



What seems like a simple objective—ensuring the packaging used for Dangerous Goods shipments will prevent the escape of the materials (solids, liquids or gasses) contained within—gets very complicated very quickly.



And using the wrong or substandard packaging can lead to a host of negative outcomes:

- Rejected shipments (and unhappy customers)
- Fines (\$500–\$16,500 per violation)
- Negative press for your company
- Injuries, death and property damage



So, where do you begin to find out what kind of packaging will be required? Each regulating agency (DOT, IATA/ICAO, IMO, etc.) has its own set of rules, but they're all based on the UN Model Regulations. For the DOT, a good place to start is:



“49 CFR Part 173, Subpart E—Non-bulk Packaging for Hazardous Materials Other Than Class 1 and Class 7.”

There you'll find packaging guidelines for most every category of Dangerous Goods that doesn't explode or emit radiation.



The regulations describe what kinds of packaging can be used in cases where “single packagings” are appropriate,

and what types of packaging can be used for “combination packagings” with an inner and outer container.



The next step is to ensure you're using packaging that's UN-certified. That means it's been tested by an appropriate authority to withstand possible conditions encountered during transport. Examples include:



DROP TESTS
Assembled packages are dropped from specific heights on each side and the corners to ensure containment.



STACK TESTS
Empty packages are placed on top of each other to ensure they won't collapse when stacked.



VIBRATION TESTS
These simulate the conditions encountered during travel by truck, boat, train or airplane.



COBB WATER ABSORPTION TEST
This test measures how much moisture fiberboard will absorb through exposure.



PRESSURE DIFFERENTIAL
This test is for packages of liquid transported by air that will be subjected to pressure variations during transit.



All packaging for DG shipments—whether it's standard packaging off the shelf or something custom-created for your needs—**must be UN-certified.**

A NOTE ABOUT PACKING GROUPS



When you're browsing all the packaging options out there, you'll come across the term "Packing Group," which describes the relative degree of danger a material represents. You'll need to know this when picking your packaging.



You can usually find the Packing Group in section 14 of your Safety Data Sheet (SDS), or look in the Hazardous Materials Table in 49 CFR Part 172, find your material and look at column 5, where you'll see a I, II or III.



Then, make sure the packaging you select is approved for the specified Packing Group or higher (i.e., Group III shipments can go in packaging rated for Group II or Group I, but not the other way around).



Labelmaster offers a complete line of Performance Plus brand UN-certified packaging components and kits to meet nearly any DG shipping need for every mode of transportation. And we can offer expert guidance on the selection and use of these solutions.



In-stock inventory of popular UN packaging for immediate shipment



Combination packaging kits assembled or unassembled, with or without inner containers



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