note for the A&D Industry

- » **Dangerous Goods:** Packaging for dangerous goods is not exempted; it is the primary target of Part 2 (Hazardous and Special Products). The regulation designates specific containers (e.g., flammable, toxic, or corrosive product containers) as regulated material. However, this applies strictly to smaller units (typically less than or equal to 10 liters or 10 kilograms); bulk industrial drums (e.g., 205L) are outside the defined scope.
- » **Aircraft on Ground & Spares:** Part 1 (Packaging) explicitly applies only to material supplied to a consumer and intended for residential use.

Risks & Penalties

- » **Financial:**
 - **Fines:** Corporations face fines of up to \$500,000 for contravening the regulation, such as failing to register or supply collection systems.
 - **Levies:** Producers must finance the recycling system; these costs will likely manifest as surcharges on imported MRO chemicals.
- » **Operational:**
 - **Market Blockage:** Section 3 contains a strict prohibition: "No producer shall supply a designated material in Alberta unless the producer is registered."

Horizon Scanning

- » **Recycling Targets:** Mandatory recycling rates increase progressively from October 31, 2027, through to 2033 (e.g., battery recycling rates rise from 40% to 47.5%).
- » **Review Date:** Regulation 194/2022 is set to expire for review on 30 June 2030.

Links

- » [Alberta Regulation 194/2022 - Extended Producer Responsibility Regulation](#)

2.2 United States

In the United States, there is no single federal packaging and packaging-waste framework comparable to EU PPWR. Obligations comparable to the EU PPWR (e.g., EPR, design for recyclability, recycling-rate targets, fee modulation) are being implemented at the state-level through EPR laws which shift end-of-life costs for packaging to producers and set recyclability and recycled-content performance targets. Thus, packaging obligations in the US are a patchwork of state laws layered over general federal waste, chemicals, and product rules.

Note: *It should be noted that there are multiple federal regulations that cover certain aspects of packaging, advertising, and labeling depending on the product type:*

- » *Federal Trade Commission regulates consumer product labeling under the Federal Trade Commission Act. It focuses on i) truth in advertising – packaging and labels must not be misleading; and ii) environmental claims – e.g., “recyclable,” “biodegradable,” “compostable.”*
- » *Environmental Protection Agency (EPA) – For packaging containing hazardous substances, the EPA regulates under i) Resource Conservation and Recovery Act – packaging and labeling of hazardous waste and ii) the Toxic Substances Control Act – labeling chemicals. Packaging must meet hazard communication requirements (labels, symbols, disposal instructions).*
- » *Department of Transportation (DOT) for shipping labels under Hazardous Materials Regulations.*
- » *The Occupational Safety and Health Administration (OSHA) administers the Globally Harmonized System of Classification and Labelling of Chemicals (GHS). It requires chemical manufacturers and importers to classify chemical hazards using GHS criteria, mandates GHS-aligned labels (pictograms, signal words, hazard statements, precautionary statements), requires Safety Data Sheets in the standardized 16-section GHS format, and enforces compliance through workplace inspections and penalties.*

Currently, state-level packaging EPR laws have been enacted in [California](#), [Maine](#), [Oregon](#), [Maryland](#), [Colorado](#), [Minnesota](#), and [Washington](#). The specific laws in California (Plastic Pollution Prevention and Packaging Producer Responsibility Act [SB 54]) and Maine (An Act to Create a Stewardship Program for Packaging [LD 1541], as amended by An Act to Improve Recycling by Updating the Stewardship Program for Packaging [LD 1423]) are elaborated in the recently published IAEG WG 14 [Emerging Circular Economy Imperatives Report](#). The sections below cover requirements in three additional states.¹⁶

2.2.1 Colorado: Producer Responsibility Regulations (amending 6 CCR 1007-2, Part 1)

Jurisdiction: Colorado, United States

Status: Adopted (14 June 2024)

¹⁶ As noted in the Executive Summary, there are several state level packaging regulations in the US. This report provides three states as an example of state reporting requirements to inform on the general landscape, but this report is not meant to be comprehensive at a state level. Please refer to the provided links for the US states or consult with your legal or regulatory expert for more details.

Compliance Trigger: Producers of covered materials (packaging and paper products) distributed in Colorado must register with the PRO by 1 October 2024.¹⁷ Failure to participate in the program prohibits the sale or distribution of products using covered materials in Colorado effective 1 July 2025.

Summary

Colorado now mandates that producers of packaging and paper products fund a statewide recycling program, enforcing compliance through a prohibition on sales for non-participants starting July 2025. While most A&D logistics are shielded by robust B2B and industrial process exclusions, any dual-use spare parts, pilot supplies, or manuals sold directly to consumers will trigger registration and fee obligations. There is no explicit national security or defense exemption; however, operational impact is mitigated by specific exclusions for long-term storage and transport packaging not intended for the end consumer.

Context and Background

This regulation implements the Producer Responsibility Program for Statewide Recycling Act (HB 22-1355), shifting the financial burden of recycling from local municipalities to producers to harmonize infrastructure and increase recycling rates. It aims to standardize the collection of materials across the state and requires producers to finance these services through a designated PRO.

Scope and Applicability

- » Packaging Material: Any material (paper, plastic, glass, metal, flexible foam, rigid packaging) used for containment, protection, handling, or delivery to a consumer at the point of sale.
- » Paper Products: Books, brochures, flyers, catalogs, and paper used for writing.
- » Exclusions:
 - Packaging used solely in transportation or distribution to non-consumers.
 - Packaging used solely in B2B transactions where the material is not intended for the end consumer.
 - Packaging used exclusively in industrial or manufacturing processes.
 - Packaging intended for long-term storage or protection of a durable product (transport, protect, or store for at least five years).
 - Packaging for products regulated under federal hazardous material acts (e.g., insecticides, fungicides), though no specific Department of Defense exemptions exist.

Critical Timelines and Deadlines

- » 1 October 2024: Registration Deadline – Producers must register with the PRO unless they have notified the department of an intent to submit an Individual Program Plan.
- » 1 July 2025: Market Access Ban – producers are prohibited from selling or distributing products using covered materials in Colorado unless they are participating in the program.
- » 1 January 2026: Payment Due – deadline for producers to pay the first round of responsibility dues to the PRO.

Key Regulatory Provisions

- » Recycled Content: The regulation does not statute a specific percentage target (e.g., "30%"). Instead, the PRO establishes recycling rate targets. The funding mechanism uses "Eco-

¹⁷ Note for A&D Supply Chain: While packaging used solely for B2B transactions, industrial processes, or transport to non-consumers is excluded from "packaging material" definitions, producers must submit documentation to the PRO to substantiate any claims of exemption for these materials.

modulation," lowering dues for producers using high levels of post-consumer recycled material.

- » Banned Formats: There are no explicit material bans (e.g., PFAS, polystyrene) in this text. However, the PRO must set higher dues for designs that increase recycling costs or are not on the Minimum Recyclable List.¹⁸
- » EPR/Financial: Dues are payable annually starting January 1, 2026. Producers are prohibited from charging a visible point-of-sale fee to consumers to recoup these costs.

Additional note for the A&D Industry

A&D entities acting as the brand owner, manufacturer, or importer of products sold in Colorado must register with the PRO by 1 October 2024, unless fully exempt. Compliance is binary: participation is mandatory to maintain market access after 1 July 2025.

- » Dangerous Goods: There is no explicit exemption for United Nations/DOT Specification packaging used for Class 1 (Explosives) or Class 9 (Miscellaneous).
- » Aircraft on Ground & Spares: Packaging used *solely* for B2B transactions or transportation to non-consumers is excluded.
- » Preservation Standards: The regulation explicitly exempts packaging intended for the long-term storage or protection of a durable product (5+ years).

Risks & Penalties

- » Financial:
 - 1st Violation: Initial penalty of \$5,000, plus \$1,500 per day for continued violation.
 - 2nd Violation (within 12 months): Initial \$10,000, plus \$3,000 per day.
 - 3rd Violation: Initial \$20,000, plus \$6,000 per day.
- » Operational:
 - Market Lockout: Effective July 1, 2025, a producer must not sell or distribute products in Colorado unless participating in the program.
 - Seizure/Search: The state may seek a search warrant to inspect records if a producer refuses entry or fails to provide data.

Horizon Scanning

- » Future Eco-Modulation Rules: The Solid and Hazardous Waste Commission will develop specific rules for eco-modulation (bonus/malus¹⁹ rates).
- » The Circular Action Alliance Final Program Plan²⁰ was officially approved recently by the Colorado Department of Public Health and Environment on 10 December 2025.

Links

- » [Producer Responsibility Program](#)

¹⁸ The Minimum Recyclable List is a uniform, statewide list of covered materials that are considered readily recyclable in Colorado. It reflects what materials recycling service providers must offer to collect to meet statewide recycling goals. Inclusion on the list means a material is expected to be collected conveniently like solid waste (e.g., curbside or equivalent services).

