



WORKING PAPER

DANGEROUS GOODS PANEL (DGP)

TWENTIETH MEETING

Montréal, 24 October to 4 November 2005

Agenda Item 2: Development of recommendations for amendments to the Technical Instructions for the Safe Transport of Dangerous Goods by Air (Doc 9284) for incorporation in the 2007-2008 Edition

SPECIAL PROVISION A75

(Presented by H. Brockhaus)

1. INTRODUCTION

1.1 Carriage of UN 2014 Hydrogen peroxide, aqueous solution with more than 40% but not more than 60% hydrogen peroxide is forbidden in passenger and cargo aircraft except under the special provisions A2 and A75. Special provision A75 allows that articles such as sterilization devices, when containing less than 30 mL per inner packaging with not more than 150 mL per outer packaging, may be transported as excepted quantities, *“provided such packagings were first subjected to comparative fire testing. Comparative fire testing must show no difference in burning rate between a package as prepared for transport (including the substance to be transported) and an identical package filled with water.”*

1.2 Based on an urgent need for transport the German appropriate authority was asked for the specific kind of the required fire test, for the appropriate determination of the burning rate and for the performance criteria (e.g. what measuring tolerances can be assessed as the required “no difference in burning rate”). There was no experience at all.

1.3 The German experts have doubts that the required comparative fire testing is able to cover the occurring risk connected with small amounts of released hydrogen peroxide. Even if it would be assumed that the bonfire test (test series 6 (c) of the UN Manual of Tests and Criteria) is an appropriate fire test, the varying real outdoor conditions connected with such tests (e.g. wind or humidity of the burning pieces of wood) could lead to such different burning conditions which prevents a reasonable conclusion from the comparative fire testing.

1.4 Hydrogen peroxide is a strong oxidiser of class 5.1 and is not combustible itself. Such oxidisers can only react dangerously, if they come in contact with combustible material such as paper,

fibreboard, wood or organic absorbents. Such materials, soaked with hydrogen peroxide, can indeed lead to a high burning rate of the packing material. This occurring risk can be prevented picking out appropriate non combustible packing materials such as an IP.3 with an inorganic non combustible absorbent material. We are convinced that such packing would at least have the same level of safety as the existing requirement.

1.5 In special provision A75 it is not clear, whether the sterilization devices are to be deemed as inner packagings itself, which must be packed into an intermediate packaging, or are treated as articles, which must be individually packed into an inner packaging of the required triple packaging. Furthermore, there is no logic referring to excepted quantities provisions and at the same time being obliged to accompany the consignment with a copy of the document of approval in accordance with special provision A2. Therefore, it seems to be reasonable to provide specific UN-marked combination packagings under normal consignment conditions, maintaining the Special provision A 2.

2. PROPOSAL

2.1 Amend special provision A75 as follows:

Articles such as sterilization devices, when containing less than 30 mL per inner packaging with not more than 150 mL per outer packaging package, may be transported in accordance with the provisions in 1;2.4, irrespective of 1;2.4.2.2, provided such packagings were first subjected to comparative fire testing must show no difference in burning rate between a package as prepared for transport (including the substance to be transported) and an identical package filled with water. if they meet the following packing requirements: Each article must be individually packed into a metal can of code IP.3 or IP.3A with non-combustible cushioning material. The inner packaging must completely contain the contents in case of breakage or leakage, regardless of package orientation. The inner packaging must contain sufficient non-combustible absorbent material to absorb the entire contents of the article. The absorbent material may be the cushioning material. Hydrogen peroxide must not react dangerously with absorbent material and the cushioning material or adversely affect their properties. The inner packaging(s) must be securely packed into an appropriate outer packaging meeting the requirements of 6;4.1.7, with exception of 6;4.1.7 e), signified by the additional letter “V” of the packaging marking.

— END —