

Understanding UN Requalification

What periodic IBC tests and inspections demonstrate—and what they do not

THE QUICK CONCLUSION

For applicable IBCs in hazardous-materials service, U.S. rules require specified periodic testing and inspections. A current mark and record show that required transportation checks were completed at a point in time. They do not establish sanitation, food-contact suitability, prior-content acceptability, sensory neutrality, or compatibility with the intended product.

01 Keep transportation qualification in scope

UN design-type markings and U.S. Department of Transportation requalification requirements concern hazardous-materials transportation. They are not food-contact credentials. Whether a shipment requires a performance-oriented package depends on the material, classification, packing group, packaging authorization, design type, and transport conditions.

02 Periodic requirements under 49 CFR 180.352

- Before first use and at intervals not exceeding 2.5 years, applicable liquid IBCs must undergo a leakproofness test; applicable IBCs also receive the prescribed external visual inspection.
- At intervals not exceeding five years, metal, rigid plastic, and composite IBCs receive the prescribed internal inspection, along with other applicable requirements.
- After repair, the IBC must meet the applicable testing, inspection, marking, and record requirements before return to service.
- The owner or lessee must retain the required test and inspection records for the period specified in the regulation.

IMPORTANT

Always confirm the current regulation, the specific IBC category, and the applicable exceptions. Do not calculate a due date from appearance or a seller's general statement.

03 Read the mark with the record

49 CFR 178.703 requires durable IBC design-type markings and additional information for rigid plastic and composite IBCs. Depending on the IBC, this includes rated capacity, tare mass, gauge test pressure, and dates of the most recent leakproofness test and inspection. The physical marking should agree with the responsible facility's supporting record.

What requalification does not prove

- The inner bottle and service components are sanitary or suitable for food contact.
- Previous contents were acceptable for the next use.
- Cleaning removed residues, odors, allergens, or incompatible material.
- The package is compatible with the actual product and process.
- The IBC remains acceptable after damage, an uncontrolled modification, or service outside its rated conditions.

Qualification questions

- Is the offered material regulated as hazardous material, and which packaging authorization applies?
- Is the design type suitable for the material's packing group, specific gravity or density, pressure, and transport mode?
- Are the UN mark, periodic test and inspection marks, and supporting records current and consistent?
- Was any bottle replacement, structural repair, or service-equipment change performed within the design type and applicable rules?
- Who performed and certified the work, and can the record be promptly produced?
- Are sanitation and food-contact files maintained separately from the transportation file?

Customer evaluation checklist

Use this checklist during supplier qualification, receipt review, or internal release. A checked box should reflect documented evidence.

- ☐ The material classification and applicable packaging authorization are documented.
- ☐ The IBC design type is suitable for the product and transport conditions.
- ☐ Required markings are legible and match the supporting records.
- ☐ The leakproofness test and inspections are within their applicable intervals.
- ☐ Repairs and component changes are documented and controlled.
- ☐ The responsible test or inspection facility is identifiable.
- ☐ Food-contact, sanitation, compatibility, and prior-content questions are evaluated separately.
- ☐ Units with damage, overdue status, or inconsistent records are quarantined.

EVALUATION RESULT

If any required item cannot be checked, quarantine the unit or pause approval until the missing technical, documentation, or application question is resolved.

Primary references and document control

49 CFR 180.352, Requirements for retest and inspection of IBCs — <https://www.ecfr.gov/current/title-49/section-180.352>

49 CFR 178.703, Marking of IBCs — <https://www.ecfr.gov/current/title-49/section-178.703>

General educational information only. Customers remain responsible for packaging suitability, applicable requirements, and confirming current regulations and authorizations.

Document control: TB-103 | Revision 2 | Final Release | Review date: July 18, 2026 | Approved