¹⁹ "Malus" means a disincentive developed by the PRO or an individual producer of an alternative collection program that increases producer responsibility dues for the purpose of preventing, minimizing, or reducing negative environmental, social, economic, and health impacts of covered materials.

²⁰ The Circular Action Alliance Final Program Plan is the approved roadmap for implementing Colorado's producer-funded statewide recycling system for packaging and paper, detailing how the program will operate, what materials are covered, how producers and service providers participate, and how Colorado will expand recycling access and performance under its EPR law.

2.2.2 Minnesota: Packaging Waste and Cost Reduction Act

Regulation: Packaging Waste and Cost Reduction Act

Jurisdiction: Minnesota, United States

Status: Adopted (enacted 2024)

Compliance Trigger:

Manufacturers and importers defined as "producers" must appoint a PRO by 1 January 2025. Furthermore, after 1 July 2025, a producer is prohibited from selling, offering for sale, distributing, or shipping products in packaging into the state unless they are a member of a registered PRO.

Executive Summary

The Minnesota Packaging Waste and Cost Reduction Act establishes an EPR framework requiring manufacturers and importers to finance packaging recycling through a PRO. For the A&D sector, the definition of "producer" captures any entity importing or distributing packaged components into the state, creating an immediate operational risk of a sales ban by 1 July 2025, if PRO membership is not secured. While a narrow B2B exemption exists for packaging used strictly within manufacturing chains, there is no explicit exemption for defense or military logistics.

Context and Background

Enacted in 2024 to shift the financial burden of waste management from municipalities to brand owners, this regulation aims to reduce waste generation and harmonize Minnesota's recycling infrastructure. It compels producers to internalize the environmental costs of packaging through a statewide program that funds collection, processing, and infrastructure improvements.

Scope and Applicability

- » Packaging: Materials used to contain, protect, deliver, or present goods, including transport packaging.
- » Paper Products: Flyers, manuals, and catalogs distributed in the state.
- » Imported Goods: If the brand owner has no US presence, the importer of record is the liable producer.
- » Exclusions:
 - B2B Manufacturing Exemption: Packaging is exempt if distributed between producers to produce another product and not passed to a subsequent third party.
 - Hazardous Materials: Packaging for hazardous or flammable products regulated by OSHA Hazard Communication Standards (HCS) (29 CFR 1910.1200) is exempt if the regulations prevent the packaging from being reduced, reused, or recycled.

Critical Timelines and Deadlines

- » 1 January 2025: Producers must appoint a PRO.
- » 1 July 2025: Prohibition of Sale enters into force; producers are prohibited from selling, offering, or distributing products in packaging in Minnesota unless they are members of a registered PRO.
- » 1 January 2029: Producers must execute written agreements with a PRO to operate under an approved stewardship plan.
- » 1 January 2032: Packaging introduced into the state must be reusable, refillable, or specifically listed on the state's recyclable/compostable materials list.

Key Regulatory Provisions

- » Recycled Content: Specific percentage targets are not currently defined in the statute. The Commissioner is mandated to establish statewide requirements for the percentage of post-consumer recycled content (PCR) following a needs assessment. The PRO must propose targets in the stewardship plan due 1 October 2028.
- » Eco-Modulated Fees: Producer fees will be eco-modulated, meaning higher costs for packaging that uses toxic substances or fails to minimize packaging volume, and lower fees for designs that reduce environmental impact.
- » EPR/Financial: Producers must pay annual fees to the PRO sufficient to cover the PRO's operating costs and the state agency's administrative, enforcement, and rulemaking costs.

Additional note for the A&D Industry

Aerospace manufacturers and importers must appoint a PRO by 1 January 2025. The definition of "producer" includes the importer of record if the brand owner has no US presence.

- » Dangerous Goods: Packaging used for hazardous or flammable products regulated by the federal OSHA HCS (29 CFR 1910.1200) is exempt if those regulations prevent the packaging from being waste-reduced, reused, or recycled (as determined by the commissioner).
- » Aircraft on Ground & Spares: The B2B exemption is narrow; it only applies if packaging is distributed to a business for the production of another product.
- » FOD & Cleanliness: There is a regulatory mechanism to request an exemption if specific federal or state health and safety requirements prevent compliance.

Risks & Penalties

- » Financial:
 - Civil penalties of up to \$25,000 per day for violations.
 - Penalties escalate to \$50,000 per day for a second violation and \$100,000 per day for subsequent violations within five years.
- » Operational:
 - Prohibition of Sale: After July 1, 2025, producers are legally prohibited from selling, offering for sale, or distributing packaged products in Minnesota unless they are members of a registered PRO.

Horizon Scanning

- » 31 December 2026 deadline for the Commissioner to complete the initial "Needs Assessment."
- » 1 July 2028: Commissioner publishes the official list of Recyclable or Compostable Covered Materials. Materials not on this list by 2032 may be unmarketable.

Links

- » [Minnesota EPR for Packaging](#)

2.2.3 Washington: Chapter 70A.208 RCW: Solid Waste—Packaging and Paper Products—Producer Responsibility

Jurisdiction: Washington, USA

Status: Adopted – in force

Compliance Trigger: 1 March 2029 (market ban enforcement)

Summary

Washington State has enacted comprehensive EPR law. This regulation requires producers to fund and manage the lifecycle of packaging and paper products, backed by a market ban for non-compliant entities beginning 1 March 2029. For the A&D sector, there is no explicit exclusion for defense or military packaging, creating statutory obligations commencing in 2026. While exemptions exist for hazardous materials, the lack of a blanket defense waiver subjects non-hazardous aerospace packaging to requirements.

Context and Background

This statute shifts the financial and operational burden of recycling from municipal governments to producers. It aims to harmonize waste management by establishing Producer Responsibility Organizations (PROs) to oversee statewide collection and processing. The law mandates variable fees to incentivize plastic source reduction and the elimination of toxic substances.

Scope and Applicability

- » Affected Products: Packaging (including material used to transport a product), paper products, single use materials.
- » A&D Exclusions: No statutory waiver for the A&D sector exists. *Note: "Exempt materials" include "packaging for hazardous or flammable products" (OSHA classified), which offers a partial operational shield for specific dangerous goods.*

Critical Timelines and Deadlines

- » 1 January 2026: Producer must appoint a PRO.
- » 1 March 2026: PRO must register with the Department of Ecology.
- » 1 September 2026: PRO must submit a one-time payment to Department of Ecology.
- » 1 May 2027: PRO begins paying annual registration fees to Department of Ecology.
- » 1 October 2028: PRO must submit a program plan to Department of Ecology.
- » 1 March 2029: Producers may not introduce covered materials into the state if not compliant (market ban).

Key Regulatory Provisions

- » Exemption Threshold (commercial materials): To qualify as exempt, materials must achieve a recycling rate of 65% (demonstrated annually until Dec 31, 2029) and 70% annually (demonstrated every two years beginning Jan 1, 2030).
- » Plastic Source Reduction: Targets are measured relative to a baseline year of 2023 (or alternative no earlier than 2013).
- » Labeling & Traceability: Compostable products must comply with Chapter 70A.455 RCW.
- » Financial: Reimbursement Rates (funded by producers) will cover net costs: 50% by Feb 15, 2030; 75% by Feb 15, 2031; 90% by Feb 15, 2032. Fee structures incentivize eliminating intentionally added toxic substances.

Additional note for the A&D Industry

- » Dangerous Goods: The regulation explicitly lists "packaging for hazardous or flammable products" (classified by OSHA 29 C.F.R. Sec. 1910.1200) as exempt materials. This provides an option for products meeting that specific federal standard. However, transport packaging generally is regulated.
- » Aircraft on Ground & Spares: The definition of "packaging" includes transport materials. However, strict application of the statute limits "packaging" to items supplied for personal, noncommercial use. If this definition is overridden by commercial exemption clauses, original equipment manufacturers (OEMs) could be liable for packaging discarded at MROs.

- » Preservation Standards: The requirement to incentivize eliminating toxic substances poses a technical risk. The statute defines toxic substances by cross-referencing RCW 70A.350, potentially implicating barrier materials relying on regulated chemistries.
- » FOD & Cleanliness: While recycled content targets are deferred to plans, future mandates to include PCR plastic in transport films could introduce risks.

KEY Risks & Penalties

- » Financial:
 - Civil penalty up to \$1,000 per violation/day and up to \$10,000 per violation per day for subsequent violations.
 - Distribution fine: Twice the value of the covered materials sold or \$500, whichever is greater (applies to distributors/retailers of non-compliant goods).
- » Operational:
 - Market Ban: Beginning 1 March 2029, non-compliant producers are legally barred from introducing covered materials into Washington.

