

DANGEROUS GOODS PANEL

Dubai, 31 March to 4 April 2003

Agenda Item 2 Development of recommendations for amendments to the Technical : Instructions for incorporation in the 2005/2006 edition

INTERPRETATION AND USE OF 4;1.1.10.2

(Presented by R. Richard)

1. Part 4;1.1.10.1 of the Technical Instructions states:

4;1.1.10.1 Unless otherwise provided in the packing instructions, liquids in Class 3, 4 or 8, or Division 5.1, 5.2 or 6.1 that are packaged in glass, earthenware, plastic or metal inner packagings must be packaged using absorbent material as follows:

- a) Packing Group I liquids on passenger aircraft must be packaged using material capable of absorbing the entire contents of the inner packagings containing such liquids;
- b) Packing Group I liquids on cargo aircraft and Packing Group II liquids and liquids in Division 5.2 on passenger and cargo aircraft must be packaged using a sufficient quantity of absorbent material to absorb the entire contents of any one of the inner packagings containing such liquids and, where they are of different sizes and quantities, sufficient absorbent material to absorb the contents of the inner packaging with the greatest quantity.

4;1.1.10.2 *Absorbent material is not required if the inner packagings are so protected that breakage of them and leakage of their contents from the outer packaging will not occur during normal conditions of transport.* Where absorbent material is required and an outer packaging is not liquid tight, a means of containing the liquid in the event of a leakage must be provided in the form of a leakproof liner, plastic bag or other equally efficient means of containment.

1.1 Recently, the question of when absorbent material is required according to 1.1.10.1 has been raised by packaging test facilities and shippers who are confused by the exception in 1.1.10.2 which states:

"Absorbent material is not required if the inner packagings are so protected that breakage of them and leakage of their contents from the outer packaging will not occur during normal conditions of transport."

1.2 In the opinion of many, this exception raises the question of whether a UN certified performance package ever truly requires absorbent material. Many have argued that no UN certified packagings should have inner packagings that are likely to break during normal conditions of transport. Some have even stated that by not taking the exception, and choosing to add absorbent material to their packaging, they are implying that their packages are likely to break and leak from the outer packaging.

1.3 A major flaw in the text of 1.1.10.2 is that it is based on the concept that absorbent material is only necessary to be used when inner packagings are likely to break during normal conditions of transport. Absorbent material provides an additional level of safety taking into account the fact that irrespective of whether a combination packaging passes the UN performance test, failure of the inner packaging's containment function is a possibility and indeed a reality in transportation. Breakage of the inner packaging is not necessary to cause leakage. Leakage can also occur, for example, due to failure of the inner packaging's closure, inappropriate application of the closure or because the person that assembled the packaging deviated from the manufacturer's closure instructions or substituted alternative components. Even the best designed packagings may leak when the element of human error is introduced into the package assembly process. The addition of absorbent material serves a critical safety function in mitigating the release of dangerous goods caused by leakage from closures due to the effects of the pressure differential. In the case of leakage of small amounts of liquid during air transport through closures, absorbent material serves a vital safety function by retaining the dangerous goods within the outer packaging.

1.4 In light of the fact that the absorbent material requirements have been so carefully conceived with regard to Class and packing group, the Panel is invited to consider how best to clarify the text in 1.1.10.2 so that the exception is not so broadly interpreted as to completely nullify the intent of the absorbent material requirement. Given the fact that the requirements have recently been revised to be more specific with respect to when absorbent material is required, the exception as worded may no longer be necessary. However it may be prudent to consider what special cases may exist that could render the use of absorbent material unnecessary. For example, some metal or plastic inner packagings which have themselves been certified as a single package would obviously be of a more robust nature and could conceivably be excepted from the requirement for absorbent material when placed in an outer package.

1.5 The Working Group should consider how best to address this problem with the objective of developing revised text for consideration at DGP 19 that is less likely to be misinterpreted as completely exempting all combination packagings from the absorbent material requirements in 4;1.1.10.1. If exceptions are considered necessary they should be reasonable and appropriate for air transport taking into account the safety implications.

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