



WORKING PAPER

**DANGEROUS GOODS PANEL (DGP)
WORKING GROUP MEETING (DGP-WG/15)**

Montreal, 27 April to 1 May 2015

Agenda Item 3: Development of recommendations for amendments to the *Supplement to the Technical Instructions for the Safe Transport of Dangerous Goods by Air* (Doc 9284SU) for incorporation in the 2017-2018 Edition

**DRAFT AMENDMENTS TO THE SUPPLEMENT TO THE TECHNICAL INSTRUCTIONS TO
ALIGN WITH THE UN RECOMMENDATIONS**

(Presented by the Secretary)

SUMMARY

This working paper contains draft amendments to the Supplement to the Technical Instructions to reflect the decisions taken by the UN Committee of Experts on the Transport of Dangerous Goods and on the Globally Harmonized System of Classification and Labelling of Chemicals at its seventh session (Geneva, 12 December 2014).

The DGP-WG is invited to agree to the draft amendments in this working paper.

Part S-3

DANGEROUS GOODS LIST, SPECIAL PROVISIONS AND QUANTITY LIMITATIONS

(ADDITIONAL INFORMATION FOR PART 3 OF THE TECHNICAL INSTRUCTIONS)

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Name	UN No.	Class or division	Subsidiary risk	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	6	7	8	9	10	11	12	13

 UN Model Regulations, SP 379, ST/SG/AC.10/42/Add.1

Ammonia, anhydrous	1005	2.3	8	AU 1 CA 7 IR 3 NL 1 US 3	A2 <u>A329</u>			See	210	See	210
Adsorbed gas, toxic, corrosive, n.o.s.*	3516	2.3	8	<u>AU 1</u> <u>CA 7</u> <u>IR 3</u> <u>NL 1</u> <u>US 3</u>	A2 <u>A329</u>			See	210	See	210

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Chapter 6

SPECIAL PROVISIONS

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Table S-3-4. Special Provisions

Supplementary special provisions

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UN Model Regulations, SP 370, ST/SG/AC.10/42/Add.1

A326 (370) This entry applies to:

- ammonium nitrate with more than 0.2% combustible substances, including any organic substance calculated as carbon, to the exclusion of any added substance; and
- ammonium nitrate with not more than 0.2% combustible substances, including any organic substance calculated as carbon, to the exclusion of any added substance, that ~~are not too sensitive for acceptance into Class 4~~ gives a positive result when tested in accordance with Test Series 2 (see UN *Manual of Tests and Criteria*, Part I). See also UN 1942.

The substances that this special provision is assigned to (UN 1005 — **Ammonia, anhydrous** and UN 3516 — **Adsorbed gas, toxic, corrosive, n.o.s.**) are forbidden from transport by air on passenger and cargo aircraft. They may be transported on cargo aircraft with prior approval (A2). Should:

- a) the substances be permitted under the conditions of this special provision (in which case the special provision would appear in the Technical Instructions) (if yes, on passenger and cargo aircraft or on cargo aircraft only?); or
- b) the substances remain forbidden/forbidden, but States may consider providing the exception in this special provision under an approval to transport on cargo aircraft; or
- c) the special provision not be provided for transport air?

A329 (379) Anhydrous ammonia adsorbed or absorbed on a solid contained in ammonia dispensing systems or cylinders intended to form part of such systems are not be subject to the other provisions of the Technical Instructions if the following conditions are observed:

- a) the adsorption or absorption presents the following properties:
 - 1) the pressure at a temperature of 20°C in the cylinder is less than 0.6 bar;
 - 2) the pressure at a temperature of 35°C in the cylinder is less than 1 bar;
 - 3) the pressure at a temperature of 85°C in the cylinder is less than 12 bar.
- b) the adsorbent or absorbent material must not have dangerous properties listed in Classes 1 to 8:
 - c) the maximum contents of a cylinder must be 10 kg of ammonia; and
- d) cylinders containing adsorbed or absorbed ammonia must meet the following conditions:
 - 1) cylinders must be made of a material compatible with ammonia as specified in ISO 11114-1:2012;
 - 2) cylinders and their means of closure must be hermetically sealed and able to contain the generated ammonia;
 - 3) each cylinder must be able to withstand the pressure generated at 85°C with a volumetric expansion no greater than 0.1%;
 - iv) each cylinder must be fitted with a device that allows for gas evacuation once pressure exceeds 15 bar without violent rupture, explosion or projection; and
 - v) each cylinder must be able to withstand a pressure of 20 bar without leakage when the pressure relief device is deactivated.

When carried in an ammonia dispenser, the cylinders must be connected to the dispenser in such a way that the assembly is guaranteed to have the same strength as a single-cylinder.

The properties of mechanical strength mentioned in this special provision must be tested using a prototype of a cylinder and/or dispenser filled to nominal capacity, by increasing the temperature until the specified pressures are reached.

The test results must be documented, must be traceable and must be communicated to the relevant authorities upon request.

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Part S-4

PACKING INSTRUCTIONS

(ADDITIONAL INFORMATION FOR PART 4 OF THE TECHNICAL INSTRUCTIONS)

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Chapter 3

CLASS 1 — EXPLOSIVES

112	PACKING INSTRUCTION 112		112
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c) for solid dry powder 1.1D			
<i>Inner packagings</i> Bags paper, multiwall, water-resistant plastics woven plastics Receptacles fibreboard metal plastics wood	<i>Intermediate packagings</i> Bags (for 1050 only) paper, multiwall, water-resistant with inner lining plastics Receptacles metal plastics wood	<i>Outer packagings</i> Boxes fibreboard (4G) natural wood, ordinary (4C1) natural wood, with sift-proof walls (4C2) other metal (4N) plywood (4D) reconstituted wood (4F) solid plastics (4H2) steel (4A) Drums aluminium (1B1, 1B2) fibre (1G) other metal (1N1, 1N2) steel (1A1, 1A2)	

PARTICULAR PACKING REQUIREMENTS OR EXCEPTIONS:

- For UN 0004, 0076, 0078, 0154, 0216, 0219 and 0386, packagings must be lead-free.
- For UN 0209, bags, sift-proof (5H2) are recommended for flake or prilled TNT in the dry state and a maximum net mass of 30 kg.

UN Model Regulations, P112(c), PP48, ST/SG/AC.10/42/Add.1

The text of UN PP48 does not currently appear in Packing Instruction 112 c) of the Technical Instructions. ST/SG/AC.10/42/Add.1 adds a second sentence to PP48. The provision, including the new second sentence, is proposed for addition to the Technical Instructions for the sake of alignment with the UN Model Regulations.

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- For UN 0504, metal packagings must not be used. Packagings of other material with a small amount of metal, for example metal closures or other metal fittings such as those mentioned in 6.3, are not considered metal packagings.
 - Inner packagings are not required if drums are used as the outer packaging.
 - These packages must be sift-proof.

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