Horizon Scanning

The Department of Ecology will establish statewide performance targets (dates to be determined) for recycling, reuse, and source reduction. The department will create a model comprehensive solid waste plan amendment by 31 January 2029, followed by independent program reviews in 2038. Specific PCR % and chemical ppm limits are delegated to future PRO plans and external RCW statutes, requiring continuous monitoring of Ecology's rulemaking (scheduled for adoption by 2028).

Link

- » [Washington - Chapter 70A.208 RCW: Solid Waste—Packaging and Paper Products—Producer Responsibility](#)



3.0 ASIA

3.1 China - Law of the People's Republic of China on the Prevention and Control of Environment Pollution Caused by Solid Wastes (2020 Revision)

Jurisdiction: People's Republic of China

Status: In force (effective 1 September 2020)

Compliance Trigger: Generation, cross-border transfer, or import of industrial solid waste or hazardous waste associated with manufacturing or MRO activities.

Executive Summary

This legislation establishes a cradle-to-grave liability framework for solid and hazardous waste, mandating a national zero import policy for solid waste and enforcing strict lifecycle tracking via a national information platform. The text provided contains no explicit exemptions for defense or military activities, implying full compliance is required for all units generating or transporting waste within the jurisdiction.

Context and Background

Originally enacted in 1995 and significantly revised in 2020, this law was updated to aggressively enforce the "polluter pays" principle and transition the industrial base toward a green development model. It resolves previous regulatory gaps by centralizing supervision under the Ministry of Ecology and Environment and mandating unified information platforms to eliminate illegal dumping and untracked hazardous waste transfers.

Scope and Applicability

- » Affected Products: Packaging waste such as pallets, films, crates, and dunnage associated with logistics (specifically regarding disposal and import restrictions).

Critical Timelines and Deadlines

- » 1 September 2020: The revised law entered into force, activating the "Zero Import" ban on solid waste and new penalty structures.
- » Ongoing: Hazardous waste management plans and transfer manifests (electronic or paper) must be filed with the ecological environment authorities prior to movement or disposal.

Key regulatory provisions

- » Recycled Content: The law mandates the government to formulate standards for comprehensive utilization and encourages green packaging, but specific percentage targets are not defined in this primary text of the law.
- » Other relevant content for A&D:
 - Zero Import Policy: The government is mandated to realize zero import of solid waste. Import of foreign solid waste for dumping, stacking, or disposal is strictly prohibited.
 - Industrial Waste Ledgers: Generators of industrial solid waste must establish a management ledger to record type, quantity, flow, and disposal, ensuring full traceability.
 - Polluter Pays: Generators are responsible for the entire lifecycle of the waste; liability remains even if third-party contractors mishandle the waste unless specific due diligence is proven.
 - Banned Formats: Non-degradable plastics – the government legally prohibits/restricts the production, sale, and use of non-degradable plastic bags and single-use plastic products (specific lists subject to dynamic adjustment by the government).
- » Labeling & Traceability:
 - Hazardous Waste: Mandatory identification marks on containers and packages.
 - Information Platform: Mandatory use of the national hazardous waste information management system to track hazardous waste transfer data.
- » EPR/Financial:
 - Liability Insurance: Units collecting, storing, transporting, or disposing of hazardous waste must purchase environmental pollution liability insurance.
 - Disposal Costs & Permits: Implementation of a "producer pays" system for treatment charges.

Additional note for the A&D Industry Manufacturing facilities and joint ventures in China must implement a cradle-to-grave digital tracking system for all industrial waste (management ledgers).

- » Dangerous Goods: Packaging for dangerous goods is not exempted from waste statutes. Once the dangerous good is used, the container is hazardous waste and cannot be discarded casually; it requires specific pollution elimination procedures before reuse or licensed disposal.

- » Aircraft on Ground & Spares: Packaging removed from break-bulk²¹ shipments at bonded warehouses in China becomes domestic Chinese waste, requiring strict compliance for disposal.
- » Preservation Standards: The law mandates the reduction of over-packaging and encourages green packaging and reusable packaging.
- » FOD & Cleanliness: The law encourages the use of comprehensive utilization products (recycled materials).

KEY Risks & Penalties

- » **Financial:**
 - Illegal Import: Fines range from RMB 500,000 to RMB 5 million for importing solid waste.
 - Hazardous Waste Mismanagement: Fines up to RMB 1 million for failure to declare, properly store, or manifest hazardous waste.
 - Record Keeping: Fines from RMB 50,000 to RMB 200,000 for failing to maintain industrial waste ledgers.
- » **Operational:**
 - Customs Blockage: Customs must order the return of solid waste illegally imported; carriers are held jointly liable for the return and disposal costs. This may lead to logistics providers refusing A&D reverse logistics shipments (cores/repairables) to avoid liability.
 - Seizure: Authorities have the power to seal and seize facilities and equipment involved in suspected violations.

Horizon Scanning

- » Packaging Standards: The State Council is mandated to formulate specific excessive packaging standards and constraints for product design. Future secondary legislation will likely define specific prohibited voids, layers, or material types, directly impacting A&D logistics specifications.

Links

- » [Law of the People's Republic of China on the Prevention and Control of Environment Pollution Caused by Solid Wastes \(2020 Revision\) - Ministry of Ecology and Environment of the PRC](#)

3.2 India - Plastic Waste Management (Amendment) Rules

Jurisdiction: India

Status: In force

Compliance Trigger: Importation of plastic packaging or products wrapped with plastic packaging.

Summary

The plastic waste management rules legally enforce EPR on all importers and producers of plastic packaging, mandating registration, specific recycling targets, and the use of recycled content. Effective as of 1 July 2025, new labeling requirements mandate QR codes or barcodes on packaging or a product information brochure to verify compliance. No specific exemptions for the A&D sector are provided in the text.

²¹ Break bulk refers to goods that cannot fit inside a standard dry container due to size, shape, or weight. This includes oversized, irregularly shaped, extremely heavy, or hazardous goods requiring special handling.

Context and Background

Building upon the 2016 framework, the 2022 amendment introduces Schedule II to operationalize the "polluter pays" principle, shifting the financial and physical responsibility for waste management onto the entity introducing the packaging to the market. The subsequent 2025 amendment strengthens enforcement by introducing digital labeling requirements and explicit penalties for contravention under the Environment (Protection) Act, 1986. This framework aims to formalize the recycling sector and reduce plastic pollution by enforcing strict quantitative targets for recycling and reuse.

Scope and Applicability

- » Affected Products: The regulations apply to all plastic packaging categories, defined broadly as material used for protecting, preserving, storing, and transporting products. This includes:
 - Category I (Rigid): Hard cases, protective caps, and crates.
 - Category II (Flexible): Films, bubble wrap, anti-static bags, and pouches (single or multi-layer).
 - Category III (Multi-layered): Barrier materials containing at least one layer of plastic and one layer of non-plastic (e.g., foil laminates used for moisture control).

Critical Timelines and Deadlines

- » Immediate (upon market entry): Registration on the Central Pollution Control Board (CPCB) centralized portal is mandatory prior to conducting business.
- » 30 June (annual): Deadline for filing annual returns on packaging waste collected and processed.
- » 1 July 2025: Mandatory requirement to provide specific compliance information via Barcode, QR Code, or unique serial number printed on the packaging, or product information brochure.
- » 30 April (Annually): Deadline for annual report submissions by entities processing plastic waste.
- » 30 June (Annually): Deadline for annual report submissions by importers and manufacturers of plastic raw material.
- » Minimum level of (excluding end of life disposal) of plastic packaging waste
 - FY 2025-26: Category I-60%, Category II-40%, Category III-40%.
 - FY 2026-27: Category I-70%, Category II-50%, Category III-50%.
 - FY 2027-28: Category I-80%, Category II-60%, Category III-60%.
- » Implementation of Mandatory Recycled Plastic Content targets in packaging material.
 - FY 2026-27: Category I-40%, Category II-10%, Category III-5%
 - FY 2027-28: Category I-50%, Category II-20%, Category III-10%
 - FY 2028-29: Category I-60%, Category II-20%, Category III-10%

Key Regulatory Provisions

- » Recycled Content: Importers must ensure their packaging contains recycled plastic starting FY 2025-26. If technical limitations prevent this, entities must purchase surplus EPR certificates to offset the deficit. Minimum recycling targets scale up from 2025-2026 (60% for Category I; 40% for Categories II/III) to 2027-2028 (80% for Category I; 60% for Categories II/III).
- » Banned Formats: The provided text does not list specific product bans but mandates that only plastics capable of recycling or specified end-of-life disposal (waste-to-energy/oil) are permitted.
- » Labeling & Traceability: Effective 1 July 2025, producers/importers must provide compliance details via a Barcode or QR Code printed on the packaging, or within the product brochure.

Alternatively, a unique registration number issued under valid laws may be printed on the packaging.

- » **EPR/Financial:**
 - Registration: Entities cannot deal with unregistered suppliers.
 - Environmental Compensation: Penalties are levied based on the "polluter pays principle" for missed recycling targets.
 - Certificate Purchase: Importers failing to use recycled content due to statutory requirements must purchase credits from compliant entities.

