

QUESTIONS REGARDING UN CHAPTER 9 PERFORMANCE TESTING AND CERTIFICATION

Q1: Are packagings which are marked as conforming to the United Nations Committee of Experts' Recommendations on the Transport of Dangerous Goods (UN Recommendations) required to be tested by a DOT-approved packaging certification agency (third party packaging certification agency)?

A1: No. There is no requirement that UN packagings be certified by a third party packaging certification agency. UN packagings may be self-certified, provided all test and construction requirements are met.

Q2: When testing is performed by a third party packaging certification agency, whose name or symbol appears after the "USA" marking--the third party packaging certification agency, the packaging manufacturer, or the shipper?

A2: Each third party packaging certification agency has been assigned a symbol consisting of a "+" sign and a two letter code. The third party symbols are distinct from markings which may be used by self-certifying entities. When a packaging has been tested by a third party packaging certification agency, the third party's symbol, with a four digit number assigned by the third party packaging certification agency which identifies the packaging, should appear on the packaging after the "USA" marking.

Q3: Can the packaging manufacturer or shipper choose not to put the third party symbol on packagings which have been certified by a third party packaging certification agency?

A3: Yes. The packaging manufacturer or shipper may place a different mark on packagings in accordance with 49 CFR 178.0-3. However, in doing so it would no longer be evident from the mark that the package has been third party certified.

Q4: May a third party packaging certification agency certify a packaging without knowing exactly what hazardous material might be shipped in the packaging?

A4: Yes. If the third party packaging certification agency does not know what materials are to be shipped in the packaging, it may certify the packaging to a specific packing group level and for a specified maximum gross weight or specific gravity. The packaging could then be used for other hazardous materials so long as the packaging test requirements are equal to or less severe than the levels to which the packaging was tested.

Additionally, the package must be assembled and closed in the same manner as the tested package.

Q5: If a shipper changes bottle manufacturers (for the inner bottles of a combination packaging), but uses the same type or size, will new testing have to be performed?

A5: Not necessarily. As agreed to at the UN Subcommittee meeting in January, 1990, and as published in RSPA's Notice of Competent Authority Ruling on March 22, 1990, substitution of a bottle of the same or smaller size, and the same or similar design and construction may be made without further testing provided the bottle being substituted is at least as strong as the bottles originally tested and other conditions that were specified in the notice are also met.

Q6: If a shipper overpacks a package that has passed UN tests, does the overpack have to be tested?

A6: No. The overpack does not have to be tested. However, the overpack must be marked in accordance with 49 CFR 173.25 to indicate that inside packagings meet applicable specifications.

Q7: When applying the required markings to UN packagings, can the markings be divided into two lines? Three lines? If so, should a slash appear at the end of one line before dropping down to the next?

A7: The UN Recommendations state that the required markings may appear in a single line or in multiple lines, provided the correct sequence is respected. Slash marks should be used to separate items on a line. To avoid confusion, we recommend that you mark packages in the same manner as the examples given in the U.N. Recommendations. While the UN Recommendations do not prohibit the placement of a slash mark at the end of a line, the examples in the UN Recommendations do not show one there.

Q8: When the inner packagings of a combination packaging are pressure tested for shipment by air, must the inner packagings be marked to indicate they have been tested? Should the outer packaging be marked with the pressure to which the inner packagings have been tested instead of the letter "S" (used to indicate inner packagings)?

UN Qs and As Continued on page 9

A8:The inner packagings are not required to be marked to indicate they have been pressure tested. The marking "S" should appear on the outer packaging to indicate that the packaging is intended to contain inner packagings. There is no requirement to mark either the inner packagings or outer packaging with the test pressure.

Q9:Is the internal pressure test required for the inner packagings of combination packagings intended for transportation by air under the International Civil Aviation Organization's Technical Instructions for the Safe Transport of Dangerous Goods (ICAO Technical Instructions)?

A9:The inner packagings of combination packagings are not required by the ICAO Technical Instructions to be tested with internal pressure. However, Part 3, 1.1.6.1, requires these inner packagings to be capable of withstanding a specified internal pressure.

Q10:When marking the gross mass on UN packagings (required in kilograms), is the gross mass rounded down to the nearest kilogram, or to a certain number of decimal places?

A10:The gross mass should be rounded down to the nearest kilogram. The gross mass may be rounded down to the nearest tenth of a kilogram where the gross mass of a package is less than one kilogram, or where a package has been tested to within a tenth of a kilogram.

Q11:Are there any quantities of hazardous materials that do not have their packagings tested?

A11:The International Maritime Dangerous Goods Code (IMDG Code) contains some provisions permitting the shipment of certain "limited" quantities of hazardous materials without meeting the performance testing requirements. Limited quantity provisions will also be included in the 1991-92 Edition of the ICAO Technical Instructions. Note, however, that the limited quantity provisions in the IMDG Code and ICAO are different. The ICAO Technical Instructions also include provisions, similar to those for "small quantities" in 49 CFR 173.4, for excepted quantities of hazardous materials, which are even smaller quantities of hazardous materials than limited quantities, and which are generally not subject to the requirements of the ICAO Technical Instructions.

Q12:Who is responsible for determining the hazard class and packing group of a hazardous material, the shipper or the third party packaging certification agency?

A12:The person offering the hazardous material for transportation (i.e. the "shipper") is responsible for classifying the hazardous material and determining its packing group.

Q13:Will the minimum pressure required for performance of the internal pressure test in accordance with paragraph 9.7.5 of the UN Recommendations always be 100 kilopascals (kPa) for Packing Groups II and III?

A13:Not necessarily. If the required test pressure is calculated in accordance with paragraph 9.7.5.4(a) of the UN Recommendations, a minimum pressure of less than 100 kPa may be used.

Q14:May a guided load test (a test where the required load, which is not necessarily achieved by additional packages, is applied to the top of the test package in a manner such that the load remains centered over the top of the package) followed by a stacking stability determination be used to comply with the stacking test requirements of paragraph 9.7.6 of the UN Recommendations?

A14:Yes.

Q15:What provisions can be made for packagings which are not currently covered under the UN Recommendations, such as boxes made of paperfaced expanded polystyrene board?

A15:Paragraph 9.3.13 of the UN Recommendations allows the use of packagings which do not meet the specifications in 9.6 if they are approved by the appropriate competent authority. The U.S. competent authority is the Director, Office of Hazardous Materials Transportation (OHMT). An approval for such a packaging may be obtained by writing to OHMT requesting a technical review of the proposed packaging. This provision is for packagings which can be shown to be equally effective and able to successfully withstand the Chapter 9 performance tests.