



**WORKING PAPER**

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

**Atlantic City, United States, 4 to 8 April 2011**

**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 2013-2014 Edition**

**2.4: Part 4 — Packing Instructions**

**POLYESTER RESIN KITS**

(Presented by G A Leach)

**SUMMARY**

This working paper proposes to amend Packing Instruction 370 and 371 to provide for packing group III base material in polyester resin kits.

Action by the DGP-WG is in paragraph 2.

**1. INTRODUCTION**

1.1 Packing Instruction 370 relating to Polyester Resin Kits specifies quantity limitations for inner packagings containing Class 3 base material. However, the quantity limitations apply irrespective of whether the substance is Packing Group II or III and are aligned with those for Packing Group II. A problem has recently been experienced by a United Kingdom shipper who wished to ship a polyester resin kit where the packing group III base material had a specific gravity considerably in excess of 1, which resulted in the resin kit exceeding the 5 kg overall pack limit. Environmental directives now require manufacturers of base materials to reduce the percentage of solvent (due to the release of volatile organic compounds) and this is typically achieved by additives to make sure the application properties do not deteriorate. However, as solvents typically have a specific gravity of less than 1, the effect of this reduction is to increase the overall SG of the product.

1.2 It is suggested there is no safety justification for limiting packing group III substances to the quantities applicable to Packing Group II and Packing Instructions 370 and 371 should be amended to reflect this to provide for polyester resin kits of this type. In preparing this working paper it was also noted that liquid quantity limitations have been included under the column for solid activator which appears to have been an error.

## 2. ACTION BY THE DGP-WG

2.1 The DGP-WG is invited to amend Packing Instructions 370 as follows:

| <b>Packing Instruction 370</b>  |                                    |   |  |                                   | <b>SINGLE<br/>PACKAGINGS</b> |
|---|------------------------------------|---|--|-----------------------------------|------------------------------|
| Passenger and cargo aircraft for UN 3269 (Packing Group II or III) only |                                    |   |  |                                   |                              |
| ...   |                                    |   |  |                                   |                              |
| <b>COMBINATION PACKAGINGS</b>   |                                    |   |  |                                   |                              |
| <i>Packing conditions</i>   | <i>Inner packaging (see 6;3.2)</i> | <i>Inner packaging quantity (per receptacle) — for liquid activator</i> | <i>Inner packaging quantity (per receptacle) — for solid activator</i> | <i>Total quantity per package</i> |                              |
| Activator (Organic peroxide)  | Plastics*                          | 125 mL  | 500 g  | 5 kg                              | No                           |
|   | Metal*                             | 125 mL  | 500 g  |                                   |                              |
| Base material<br>Class 3 Packing<br>Group II or III                     | Glass                              | 1.0 L   | <del>4.0 L</del> <u>n/a</u>  | 5 kg                              | No                           |
|   | Plastics                           | 5.0 L   | <del>5.0 L</del> <u>n/a</u>  |                                   |                              |
|   | Metal                              | 5.0 L   | <del>5.0 L</del> <u>n/a</u>  |                                   |                              |
| <u>Activator (Organic peroxide)</u>                                     | <u>Plastics*</u>                   | <u>125 mL</u>   | <u>500 g</u>   | <u>10 kg</u>                      | <u>No</u>                    |
|   | <u>Metal*</u>                      | <u>125 mL</u>   | <u>500 g</u>   |                                   |                              |
| <u>Base material<br/>Class 3 Packing<br/>Group III</u>                  | <u>Glass</u>                       | <u>2.5 L</u>  | <u>n/a</u>   | <u>10 kg</u>                      | <u>No</u>                    |
|   | <u>Plastics</u>                    | <u>10 L</u>   | <u>n/a</u>   |                                   |                              |
|   | <u>Metal</u>                       | <u>10 L</u>   | <u>n/a</u>   |                                   |                              |
| *Including tubes  |                                    |   |  |                                   |                              |
| ...   |                                    |   |  |                                   |                              |

2.2 The DGP-WG is further invited to similarly amend Packing Instruction Y370 as follows:

| <b>Packing Instruction Y370</b><br>Limited quantities<br>Passenger and cargo aircraft for UN 3269 (Packing Group II or III) only<br>... |                                    |   |  |                                   |                                     |                              |
|---|------------------------------------|---|--|-----------------------------------|-------------------------------------|------------------------------|
| <b>COMBINATION PACKAGINGS</b>   |                                    |   |  |                                   |                                     | <b>SINGLE<br/>PACKAGINGS</b> |
| <i>Packing conditions</i>   | <i>Inner packaging (see 6;3.2)</i> | <i>Inner packaging quantity (per receptacle) — for liquid activator</i> | <i>Inner packaging quantity (per receptacle) — for solid activator</i> | <i>Total quantity per package</i> | <i>Total gross mass per package</i> |                              |
| Activator (Organic peroxide)  | Plastics*                          | 30 mL   | 100 g  | 1 kg                              | 30 kg                               | No                           |
|   | Metal*                             | 30 mL   | 100 g  |                                   |                                     |                              |
| Base material Class 3 Packing Group II or III   | Glass                              | 1.0 L   | <del>4.0 L</del> n/a   |                                   |                                     |                              |
|   | Plastics                           | 1.0 L   | <del>4.0 L</del> n/a   |                                   |                                     |                              |
|   | Metal                              | 1.0 L   | <del>4.0 L</del> n/a   |                                   |                                     |                              |
| <u>Activator (Organic peroxide)</u>   | <u>Plastics*</u>                   | <u>30 mL</u>  | <u>100 g</u>   | <u>5 kg</u>                       |                                     |                              |
|   | <u>Metal*</u>                      | <u>30 mL</u>  | <u>100 g</u>   |                                   |                                     |                              |
| <u>Base material Class 3 Packing Group III</u>  | <u>Glass</u>                       | <u>2.5 L</u>  | <u>n/a</u>   |                                   |                                     |                              |
|   | <u>Plastics</u>                    | <u>5.0 L</u>  | <u>n/a</u>   |                                   |                                     |                              |
|   | <u>Metal</u>                       | <u>5.0 L</u>  | <u>n/a</u>   |                                   |                                     |                              |
| *Including tubes  |                                    |   |  |                                   |                                     |                              |
| ...   |                                    |   |  |                                   |                                     |                              |

— END —