Additional note for the A&D Industry

- » **Dangerous Goods:** No exemptions are provided for dangerous goods packaging (though case-to-case exemptions for statutory requirements allow replacing physical recycled content with purchased credit certificates).
- » **Aircraft on Ground & Spares:** The importer liability attaches to the entity clearing customs.
- » **Preservation Standards:** The mandate for 10% recycled content in flexible packaging (Category II) by 2025-26 may pose a conflict with certain A&D preservation standards.

Key Risks & Penalties

- » **Financial:**
 - Environmental Compensation: Levied based on the "polluter pays principle" for failure to meet EPR targets. If shortfalls are not addressed within three years, the entire compensation levied is forfeited.
 - Statutory Penalties: Effective immediately under the 2025 Amendment, any contravention renders the entity liable to penalties in accordance with Section 15 of the Environment (Protection) Act, 1986.
 - Compliance Costs: Importers unable to use recycled plastic content due to technical constraints (e.g., airworthiness requirements) must purchase credit certificates from compliant entities to fulfill obligations, creating a direct operational tax.
- » **Operational:**
 - Market Access & Customs Blockage: Packaging must feature a QR code, Barcode, product information brochure, or unique registration number. Failure to provide this would risk inbound shipments being held at the border.
 - Supply Chain Paralysis: Registered entities are legally prohibited from dealing with unregistered entities. If local Indian packaging suppliers for A&D manufacturing are not registered on the CPCB portal, procurement from them must cease immediately.
 - License Revocation: Providing false information triggers a registration revocation for one year, effectively banning the entity from the Indian market for that period.

Horizon Scanning

- » **Reviews:** The obligations for reuse, recycling, and recycled content are subject to mandatory review every five years.
- » **Compensation Updates:** The CPCB is mandated to update Guidelines for Environmental Compensation as required.

Links

- » [Centralized Extended Producers Responsibility Portal for Plastic Packaging](#)

3.3 Japan - Act on the Promotion of Sorted Collection and Recycling of Containers and Packaging

Jurisdiction: Japan

Status: In force

Compliance Trigger: Compliance is triggered when an entity qualifies as a Specified Business Entity, defined as a company that uses, manufactures, or imports containers and packaging, provided they exceed the Small-sized Business thresholds (i.e., sales > ¥240 million or > 20 employees for manufacturing sectors).²²

Executive Summary

The Act on the Promotion of Sorted Collection and Recycling of Containers and Packaging (the Act) imposes EPR on manufacturers, users, and importers to pay for or conduct the recycling of packaging waste. For A&D entities importing parts into Japan, the primary operational risk involves the classification of packaging materials. While no explicit defense exemption exists, packaging used solely for shipping goods or products between businesses that is disposed of as industrial waste is generally exempt from recycling fee calculations. However, misclassification of supply chain packaging as "household-equivalent" waste could trigger significant financial recycling obligations and reporting requirements for importers.

Context and Background

Enacted to address the issue where containers and wrapping accounted for 60% of Japan's household waste by volume, this regulation shifts the cost of recycling from municipalities to business operators. The Act establishes a Designated Organization route where businesses pay fees to a centralized body to manage the recycling of glass, PET, paper, and plastic packaging, thereby harmonizing waste management responsibilities across the supply chain.

Scope and Applicability

- » Affected Products:
 - Plastic Containers and Wrapping: Boxes, cases, trays, tube-shaped containers, bags, and shrink film.
 - Paper Containers and Wrapping: Boxes, cases, and wrapping paper (excluding corrugated cardboard and paper drink packs).
 - Glass and PET: Bottles and stoppers/lids.
- » Exclusions:
 - B2B Transport Exclusion: Containers or wrapping placed solely for the purpose of shipping goods and products are exempt from recycling fees if they are disposed of properly as business waste and not provided to consumers.
 - Industrial Waste Exclusion: The Act targets municipal solid waste (household-type waste); items disposed of as industrial waste through self-collection routes are generally outside the fee calculation scope.
 - Small Business Exemption: Entities with sales of ¥240 million or less (and 20 or fewer employees) in manufacturing are exempt from recycling obligations.

²² While the Act broadly targets packaging waste, entities operating in a B2B supply chain must assess whether their packaging becomes "municipal solid waste" (household waste) or is disposed of as industrial waste; packaging used solely for shipping merchandise between businesses (and not consumed at home) is generally exempt from the recycling fee calculation but requires careful classification and record keeping to ensure compliance.

Critical Timelines and Deadlines

- » April (Annually): Payment of the annual recycling fee is due (unless the installment option is selected).
- » Every Fiscal Year: Designated container/packaging users must report usage amounts and reduction measures to the competent minister.

Key Regulatory Provisions

- » Labeling & Traceability:
 - Mandatory Identification Marks: Importers and manufacturers must apply specific identification marks (e.g., the "paper" or "plastic" symbol) to regulated containers and wrapping.
 - Importer Liability: Importers assume the identification marking obligation if they provide specifications for the packaging or if Japanese language is used on the packaging (printing, embossing, or labels).
 - Composite Materials: For packaging made of multiple materials, the marking is determined by the heaviest material by weight.
- » EPR/Financial Implications:
 - Recycling Fees: Specified Business Entities must pay a fee calculated as: Estimated Amount of Output (kilograms) × Calculation Coefficient²³ × Recycling Unit Cost.
 - Penalties: Failure to fulfill recycling obligations, keep records, or report truthfully can result in fines.

Additional notes for the A&D Industry

A&D entities acting as importers or manufacturers in Japan are classified as "Specified Business Entities" and assume EPR for packaging waste. Importers are liable for recycling fees and mandatory identification marking (labeling) if they specify the packaging design or if Japanese language appears on the label. However, packaging used exclusively for B2B shipping that is disposed of as industrial waste (not municipal/household waste) is generally excluded from the fee calculation, provided accurate records separate this from consumer-bound packaging.

- » Dangerous Goods: There is no explicit statutory exemption for dangerous goods packaging.
- » Aircraft on Ground & Spares: Logistics handling break-bulk shipments (where MROs or depots remove and discard packaging) face a critical classification risk.
- » Preservation Standards: The Act obliges businesses to rationalize use and reduce excessive packaging.

Risks & Penalties

- » Financial:
 - Fines: Up to 1,000,000 JPY for violating orders to recycle and up to 200,000 JPY for failure to report or false reporting
 - Recycling Fees: Failure to deduct B2B/industrial waste from calculations results in significant overpayment of recycling fees to the Designated Organization.

Horizon Scanning

The Act includes provisions for periodic review (e.g., every 5 or 10 years) regarding the state of enforcement and recycling rates, which may lead to adjusted recycling targets or fees. No specific upcoming amendment affecting A&D materials is mentioned in the current text, but the recycling unit cost and calculation coefficient are updated annually, impacting financial liability.

²³ The Calculation Coefficient, set by the government, adjusts the raw output figure to reflect the actual recyclability and collection efficiency for specific material types (paper, plastic, glass, aluminum).

Links

- » [Act on the Promotion of Sorted Collection and Recycling of Containers and Packaging](#)
- » [METI Recycling Law Pamphlet](#)

3.4 Russia - Federal Law No. 89-FZ "On Production and Consumption Waste" (as amended)

Jurisdiction: Russian Federation

Status: In force (major EPR amendments effective from 1 January 2024)

Compliance Trigger: The manufacture or import of goods in packaging, or packaging materials themselves, into the territory of the Russian Federation.

Executive Summary

This regulation enforces a EPR framework, mandating that manufacturers and importers ensure the recycling (utilization) of 100% of the mass of packaging placed on the Russian market or pay an environmental ecological fee. For the A&D sector, a critical exemption applies: the core EPR obligations and fees do not apply to manufacturers or importers of packaging related to the State Defense Orders, products used for protecting state secrets, or products classified as state secrets. However, A&D entities engaged in commercial aviation, MRO activities, or dual-use imports falling outside the specific State Defense Order definitions remain fully liable for packaging waste reporting and recycling targets. Failure to comply regarding non-exempt commercial streams triggers enforcement actions, including the collection of fees and potential administrative penalties.

Context and Background

Originally established in 1998 to define the legal framework for waste management, Federal Law No. 89-FZ has been amended to enforce an EPR regime. The legislation addresses environmental degradation and resource scarcity by mandating the reintegration of waste (including packaging) into the economic cycle as secondary raw materials. For the A&D supply chain, this shifts the regulatory landscape from general waste disposal rules to a mandatory obligation where importers and manufacturers must assume 100% financial or physical responsibility for the recycling of their packaging.

Scope and Applicability

- » Affected Products:
 - Packaging produced within the Russian Federation.
 - Packaging imported into the Russian Federation from Eurasian Economic Union (EAEU) member states.
 - Packaging imported into the Russian Federation from non-EAEU states (goods in packaging).
- » Exclusions: The core EPR obligations do not apply to manufacturers or importers of products (and their packaging) supplied under State Defense Orders.

