



WORKING PAPER

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

Montréal, 15 to 19 April 2013

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 2015-2016 Edition

2.3 : Part 3 — Dangerous Goods List, Special Provisions and Limited and Excepted Quantities

LIFE-SAVING APPLIANCES, NOT SELF-INFLATING

(Presented by D. Brennan)

SUMMARY

This working paper seeks some clarification of just what types of articles the entry UN 3072, **Life-saving appliances, not self-inflating** is intended to cover and proposes addition of some requirements around those containing only lithium batteries.

Action by the DGP-WG is in paragraph 2.

1. INTRODUCTION

1.1 There are currently two entries in the dangerous goods list, Table 3-1 related to life-saving appliances, UN 2990, **Life-saving appliances, self-inflating** and UN 3072, **Life-saving appliances, not self-inflating**, which has light type text following that reads “containing dangerous goods as equipment”. Both of these entries then refer to Packing Instruction 955.

1.2 In looking at the content of Packing Instruction 955 while there is some explanation as to what the self-inflating entry is intended to cover, there is no indication as to what types of articles should be classified as UN 3072.

1.3 There have been a number of questions related to the shipping of emergency locator transmitters (ELT), emergency position indicating radio beacons (EPIRB) and personal locating beacons (PLB), most of which are powered by a lithium metal battery, and which are being classified as UN 3072, **life-saving appliances, not self-inflating** by some manufacturers, whereas other manufacturers are classifying their ELT, EPIRB and PLB as UN 3091, **lithium metal batteries contained in equipment**.

1.4 The lack of any definition of what is meant by “life-saving appliances, not self-inflating” or explanation in the packing instruction as to what types of articles meet this classification means that there is a lack of consistent application with the provisions of the Technical Instructions.

1.5 Packing Instruction 955 simply contains a statement to the effect that articles assigned to the packing instruction may contain “lithium batteries (Class 9)”. There is no reference to the lithium batteries types having to have passed the tests set out in Subsection 38.3 of the *UN Manual of Tests and Criteria*, or any reference to Part 2;9.3.

1.6 This gap means that potentially shippers could have “life-saving appliances” without an inflation devices that contain only a lithium battery and that could then be shipped without having to meet any of the requirements set out in Packing Instruction 967 or Packing Instruction 970 for lithium batteries contained in equipment.

1.7 To address this gap it is proposed to assign Special Provision A182 against the entry for UN 3072, which would mean that if the life-saving appliance contains no other dangerous goods other than a lithium battery then it must be assigned to UN 3091 or UN 3481, as applicable and in addition to make specific reference in Packing Instruction 955 that where lithium batteries are contained in life-saving appliances that the lithium battery must meet the applicable provisions of 2;9.3.

2. ACTION BY THE DGP-WG

2.1 The DGP-WG is invited to consider revisions as shown in the appendix to address lithium batteries contained in life-saving appliances, not self inflating.

APPENDIX

PROPOSED AMENDMENT TO PART 3 AND PART 4 OF THE TECHNICAL INSTRUCTIONS

...

Part 3

DANGEROUS GOODS LIST,
SPECIAL PROVISIONS AND
LIMITED AND EXCEPTED QUANTITIES

...

Table 3-1. Dangerous Goods List

Name	UN No.	Class or division	Sub-sidiary risk	Labels	State variations	Special provisions	UN packing group	Excepted quantity	Passenger aircraft		Cargo aircraft	
									Packing instruction	Max. net quantity per package	Packing instruction	Max. net quantity per package
1	2	3	4	5	6	7	8	9	10	11	12	13
Life-saving appliances, not self-inflating containing dangerous goods as equipment	3072	8		Miscellaneous		A48 A87 <u>A182</u>		E0	See 955	No limit	See 955	No limit
...												

...

Part 4

PACKING INSTRUCTIONS

...

Packing Instruction 955

Passenger and cargo aircraft for UN 2990 and UN 3072 only

General requirements

Part 4, Chapter 1 requirements must be met, including:

- 1) **Compatibility requirements**
 - Substances must be compatible with their packagings as required by 4;1.1.3.
- 2) **Closure requirements**
 - Closures must meet the requirements of 4;1.1.4.

<i>UN number and proper shipping name</i>	<i>Quantity — passenger</i>	<i>Quantity — cargo</i>
UN 2990 Life-saving appliances, self-inflating UN 3072 Life-saving appliances, not self-inflating containing dangerous goods as equipment	No limit	No limit

ADDITIONAL PACKING REQUIREMENTS

The description “Life-saving appliances, self-inflating” (UN 2990) is intended to apply to life-saving appliances that present a hazard if the self-inflating device is activated accidentally.

Life-saving appliances, such as life rafts, life vests, aircraft survival kits or aircraft evacuation slides, may only contain the dangerous goods listed below:

- a) Division 2.2 gases, must be contained in cylinders which conform to the requirements of the appropriate national authority of the country in which they are approved and filled. Such cylinders may be connected to the life-saving appliance. These cylinders may include installed actuating cartridges (cartridges, power device of Division 1.4C and 1.4S) provided the aggregate quantity of deflagrating (propellant) explosives does not exceed 3.2 grams per unit. When the cylinders are shipped separately, they must be classified as appropriate for the Division 2.2 gas contained and need not be marked, labelled or described as explosive articles;
- b) signal devices (Class 1), which may include smoke and illumination signal flares; signal devices must be packed in plastic or fibreboard inner packagings;
- c) small quantities of flammable substances, corrosive solids and organic peroxides (Class 3, Class 8, Division 4.1 and 5.2), which may include a repair kit and not more than 30 strike-anywhere matches. The organic peroxide may only be a component of a repair kit and the kit must be packed in strong inner packaging. The strike-anywhere matches must be packed in a cylindrical metal or composition packaging with a screw-type closure and be cushioned to prevent movement;
- d) electric storage batteries (Class 8); ~~and lithium batteries (Class 9); and~~
- e) lithium batteries, which must meet the applicable requirements of 2;9.3; and
- ~~e)~~ f) first aid kits which may include flammable, corrosive and toxic articles or substances.

The appliances must be packed, so that they cannot be accidentally activated, in strong outer packagings and, except for life vests, the dangerous goods must be in inner packagings packed so as to prevent movement. The dangerous goods must be an integral part of the appliance without which it would not be operational and in quantities which do not exceed those appropriate for the actual appliance when in use.

Passenger restraint systems consisting of a cylinder charged with a non-liquefied, non-flammable compressed gas and no more than two actuating cartridges per passenger restraint system that meet the requirements of the State of Manufacture must be packed in strong outer packagings so they cannot be accidentally activated.

Life-saving appliances packed in strong rigid outer packagings with a total maximum gross mass of 40 kg, containing no dangerous goods other than Division 2.2 compressed or liquefied gases with no subsidiary risk in receptacles with a capacity not exceeding 120 mL, installed solely for the purpose of the activation of the appliance, are not subject to these Instructions when carried as cargo.

Life-saving appliances may also include articles and substances not subject to these Instructions which are an integral part of the appliance.

...