

Noncompliant IBCs in HAZMAT Service

Authorization, UN markings, qualification, and the consequences of getting them wrong

THE QUICK CONCLUSION

If the HMR requires a UN standard IBC, using an IBC that is unmarked, incorrectly marked, outside its authorized limits, damaged, improperly closed, or past due for required testing can make the package unauthorized for that shipment. The shipment may need to be held or repackaged and can expose regulated parties to enforcement, civil penalties, spill costs, delays, and customer consequences. A UN mark identifies a certified design type; it does not by itself approve every material or use.

01 First determine what the shipment requires

The first question is not simply whether the IBC carries a UN mark. The shipper must classify the material and determine the packaging authorized by the applicable 49 CFR 172.101 Table entry, packaging section, special provisions, and any special permit. When a UN standard IBC is required, a non-UN packaging or an IBC used outside its authorized design, performance level, condition, or qualification is not authorized for that shipment. The HMR can expressly authorize non-specification packaging in limited situations, so the answer is shipment-specific.

02 What can make an IBC noncompliant

- Required UN design-type or additional markings are missing, unreadable, altered, false, or not supported by the actual packaging.
- The IBC code, performance level, packing-group capability, test pressure, specific-gravity basis, capacity, or maximum gross mass does not cover the shipment.
- The hazardous material is not authorized in that IBC type, is chemically incompatible, or is used outside an applicable special provision or limitation.
- A prescribed leakproofness test, visual inspection, internal inspection, or post-repair requirement is overdue or unsupported by the required record.
- The bottle, cage, pallet, valve, closures, or other service equipment is damaged, contaminated, incorrectly assembled, or unable to perform as required.
- A repair, remanufacture, bottle replacement, modification, closure, or vent does not conform to the original design type, applicable HMR requirements, approval, or special permit.

A UN MARK IS NOT BLANKET APPROVAL

The mark identifies a design type and performance basis. Authorization still depends on the material, packing group, quantity, compatibility, condition, closure, filling limits, current tests and inspections, and any shipment-specific provisions.

03 Immediate shipment impact

- The hazardous material may not be filled, offered, accepted, or transported in that packaging when the applicable requirements are not met.
- Shipping papers, labels, placards, or a supplier statement do not cure an unauthorized or nonconforming package.
- A carrier, customer, or receiving facility may reject, hold, return, or require correction of the shipment.
- The material may need to be transferred into an authorized package, followed by renewed inspection, marking, documentation, and shipment preparation.
- Discovery in transit can interrupt movement and may require inspection, segregation, corrective action, or incident response if a release occurs.

04 Enforcement and financial impact

- Each person performing a regulated function is responsible for that function; a shipment can involve more than one offeror or regulated party.
- PHMSA may inspect shippers, carriers, packaging manufacturers, reconditioners, repairers, and retest facilities and can require corrective action.
- Civil penalties may be assessed for each violation, and a continuing violation can create separate daily violations under federal law.
- A violation that results in death, serious illness or injury, or substantial property destruction is subject to a higher maximum civil penalty.
- Maximum penalty amounts are adjusted over time. Verify the current 49 CFR 107.329 instead of relying on a static brochure amount.
- Willful or reckless violations can create criminal exposure under 49 U.S.C. 5124; an ordinary packaging mistake is not automatically a criminal case.

05 Safety, operational, and business impact

- Noncompliance does not mean a release will occur, but it removes or weakens the evidence that the package meets the required performance controls.
- A leak or structural failure can expose employees, carriers, responders, customers, property, and the environment.
- Product loss, cleanup, disposal, investigation, emergency response, and incident-reporting obligations can exceed the original packaging cost.
- Repackaging, retesting, replacement freight, storage, demurrage, and missed delivery windows can disrupt operations.
- Customers or carriers may suspend acceptance, require corrective-action evidence, or reconsider supplier qualification.
- Coverage, indemnity, warranty, and contract questions may become more difficult when the packaging was not authorized or records are incomplete.
- Repeated or poorly controlled failures can damage confidence in the shipper's packaging and HAZMAT management system.

Use this checklist before filling or offering an IBC containing hazardous material. A checked box should reflect the actual material, packaging authorization, physical IBC, current qualification, and supporting records.

- ☐ The material's proper shipping name, hazard class, packing group, and relevant special provisions are documented.
- ☐ The applicable packaging authorization permits this IBC type, quantity, and transport conditions.
- ☐ The UN code and performance level cover the material; marked capacity, pressure, and gross-mass limits and any supporting specific-gravity basis are suitable.
- ☐ Required manufacturer, design-type, and additional markings are durable, readable, and consistent with the physical IBC.
- ☐ Required leakproofness tests and inspections are current, and the markings agree with the supporting records.
- ☐ The bottle, cage, pallet, valve, closures, and service equipment are undamaged, functional, and correctly assembled.
- ☐ Compatibility, filling limits, venting, closure instructions, and required manufacturer notifications have been addressed.
- ☐ Any exception, approval, or special permit relied upon is current, applicable, and available to the responsible personnel.
- ☐ Any missing, inconsistent, overdue, damaged, or uncertain item is quarantined and resolved before shipment.

EVALUATION RESULT

If the packaging authorization or the IBC's conformity cannot be demonstrated, do not treat the UN mark or a supplier assurance as sufficient. Pause the shipment and resolve the classification, packaging, condition, qualification, or documentation question.

Primary references and document control

49 CFR 171.2 and 173.22, General requirements and shipper's responsibility - <https://www.ecfr.gov/current/title-49/section-171.2> | <https://www.ecfr.gov/current/title-49/section-173.22>

49 CFR 173.24 and 173.35, General packaging requirements and hazardous materials in IBCs - <https://www.ecfr.gov/current/title-49/section-173.24> | <https://www.ecfr.gov/current/title-49/section-173.35>

49 CFR 178.703, 180.352 and 107.329; 49 U.S.C. 5124 - IBC marking, retest and inspection, civil penalties, and criminal penalty provisions. Verify the current text and penalty amounts before use.

General educational information only. Customers remain responsible for classification, packaging authorization, compatibility, filling, closure, marking, qualification, documentation, training, and compliance with the current Hazardous Materials Regulations.

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