Critical Timelines and Deadlines

- » Prior to Customs Release: For imports from non-EAEU states, the ecological fee must be paid, or a bank guarantee/surety contract provided before the customs authority releases the goods for domestic consumption.
- » 15 April (Annually): Submission of reporting on the mass of packaging produced or imported in the previous calendar year.

- » 15 April (Annually): Submission of the report on the fulfilment of independent utilization (recycling) targets.
- » 15 April (Annually): Payment of the ecological fee for manufacturers and EAEU importers (calculated based on the previous year's reporting).
- » 15th of the Month following each Quarter: Recyclers (if entities perform their own waste processing) must report data on waste utilization to the registry.

Key Regulatory Provisions

- » Recycled Content: There is no mandatory minimum recycled content percentage currently specified in the source text for A&D goods; however, the government is authorized to establish lists of goods requiring a mandatory share of secondary raw materials. Using secondary raw materials produced in Russia allows for a "lowering coefficient" (discount) applied to the ecological fee.
- » 100% Liability: Producers and importers must ensure the utilization (recycling) of the *entire mass* of packaging placed on the market.
- » Transitional Targets: While the goal is 100% liability, transitional norms apply: 75% of packaging mass must be recycled in 2026.
- » Material Bans: The Federal Law empowers the Government to establish a list of goods and packaging subject to utilization, effectively allowing them to scope in or out specific formats, though no specific material bans (e.g., polyvinyl chloride [PVC], foams) are detailed in the statutory text provided.
- » EPR/Financial: Eco-fee Calculation: For packaging, the fee is calculated by multiplying the mass of the packaging by the base rate and a coefficient reflecting the complexity of recycling.

Additional note for the A&D Industry

Unless operating strictly under a State Defense Order, A&D entities importing parts or equipment must account for the mass of all logistics packaging (crates, pallets, films) and either recycle it to 100% of the mass or pay the ecological fee. Companies must register with the federal operator and submit detailed annual reports on packaging mass to avoid administrative penalties.

- » Dangerous Goods: The legislation does not explicitly exempt dangerous goods packaging; therefore, standard UN-spec packaging used for hazardous chemical transport falls under standard EPR liabilities unless the Defense exemption is invoked.
- » Preservation Standards: The law incentivizes the use of secondary (recycled) raw materials through fee reductions. This could conflict with A&D specifications requiring virgin materials for long-term preservation and structural integrity of packaging.

Risks & Penalties

- » Financial:
 - Mandatory Ecological Fee: Commercial importers and manufacturers failing to meet recycling targets must pay the ecological fee, calculated by multiplying the packaging mass, the base rate, and a coefficient reflecting recycling complexity.
 - Bank Guarantee Costs: For imports from non-EAEU countries, companies must provide a bank guarantee or surety contract to cover the ecological fee liability prior to customs release, incurring additional financial carrying costs.
 - Retroactive Collection: The regulator (Rosprirodnadzor) audits reporting; if under-reporting of packaging mass is detected, the authority will issue a demand for immediate payment of the discrepancy.
 - Liability: Non-compliance triggers disciplinary, administrative, criminal, or civil liability under Russian legislation, though specific monetary fine amounts are codified in the Code of Administrative Offences.

- » Operational: Invalidation of Recycling: If an A&D entity contracts a recycler not listed in the official "Register of Utilizers," the recycling acts will be rejected, reverting the company to full fee liability.

Horizon Scanning

EPR Infrastructure Development: By 2026–2027, stricter requirements for recyclers to provide automated data on energy consumption will come into force to verify actual recycling activity.

Link

- » [Federal Law No. 89-FZ](#)
- » [2024 Amendments](#)

3.5 South Korea - Act on the Promotion of Saving and Recycling of Resources

Jurisdiction: Republic of Korea

Status: In force (amendments through Sep 2025)

Compliance Trigger: Manufacturers and importers of products and packaging materials that fall under the scope of the Act's recycling and waste control provisions are subject to compliance obligations. Sellers of products using packing materials are also included as producers with recycling obligations in respect of packing materials.

Executive Summary

The Act on the Promotion of Saving and Recycling of Resources (the Act) mandates strict quality and structure evaluations for packaging materials, requiring manufacturers and importers to minimize packaging ratios and potentially face suspension orders materials that are difficult to recycle. The source text of the Act contains no explicit exemptions for aerospace or defense activities. Effective September 2025, the Act was further amended to introduce a mandatory recycled plastic raw material content obligation for designated product categories, with the first compliance obligation for colorless PET bottle producers taking effect 1 January 2026 (Article 33-3).

Context and Background

Enacted to facilitate the use of recycled resources, this Act was established to curb waste generation at the source by restricting excessive packaging and enforcing the use of recyclable materials. The regulation harmonizes waste management by shifting the financial and physical burden of recycling from the public sector to manufacturers and importers through Waste Charges and Recycling Dues.

Scope and Applicability

Affected Products: The Act applies to packaging materials defined as containers or materials used to protect the value and state of products during transportation, storage, handling, and use. It specifically targets:

- » Packing materials made of synthetic resin and other products/packing materials prescribed by Presidential Decree.
- » Products utilizing packaging materials that require improvement in material quality or structure to facilitate recycling.
- » Items containing poisonous substances, specific air/water pollutants, or materials difficult to recycle (imposing waste charges).

Critical Timelines and Deadlines

Specific operational reporting dates are typically located in subordinate legislation and technical standards. These include:

- » The Enforcement Decree of the Act on the Promotion of Saving and Recycling of Resources (Presidential Decree): It defines products and packing materials in scope, waste-charge product lists, detailed reporting and payment timelines, and calculation methods for mandatory recycling rates and quantities.
- » The Enforcement Rule (Ordinance of the Ministry of Environment): This rule provides detailed procedures, forms, and technical specifications for implementing packing-material evaluation, labeling, and recycling obligations.
- » Ministry of Environment Notifications (which together set the technical criteria and labeling rules for packaging recyclability grades), such as the:
 - Standards for Quality and Structure of Packaging Materials.
 - Packaging Material Recyclability Rating Evaluation Standard.
 - Labeling Standards for Quality and Structure Grade of Packaging Materials.

Key Regulatory Provisions

Note: Please see note above for detailed specifications.

- » Recycled Content:²⁴
 - Target %: The original Act did not set a fixed percentage but empowers the Minister of Environment to set standards for the quality and structure of packaging. The Act, as amended by the insertion of Article 33-3 (promulgated 25 March 2025; effective 26 September 2025), now establishes a mandatory recycled plastic raw material (input) content obligation for designated product categories. With an Enforcement Decree (effective 1 January 2026), producers of bottled water and non-alcoholic beverages manufacturing or importing $\geq 5,000$ tonnes of colorless (transparent) PET bottles per year are designated as the first obligated entities. The mandatory recycled content ratio is set at 10% for 2026, increasing to 30% by 2030. The scope of obligated entities expands to producers using $\geq 1,000$ tonnes per year from 2028. For product/packing material categories not yet designated under Article 33-3, the Minister of Environment retains authority to set standards.
 - Indication: Manufacturers *may* indicate the percentage of recycled raw material use on the product/container if it meets Ministerial standards if the percentage equals or exceeds that prescribed by Ministerial Decree.
- » Banned Formats:
 - Hard-to-Recycle Materials: The Minister of Environment may suspend the manufacture, import, or sale of packaging materials that fail to meet quality and structure criteria (e.g., color, weight, and ease of recycling).
 - Excessive Packaging: Packaging is restricted based on packing space ratio and the number of packing layers.
 - PVC/Synthetic Resins: Manufacturers must adhere to annual reduction targets for synthetic resin packaging materials (excluding biodegradable resins).
- » Labeling & Traceability:
 - Recyclability Grading: Producers must evaluate the quality and structure of packaging and mark the evaluation result on the packaging surface.
 - Separate Discharge Mark: Manufacturers must place a separate discharge (recycling) mark on packaging to facilitate collection.

²⁴ Under South Korea's *Act on the Promotion of Saving and Recycling of Resources*, recycled-content requirements are not generally set as uniform, economy-wide minimums in the main law. Instead, recycled-content targets are introduced for specific product categories through amendments to the Enforcement Decree and related administrative rules.

- Deposit Mark: Containers subject to the deposit system must be marked “resource circulation deposit refundable” and “reusable” or “recyclable”.
- » EPR/Financial:
 - Waste Charges: Importers must pay charges for materials deemed difficult to recycle or containing hazardous substances.
 - Recycling Dues: Producers who fail to meet mandatory recycling ratios must pay recycling dues calculated based on the cost of recycling plus a surcharge (30% of expenses).
 - Penalty Surcharges: Violating suspension orders (for bad packaging structure) can result in a penalty surcharge.

