



**WORKING PAPER**

**DANGEROUS GOODS PANEL (DGP)  
WORKING GROUP MEETING (DGP-WG/19)**

**Montréal, 1 to 5 April 2019**

**Agenda Item 1: Harmonizing ICAO dangerous goods provisions with UN Recommendations on the Transport of Dangerous Goods**

**1.3: Develop proposals, if necessary, for amendments to the *Supplement to the Technical Instructions for the Safe Transport of Dangerous Goods by Air* (Doc 9284SU) for incorporation in the 2021-2022 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 ninth session (Geneva, 7 December 2018).

**Action by the DGP-WG:** 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

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## Chapter 2

## SUPPLEMENTARY DANGEROUS GOODS LIST

Name	UN No.	Class or division	Subsidiary hazard	Labels	State variations	Special provisions	UN packing group	Excepted quantity	Passenger and cargo aircraft		Cargo aircraft only	
									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, Chapter 3.2, dangerous goods list (see ST/SG/AC.10/46/Add.1)												
<u>Detonators, electronic programmable for blasting†</u>	<u>0511</u>	<u>1.1B</u>		<u>Explosive</u>				<u>E0</u>	<u>FORBIDDEN (131)</u>		<u>FORBIDDEN (131)</u>	
<u>Detonators, electronic programmable for blasting†</u>	<u>0512</u>	<u>1.4B</u>		<u>Explosive 1.4</u>				<u>E0</u>	<u>FORBIDDEN (131)</u>		<u>131I</u>	<u>75 kg</u>
<b>Desensitized explosive, solid, n.o.s.*</b>	3380	4.1		Solid flammable	BE 3	A133 <u>A217</u>	I		FORBI	DDEN	FORBI	DDEN
<b>Nitrocellulose</b> , dry or wetted with less than 25% water (or alcohol), by mass	0340	1.1D		Explosive		<u>A216</u>			FORBIDDEN (112 b) or c))		FORBIDDEN (112 b) or c))	
<b>Nitrocellulose</b> , unmodified or plasticized with less than 18% plasticizing substance, by mass	0341	1.1D		Explosive		<u>A216</u>			FORBIDDEN (112 b))		FORBIDDEN (112 b))	

Name	UN No.	Class or division	Subsidiary hazard	Labels	State variations	Special provisions	UN packing group	Excepted quantity	Passenger and cargo aircraft		Cargo aircraft only	
									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
<b>Nitrocellulose, plasticized</b> with not less than 18% plasticizing substance, by mass	0343	1.3C		Explosive		<a href="#">A216</a> <a href="#">A313</a>			FORBIDDEN (111)		FORBIDDEN (111)	
<b>Nitrocellulose, wetted</b> with not less than 25% alcohol, by mass	0342	1.3C		Explosive		<a href="#">A216</a> <a href="#">A313</a>			FORBIDDEN (114 a))		FORBIDDEN (114 a))	
<b>Dipropylamine</b>	2383	3	8	Liquid flammable & Corrosive		<a href="#">A209</a> <a href="#">A330</a>	II	E2	352 Y340	1 L 0.5 L	363	5 L
<a href="#">Dangerous goods in articles</a>	<a href="#">3363</a>	<a href="#">9</a>		<a href="#">Miscellaneous</a>		<a href="#">A48</a> <a href="#">A107</a> <a href="#">A332</a>		<a href="#">E0</a>	<a href="#">see 962</a>		<a href="#">see 962</a>	
<b>2-Dimethylaminoethyl methacrylate, stabilized</b>	2522	6.1		Toxic		<a href="#">A209</a> <a href="#">A330</a>	II	E4	654 Y641	5 L 1 L	662	60 L
<b>Engine, internal combustion, flammable gas powered</b>	3529	2.1		Gas flammable		A70 A87 <a href="#">A176</a> A208		E0	FORBI	DDEN	220	No limit
<b>Machinery, internal combustion, flammable gas powered</b>	3529	2.1		Gas flammable		A70 A87 <a href="#">A176</a> A208		E0	FORBI	DDEN	220	No limit

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## Chapter 6

### SPECIAL PROVISIONS

Against the entries in the Supplementary Dangerous Goods List (Table S-3-1), column 7 shows any special provisions that are applicable. Where these special provisions have not been listed in Table 3-2 of the Technical Instructions, they are listed in Table S-3-4 below.

**Table S-3-4. Special Provisions**

*Supplementary special provisions*

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UN Model Regulations, Chapter 3.3, SP 370 (see ST/SG/AC.10/46/Add.1)

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A326 (370) This entry only applies to ammonium nitrate that meets one of the following criteria:

- ammonium nitrate with more than 0.2% combustible substances, including any organic substance calculated as carbon, to the exclusion of any added substance; ~~and~~ or
- 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 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.

This entry must not be used for ammonium nitrate for which a proper shipping name already exists in the Table 3-1 of the Technical Instructions including ammonium nitrate mixed with fuel oil (ANFO) or any of the commercial grades of ammonium nitrate.

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UN Model Regulations, Chapter 3.3, SP 379 (see ST/SG/AC.10/46/Add.1)

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A329 (379) Anhydrous ammonia adsorbed or absorbed on a solid contained in ammonia dispensing systems or cylinders intended to form part of such systems may be transported on cargo aircraft only with the prior approval of the appropriate authority of the State of Origin and the State of the Operator under the written conditions established by those authorities in addition to the following:

- 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~~ ISO 11114-1:2012 + A1:2017;
  - 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%;

- 4) 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
- 5) each cylinder must be able to withstand a pressure of 20 bar without leakage when the pressure relief device is deactivated.

When offered for transport 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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