



**DANGEROUS GOODS PANEL (DGP)
MEETING OF THE WORKING GROUP OF THE WHOLE**

Beijing, China, 25 October to 3 November 2006

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 2009/2010 Edition

2.3: Part 3 — Dangerous Goods List and Limited Quantities Exceptions

MAXIMUM ALLOWABLE QUANTITY OF UN 1950 AEROSOLS

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REVISED

SUMMARY

This paper discusses the current maximum quantities of ltd qty permitted on passenger aircraft and cargo aircraft only for UN 1950, Aerosols. It proposes that these quantities are too high.

Action by the DGP-WG is in paragraph 2.

1. INTRODUCTION

1.1 The following is a list of three products belonging to the similar category of “Receptacles Containing Gas Compressed, Not Exceeding 1 Litre Capacity”. The only difference is whether the receptacle has a release device or not.

[Receptacles containing gas, not exceeding 1 Litre capacity]

UN 1950	Aerosols, flammable	2.1	Y203/30kgG	203/75kg	203/150kg
UN 2037	Gas cartridges (flammable) without a release device, non-refillable	2.1	Y203/1kg	203/1kg	200/15kg
UN 2037	Receptacles, small, containing gas (flammable) without a release device, non-refillable	2.1	Y203/1kg	203/1kg	200/15kg

According to Packing Instruction 203, aerosols and receptacles, small, containing gas as well as gas cartridges are basically treated as the same type of category as far as the material of receptacle, contained gas pressure, maximum capacity of receptacle are concerned. Packing Instruction 203 states: “aerosols and receptacles, containing gas (gas cartridges) are permitted in inner non-refillable metal receptacles not exceeding 1 000 mL capacity each. The pressure in the receptacle must not exceed 1 500 kPa at 55° and each receptacle must be capable of withstanding without bursting a pressure at least 1.5 times equilibrium pressure of the contents at 55°.”

1.2 Mostly aerosols contain gas compressed such as DME (Dimethyl ether), LPG (Liquefied petroleum gas), and Butane, as a flammable gas, besides some solvent. The quantity of contents of, for example, hair spray is 180g Net (118 mL of Alcohols), 230g Gross. As to UN 2037 Gas Cartridge and Receptacles, small containing gas are the same type of non-refillable metallic receptacle which has no release device, containing flammable gas such as Hydrogen for measuring the level of environment pollution or exhaust gas of vehicles, and Propane Gas or Butane for use of portable cooking ranges. The quantity of Propane Gas or Butane as a standard type is 250g Net, 360g Gross.

1.3 With the above common conditions of these three kinds of receptacles containing gas compressed, when looking at the above list of Maximum Quantities per Package for Limited Quantities, Passenger Aircraft and Cargo Aircraft Only comparing these articles, it can be realized that there is a lack of a balance among them. Aerosols, flammable Y203/30kgG, 203/75kg, 203/150kg, while Receptacles, small, containing gas, Y203/1kg, 203/1kg, 200/15kg. Also, the maximum quantity of Aerosol, Y203/30kgG, 203/75kg 203/150kg, seems too high. For example, there is an aerosol called “ Hair spray”, containing LPG and alcohols, n.o.s., 180kg Net, 230g Gross. This could be packed up to 144 pcs. into a wooden box of (suppose) 4kg including cushioning materials as Limited Quantities. If a fibreboard box of (suppose) 2kg is used, 155 pcs of Aerosols, flammable could be packed in a Limited Quantity packaging. In the case of passenger aircraft, about 380pcs of aerosols could be packed in 4G fibreboard box of (suppose) 5kg including cushioning materials. For a CAO package, 777pcs in 4C1 wooden box of (suppose)10 kg including cushioning materials.

1.4 Does the working group agree that these quantities are too high? Aerosols, especially flammable ones, do not seem safe enough to be packed in many pieces in one packaging. The working group is particularly asked the exact reason why the maximum allowable weight per package for Ltd Qty was set at 30 kgG, which is the same weight of LTD QTY in marine transport.

2. ACTION BY THE DGP-WG

2.1 The DGP-WG is invited to reconsider the current maximum quantities of Ltd Qty for UN 1950 Aerosols. The following is proposed as an example:

UN 1950	Aerosols, flammable	2.1	Y203/10 kg	203/75 kg	203/150 kg
UN 2037	Gas cartridges	2.1	Y203/1 kg	203/1 kg	203/15 kg
UN 2037	Receptacles, small containing gas	2.1	Y203/1 kg	203/1 kg	203/15 kg