Impact on the A&D Industry

A&D importers face a dual burden: 1) strict quality and structure evaluations for packaging entering the country and 2) financial liability (EPR) for waste management. Failing the recyclability evaluation (e.g., using multi-layered barrier films) may lead to a suspension of imports unless the Consortium²⁵ can negotiate a penalty payment in lieu of the ban.

- » Dangerous Goods: Packaging or products containing poisonous substances or specific air pollutants are subject to waste charges.
- » Aircraft on Ground & Spares: Logistics packaging (crates, wraps) removed by the importer immediately becomes their waste responsibility (as producers with recycling obligations).
- » FOD & Cleanliness: The Act encourages the use of recycled raw materials. For A&D, introducing recycled plastics into the supply chain increases the risk of FOD or material contamination in clean-room environments.

Risks & Penalties

- » Financial:
 - Penalty Surcharges: If an import suspension order (for failing packaging recyclability standards) would cause significant issues, the Minister of Environment may impose a penalty surcharge of up to one billion won in lieu of the ban.
 - Recycling Dues: Producers failing to meet mandatory recycling ratios must pay recycling dues calculated as the cost of recycling plus a 30% surcharge.
 - Administrative Fines: Failure to indicate recyclability grades on packaging, or falsely marking them, may cause fines up to 3 million won per instance.
 - Waste Charges: Importers of products containing poisonous substances or specific air pollutants (relevant to aerospace batteries/chemicals) face mandatory Waste Charges if the materials are difficult to recycle.
- » Operational:
 - Market Access Blockage (Stop-Ship): The Minister of Environment holds the authority to order the suspension of manufacture, import, or sale of packaging materials that fail to meet quality and structure standards (e.g., prohibiting specific material defined by Decrees).
 - Mandatory Recall/Improvement: Importers may be ordered to improve packaging quality within one year; failure to do so results in the suspension orders described above.
 - Customs/Documentation: A&D importers must submit data on outbound shipping volumes and import volumes to the Minister to calculate waste charges; failure to submit data or submitting false data triggers administrative fines.

²⁵ Defined as a collective organization of producers that joins together to fulfil their resource-recycling obligations under the EPR system. In Korea, this kind of collective is typically structured as a recycling business mutual aid cooperative (often translated as a producer responsibility organization — in packaging contexts the main one is the Korea Packaging Recycling Cooperative).

Horizon Scanning

- » Delegated Legislation (ongoing): The Act heavily relies on Presidential Decrees and Ministerial Decrees to define the specific technical criteria for recyclability and prohibited materials. These subordinate acts can be amended faster than the primary law; the consortium must monitor Ministry of Environment notifications for changes to the Detailed Standards for packaging structure.

Link

- » [South Korea: Act on the Promotion of Saving and Recycling of Resources](#)
- » [Official MCEE press release on Article 33-3 / Enforcement Decree amendment \(15 September 2025\)](#)

3.6 Taiwan - Resource Recycling Act

Jurisdiction: Taiwan (Republic of China)

Status: In force

Compliance Trigger: Production, manufacturing, transportation, selling, services, and related commercial activities that involve recyclable resources/reuseable materials.

Executive Summary

The Resource Recycling Act (the Act) enforces a strict resource conservation framework that mandates waste reduction through excessive packaging restrictions and mandatory recyclability design for containers. No explicit defense exemptions for packaging compliance are present.

Context and Background

The Act was formulated to mitigate environmental loading by prioritizing the reuse and recycling of materials over disposal, moving Taiwan toward a sustainable society model. It empowers the central authority to rigorously control material flows and restrict designated items (including packaging) that do not meet economic or technological feasibility for recycling.

Scope and Applicability

- » Affected Products:
 - Packaging & Containers: Specifically targets excessive packaging, packaging volume ratios, number of layers, and material types.
 - Recycled Resources: Broadly defined as substances that have lost original usefulness but are feasible to recycle (likely applicable to industrial by-products).

Critical Timelines and Deadlines

- » Immediate Effect: The Act is currently in force.

Key Regulatory Provisions

- » Recycled Content: The regulatory authority determines the "certain proportion"²⁶ of recycled resources required for designated products; specific percentages are not fixed in the primary text.

²⁶ refers to a minimum content requirement for products made from recycled materials – the Act provides that government agencies and other entities should preferentially procure products that are “[made] using at least a certain proportion of renewable resources as raw materials.”

- » Excessive Packaging: The regulator may restrict packaging volume ratios, the number of layers, and the quantity of materials used for designated products.
- » Design for Recyclability: Manufacturers and sellers of containers are obligated to design them to facilitate decomposition, demolition, or recycling.
- » Material Bans: The central authority may strictly prohibit the use of specific articles, packaging, or containers on public or private premises.
- » Material Disclosure: Enterprises (including importers) must list the types of materials used on containers and products.
- » Recycling Marks: Classification and recycling marks must be applied to designated products.
- » EPR/Financial:
 - Penalties: Fines range from NT\$30,000 to NT\$150,000 for excessive packaging or labeling violations.
 - Operational Risk: Failure to correct violations within a limited time results in consecutive daily fines. Serious violations may lead to orders to suspend work or terminate business operations.

Additional note for the A&D Industry

Enterprises involved in manufacturing, importing, or selling products must comply with strict excessive packaging restrictions, limiting void space and layers. Furthermore, importers bear the full legal liability for compliance at the time of sale, meaning inbound shipments from foreign OEMs must meet Taiwanese labeling and recyclability standards before entering the local supply chain.

- » Designated Status: The Act operates as a framework law. Specific restrictions (e.g., exactly *which* packaging materials are banned or *what* the volume ratio limit is) are not in the Act itself but are legally triggered when the central authority officially announces and designates them.
- » Dangerous Goods: No explicit exemption found. The Act allows the central authority to restrict packaging materials and formats on public or private premises without stating exceptions for safety-critical or dangerous goods packaging. However, Article 1 states that "regulations of other laws shall apply to those matters not regulated by this Act," which may offer a legal defense if dangerous goods safety laws conflict with packaging reduction mandates.
- » Aircraft on Ground & Spares: High risk for break-bulk and aircraft on ground shipments. As importers are liable for packaging compliance, MROs or local distributors receiving urgent spares may face fines if the foreign shipper used unapproved materials or excessive dunnage.
- » Preservation Standards: The Act prioritizes cleaner production and material reduction.
- » FOD & Cleanliness: Article 22 explicitly mandates that military authorities and government agencies preferentially procure products with recycled content.

Risks & Penalties

- » Financial:
 - Base Fines: Fines ranging from NT\$30,000 to NT\$150,000 for violations regarding excessive packaging, material labeling, or import restrictions.
 - Compounding Fines: Failure to correct violations by the deadline results in consecutive daily fines.
- » Operational:
 - Business Suspension: Serious violators (defined as those continuing violations after two orders to improve) face suspension of work (one month to one year) or termination of business operations.

- Import Prohibitions: The central authority has the power to strictly prohibit the import of specific recycled resources (packaging waste) or designated articles to prioritize domestic recycling.

Horizon Scanning

- » Designated Product Expansions: The Act functions as a framework law. Secondary announcements from the authorities must be monitored by A&D stakeholders.
- » In mid-2025, the Ministry of Environment announced its intention to amend and update the act. Developments should be monitored.

Link

- » [Resource Recycling Act](#)

3.7 Turkey - Regulation on Control of Packaging Wastes

Regulation: Regulation on Control of Packaging Wastes

Jurisdiction: Turkey

Status: In force

Compliance Trigger: When an economic operator places on the market any packaged product within Turkey.

Summary

The regulation on Control of Packaging Wastes mandates strict management of all packaging placed on the Turkish market, enforcing EPR, registration obligations, and material restrictions. The regulation enforces heavy metal limits and restricts non-recyclable formats, placing the financial and legal burden of waste management on the entity placing the goods on the Turkish market. There is no explicit exemption for defense use.

Context and Background

This regulation replaces the 2017 legislation to align Turkey's waste management framework with zero waste and circular economy principles, centralizing authority under the Ministry and the Turkey Environment Agency. Its primary objective is to enforce the "polluter pays" principle, ensuring that economic operators bear the costs of collecting and recycling the packaging waste they introduce into the supply chain.

Scope and Applicability

- » Affected Products: All packaging formats including primary (sales), secondary (group), and tertiary (transport) packaging.
- » Exclusions: Containers used for road, rail, sea, and air transport are explicitly excluded from the definition of transport packaging.

Critical Timelines and Deadlines

- » Annually (end of March): Deadline for producers, importers, and suppliers to report data on packaging placed on the market during the previous year via the Packaging Information System.
- » 2021–2025: Operational target period to achieve a 60% total recovery rate and material-specific recycling rates (e.g., 60% for metal, 25% for wood).

Key Regulatory Provisions

- » Recycled Content: No fixed percentage is mandated in this text for general packaging, but producers are legally obligated to comply with future Ministry regulations regarding recycled content usage based on material type.
- » Heavy Metals: The sum of lead, cadmium, mercury, and hexavalent chromium in packaging components must not exceed 100 parts per million.
- » Banned Formats: Packaging that is technically impossible to recycle is prohibited from being produced or imported, unless no alternative exists.
- » Labeling & Traceability:
 - Labeling is generally voluntary; however, if used, it *must* strictly follow the defined numbering and abbreviation system (e.g., recycling triangle with material code).
 - Importers must use the Packaging Information System for traceability and reporting.
- » EPR/Financial: Importers/Producers must register with the Agency and are responsible for the costs of waste management.

Note for the A&D Industry

Similar to all importers, A&D entities importing parts into Turkey must register with the Packaging Information System. They are financially liable for the waste management costs of all packaging (crates, boxes, films) surrounding their imported goods.

- » Dangerous Goods: Packaging for dangerous goods is not exempt from the regulation; however, it is subject to specific collection and handling rules. The definition of transport packaging excludes large intermodal containers (sea/air/rail) but explicitly includes the tertiary packaging (pallets, strapping) used within them.
- » Preservation Standards: The regulation bans packaging that is technically impossible to recycle unless no alternative exists.
- » FOD & Cleanliness: Producers must comply with Ministry regulations regarding recycled content usage. A&D stakeholders must monitor upcoming secondary legislation on mandatory recycled content, as recycled plastics may introduce FOD or particulate risks incompatible with clean-room standards or sensitive optics.

Risks & Penalties

- » Financial: Penalties are applied in accordance with Environment Law No. 2872 and other relevant legislation. Additionally, importers are liable for the Recycling Contribution Share for packaging placed on the market since 1 Jan 2020.
- » Operational: Products (and their packaging) placed on the market without necessary approvals (specifically noted for deposit systems but applicable to general compliance) are prohibited. Non-compliance with heavy metal limits or registration requirements could lead to market access blockage at customs.

Horizon Scanning

- » Recycled Content Mandates: The Ministry may issue specific regulations mandating recycled content percentages based on material type.
- » Labeling Mandates: While currently largely voluntary (unless in the deposit system), the Ministry may make packaging labeling (material coding) mandatory.

Links

- » [Regulation on Control of Packaging Wastes](#)



4.0 AFRICA

4.1 South Africa - Extended Producer Responsibility Regulations, 2020 (Government Notice 1184 of 2020)

Jurisdiction: South Africa

Status: In force

Compliance Trigger: The commercial manufacture, conversion, refurbishment, or import of identified products (which generally includes packaging) into the South African market.

Executive Summary

This framework regulation mandates that any entity introducing identified products into South Africa must register with the government and finance the end-of-life management of those materials. The regulation requires producers to join an EPR scheme, pay fees based on net cost recovery, and implement environmental labelling (SANS 14021/14024) within three years. No specific exclusions exist for defense or national security applications, though goods produced for export purposes only are exempt.

Context and Background

This regulation operationalizes Section 18 of the National Environmental Management: Waste Act, 2008, moving South Africa from a linear waste model to a circular economy. It establishes a mandatory EPR framework, shifting the financial and physical burden of end-of-life management from government to producers and importers. The primary goal is to enforce lifecycle accountability and ensure effective waste management through industry-funded schemes.

Scope and Applicability

- » Affected Products: Identified products (packaging and goods) as designated by the Minister.
- » A&D Exclusions: Explicit exemption exists for goods produced for export purposes only or the portion of goods that is exported only.

Critical Timelines and Deadlines

- » Registration (New Importers/Producers): Within three months of establishment or commencing operations.
- » Labeling Compliance: three years from implementation to comply with SANS 14021 and SANS 14024.
- » Life Cycle Assessment (LCA): 5 years from implementation to conduct LCA focusing on material minimization.
- » Financial Plan Submission: Within 60 days of implementation (Year 1) and by 30 November annually thereafter.

Key Regulatory Provisions

- » Recycled Content: Schemes must report on the minimum recycled content standards and the secondary materials utilization rates. Specific % targets are determined in sector-specific notices, not this regulation framework.

- » Other relevant content for A&D: Producers must conduct LCA focused on minimizing material usage and reducing environmental toxicity.
- » Banned Formats: Not listed in this framework; however, schemes must include cleaner production measures including waste minimization and design for recyclability.
- » Labeling & Traceability: Mandatory implementation of environmental labeling standards SANS 14021 and SANS 14024.
- » EPR/Financial: Producers must pay EPR fees based on net cost recovery (full cost of collection, storage, treatment, and administration, less revenue from sales). Administration costs are capped at 20% in Year 1, reducing to 12% by Year 3.

Additional note for the A&D Industry

The definition of "producer" captures A&D entities acting as importers of components and their packaging. A&D firms must register with the Department,²⁷ report volumes placed on the market, and finance the waste management of packaging that remains in South Africa (i.e., not re-exported).

- » Dangerous Goods: No exemptions for dangerous goods packaging are found in the text; standard EPR obligations apply unless excluded by specific product notices.
- » Aircraft on Ground & Spares: MRO activities involving break-bulk of imported spares will trigger producer obligations for the discarded packaging.
- » Preservation Standards: The requirement to design for recyclability and minimization of material may conflict with specifications intended for long-term preservation rather than recycling.
- » FOD & Cleanliness: The mandate to develop markets for "secondary materials" (recycled content) creates a risk if recycled plastics with uncontrolled particulate levels are introduced into the aerospace supply chain, potentially leading to FOD issues.

Risks & Penalties

- » Financial: Non-compliance constitutes a criminal offence. Penalties are severe, including imprisonment for a period not exceeding 15 years, an appropriate fine (uncapped in the regulation text), or both.
- » Operational:
 - Revocation of Registration: A registered producer (importer) found non-compliant may have their registration revoked. As registration is mandatory for producers/importers, revocation could effectively block the legal importation of packaged A&D components.
 - Forced Scheme Transfer: Non-compliant producers may be compelled by the Department to join a different EPR scheme, potentially resulting in higher fees or loss of control over waste management strategy.

Horizon Scanning

- » Five-Year Performance Review: The Department will review the performance of EPR schemes at five-year intervals, which may trigger regulatory adjustments.

Links

- » [South Africa: Extended Producer Responsibility Regulations, 2020 \(Government Notice 1184 of 2020\)](#)

²⁷ The regulation defines Department as "the national Department responsible for the environment."



5.0 OCEANIA

5.1 Australia – National Environment Protection (Used Packaging Materials) Measure 2011 (NEPM-UPM)

Jurisdiction: Australia

Status: In force

Compliance Trigger: The main compliance trigger in the NEPM-UPM is being a “liable brand owner” of consumer packaging above the specified threshold (more than AUD 5 million annual turnover).

Summary

Australia has a mandatory national co-regulatory framework for used packaging established under the [National Environmental Protection \(Used Packaging Materials\) Measure 2011](#) (NEPM-UPM). It creates obligations for liable businesses (known as brand owners) to design more sustainable packaging to increase recycling, reduce litter and progress action on the [2025 National Packaging Targets](#). The co-regulatory product stewardship framework works in tandem with the Australian Packaging Covenant Organization (a circularity focused non-profit). The NEPM-UPM relies on each participating state and territory to give it effect through local legislation and regulations so that obligations on liable businesses are enforceable.

Context and Background

The NEPM-UPM was established in 1999. Its national environment protection goal is to reduce environmental degradation arising from the disposal of used packaging and conserve virgin materials.

Scope and Applicability

- » Affected Products: NEPM-UPM applies nationally to brand owners of consumer packaging and paper products. It covers packaging made of materials such as plastics, glass, paper, cardboard, and metals.

Critical Timelines and Deadlines

- » There are no single national phase-out style dates in the NEPM-UPM comparable to other jurisdictions; instead, the key timelines for A&D are about ongoing annual obligations and the current reform horizon.
- » For example, the annual reporting and record-keeping date for regulated packaging operations in Victoria is 30 September.
- » The NEPM-UPM/APCO²⁸ model is expected to change with stricter national EPR style frameworks in the future.

Key Regulatory Provisions

The following examples highlight how the national goals to reduce environmental degradation from used packaging are implemented.

²⁸ Australian Packaging Covenant Organization

- » In Victoria, NEPM-UPM is implemented through Part 4.3 of the Environment Protection Regulations 2021 and the Australian Packaging Covenant. Liable brand owners in Victoria must either become a signatory to the Australian Packaging Covenant or comply directly with the Environment Protection Regulations 2021 for used packaging materials (e.g., review packaging, take action to meet reuse and recycling targets, and report). In New South Wales (NSW), NEPM-UPM is given effect by Part 8 of the Protection of the Environment Operations (Waste) Regulation. Under that regulation, brand owners have mandatory obligations, including meeting NSW packaging recovery targets (e.g., 90% recovery of all packaging materials up to 30 June 2026) and ensuring 100% of new and existing packaging is reviewed using the Sustainable Packaging Guidelines.

Additional note for the A&D Industry

- » Although the NEPM-UPM is primarily aimed at consumer and general product packaging, it can indirectly affect aerospace and defense companies that are brand owners for packaged products sold into the Australian consumer market.

Risks & Penalties

- » Because the NEPM-UPM is implemented through state and territory legislation, penalties for non-compliance are set at jurisdictional level.

Horizon Scanning

The current NEPM-UPM/APCO model is expected to change, potentially moving to stricter national EPR-style obligations on packaging.

Links

- » [National Environment Protection \(Used Packaging Materials\) Measure 2011](#)
- » [Australian Packaging Covenant Organization](#)
- » [Victoria - Environment Protection Regulations 2021](#)
- » [New South Wales - Protection of the Environment Operations \(Waste\) Regulation](#)

5.2 New Zealand – Waste Minimization Act (WMA) 2008

Jurisdiction: New Zealand

Status: In force

Compliance Trigger: In July 2020, the Government announced six products (including plastic packaging) to be declared priority products for the establishment of product stewardship schemes under the WMA.

Summary

The WMA established a regulatory framework for recycling and waste reduction in New Zealand. It authorized the government to mandate product stewardship schemes and prohibit the sale of goods not compliant with such schemes. In 2022, the Government adopted specific regulations banning or restricting certain plastic packaging products. New Zealand is actively amending WMA with specific moves towards a broader EPR framework.

Context and Background

WMA was enacted to shift responsibility to producers, importers, and consumers for a product's end-of-life management. Under the WMA, the government declares specific items priority products

requiring mandatory management schemes. The legislation addresses the economic and environmental costs of disposal, with levy revenue paid into a dedicated fund for waste minimization initiatives. The WMA is being amended to modernize New Zealand's waste framework and to broaden and increase waste disposal levy to fund a wider range of environmental outcomes.

Scope and Applicability

- » Affected Products: The Waste Minimization (Plastic and Related Products) Regulations took effect in 2022 and phased in bans on problematic plastics such as PVC and polystyrene in single use packaging.

Critical Timelines and Deadlines

- » Tranche 1 (Effective Oct 1, 2022): Bans included PVC trays, polystyrene takeaway food/beverage packaging, expanded polystyrene food/drink packaging, and products with pro-degradant additives (OXO-degradable).
- » Tranche 2 (Effective July 1, 2023): Bans included single-use plastic bags, plates, bowls, cutlery, etc.
- » Future Phase-Outs (Timing under review): A planned third tranche to ban all remaining PVC and polystyrene food/beverage packaging (originally mid-2025) has been put on hold, with the 2025 deadline removed and further policy work underway; no replacement implementation date has been confirmed.

Key Regulatory Provisions

- » Labeling & Traceability:
- » Regulations may prescribe labeling requirements and mandate information collection regarding the disposal, sale, or manufacture of products.
- » EPR/Financial: A levy is imposed on all waste disposed of at disposal facilities (set at NZ\$70/per tonne for 1 July 2025 – 30 June 2026). Regulations may require producers (including importers) to provide take-back services, charge deposits, or pay management fees at various lifecycle stages.

Additional note for the A&D Industry

- » Dangerous Goods: There is no explicit exemption in the WMA for packaging used for dangerous goods or hazardous substances.
- » Preservation Standards: Section 23(1)(b) allows the authorities to control or prohibit the sale of products containing specified materials, where reasonably practicable alternative exists.
- » FOD & Cleanliness: The Act allows regulations to prescribe quality standards for reusing, recycling, or recovering materials. If regulations mandate minimum recycled content in packaging to drive the circular economy, there is a risk of introducing FOD or particulate contamination into the cleanroom or flight-line environment.

Risks & Penalties

- » Operational: Regulations may prohibit the sale (defined to include distribution/delivery) of priority products except in accordance with an accredited scheme.
- » Fines: Up to NZ\$100,000 for producers who contravene regulations regarding priority product sales or material bans.
- » Levies: A default waste disposal levy (currently NZ\$ 70/tonne unless prescribed otherwise) applies to all waste sent to disposal facilities.

Horizon Scanning

The WMA is operational, but specific impacts depend on the authorities classifying Priority Products. A&D stakeholders must monitor official Gazettes for declarations regarding additional aspects such as industrial plastics, pallets, and strapping. The WMA relies heavily on Orders in Council (secondary legislation) regarding fees, mandatory take-back services and prohibited materials and should be actively monitored. The government is currently amending the WMA and detailed EPR schemes covering packaging are underway.

Links

- » [New Zealand Waste Minimization Act 2008](#)
- » [Priority Product Stewardship](#)



6.0 SOUTH AMERICA

6.1 Brazil - Decree No. 12.688 (October 2025)

Jurisdiction: Brazil

Status: In force (effective 21 October 2025)

Compliance Trigger: Importation of goods packaged in plastic (Risk of Import License blocking)

Summary

Decree No. 12.688 activates a mandatory reverse logistics system for primary, secondary, and tertiary plastic packaging, requiring manufacturers and importers to prove recycled content and recovery targets. For the A&D sector, the critical operational risk is the government's authority to subject foreign trade operations to strict import licensing if there are indications of non-compliance, potentially grounding inbound shipments of parts and materials. While exemptions exist for certain electronics and mixed-material packaging, there are no explicit defense or national security exemptions within the text.

Context and Background

The Decree operationalizes Articles 32 and 33 of Law No. 12.305 (2010), the National Policy on Solid Waste, to formalize the reverse logistics of plastic packaging across the product lifecycle. It aims to increase recovery rates and integrate circular economy principles by mandating financial sustainability mechanisms and recycled content targets for packaging placed on the Brazilian market.

Scope and Applicability

- » Affected Products:
 - Tertiary Packaging (logistics): Explicitly includes tertiary packaging, which impacts A&D logistics assets such as plastic pallets, crates, shrink wrap, and protective foam used in transport.
 - Primary and Secondary Packaging: Any plastic packaging surrounding components or spare parts.

- » Exclusions:
 - Mixed packaging that contains paper or cardboard in its composition is explicitly excluded, offering a potential compliance strategy for specific logistics configurations.
 - Plastic packaging for products already regulated by Decree No. 10.240 (2020) is excluded.²⁹

Critical Timelines and Deadlines

- » 21 October 2025: Effective Date. The Decree entered into force immediately upon publication.
- » January 2026: Mandatory Recycled Content (large enterprise). Companies defined as large size must meet quantitative targets for recycled content in plastic packaging.
- » July 2026: Mandatory Recycled Content (small and medium size enterprises). Compliance deadline for small and medium-sized enterprises.
- » 30 July (Annually): Reporting Deadline. Submission of the Annual Report of Results via the National System of Information on Solid Waste Management regarding the previous year's performance.

Key Regulatory Provisions

- » Recycled Content: Mandatory targets for incorporating recycled resin (PCR) are established in Annex II. Compliance is verified via mass balance and electronic invoices.
- » Other relevant content for A&D:
 - Import Conditions: Compliance with reverse logistics is explicitly listed as a "requisite of conformity" for importation. Authorities may subject operations to import licensing scrutiny if non-compliance is suspected.
 - Tertiary Packaging: The scope explicitly includes tertiary packaging (transport logistics), affecting pallets, shrink wrap, and strapping.
- » Banned Formats: No specific polymer or format bans are listed in the provided text; however, manufacturers must prioritize recyclability in the design phase.
- » Labeling & Traceability:
- » De-characterization: Commercial operators (e.g., MROs, distributors) are required to remove or de-characterize labels from packaging prior to disposal.
- » Traceability: Compliance is tracked via the Waste Transport Manifest and electronic invoices issued by recycling operators.
- » EPR/Financial: Manufacturers and importers must institute a financial mechanism to ensure the economic sustainability of the system. Costs are proportional to the mass of plastic placed on the market.

Additional note for the A&D Industry

Importers of A&D parts packaged in plastic must declare who manages their reverse logistics to customs authorities.

- » Dangerous Goods: No explicit exemption for dangerous goods packaging is found in the text. This creates a challenge where contaminated plastic (e.g., chemical drums, fuel system packaging) is legally required to be recovered but technically difficult to recycle.
- » Preservation Standards: Mandate to use recycled content.
- » FOD & Cleanliness: The push for PCR in packaging may introduce FOD challenges.

²⁹ Decree 10.240 generally covers electronics.

Risks & Penalties

- » Financial: Sanctions apply under the Environmental Crimes Law (Lei nº 9.605/1998).
- » Operational: Customs Blockage. The most immediate threat is the authority granted to competent bodies to condition imports on proof of reverse logistics compliance. This creates a "stop-ship" mechanism at the border.

Horizon Scanning

- » Returnable Packaging Targets: The Ministry will set specific targets for returnable packaging 90 days after receiving the first sector reports.

Links

- » [Brazil - Decree No. 12.688 \(October 2025\)](#)