



**NOTE DE TRAVAIL**

**GROUPE D'EXPERTS SUR LES MARCHANDISES DANGEREUSES (DGP)**

**VINGT-SEPTIÈME RÉUNION**

**Montréal, 16 – 20 septembre 2019**

- Point 2 : Gestion des risques de sécurité propres au transport aérien et détection des anomalies**  
**2.3 : Élaboration, s'il y a lieu, de propositions d'amendement du *Supplément aux Instructions techniques pour la sécurité du transport aérien des marchandises dangereuses* (Doc 9284SU) à introduire dans l'édition de 2021-2022**

**MODIFICATION DE LA LISTE DE LA DIVISION 6.1 AU § 2.2.2  
DE LA SECTION 2.2 DE LA PARTIE S-7 DU SUPPLÉMENT  
AUX INSTRUCTIONS TECHNIQUES**

(Note présentée par S. Bitossi)

**RÉSUMÉ**

La présente note de travail demande un examen de la liste des numéros ONU exclus de la Division 6.1 contenue au § 2.2.2 de la section 2.2 la Partie S-7 du Supplément aux Instructions techniques pour la sécurité du transport aérien des marchandises dangereuses (le Supplément).

Le Groupe DGP est invité à envisager de former un groupe de travail afin de procéder à un examen technique de la liste de la Division 6.1 au § 2.2.2 de la section 2.2 de la Partie S-7 du Supplément par rapport à la liste complète de marchandises dangereuses de la Division 6.1, Groupe d'emballage III, dans le Tableau 3-1 (liste des marchandises dangereuses) des Instructions techniques.

**1. INTRODUCTION**

1.1 In Part 7; 2.1.2 of the Technical Instructions, the State of the Origin and State of the Operator may approve the carriage of certain dangerous goods in the main deck cargo compartments of passenger aircraft, where the aircraft does not meet the requirements of a Class B or Class C cargo compartment.

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\* Seuls le résumé et l'appendice sont traduits.

1.2 This approval is subject to the conditions specified in S-7;2.2 of the Supplement, and more specifically, the approval is restricted to the dangerous goods listed within S-7:2.2.2 (see Appendix A to this working paper).

1.3 Australia is currently updating its dangerous goods regulations and subsequently, conducted a review of the list of Division 6.1 UN numbers noted within S-7:2.2.2, which are excluded for carriage on a passenger aircraft in a main deck cargo compartment other than a Class B or Class C compartment.

1.4 As part of this update, Australia noted that UN 3283 — **Selenium compound, solid, n.o.s.** (Packing Group III only) is listed as one of the excluded dangerous goods classified as toxic substances under Division 6.1 within S-7:2.2.2. However, UN 3440 — **Selenium compound, liquid, n.o.s.** is not included within this list.

1.5 Upon further review, there are potentially other UN numbers which should be reviewed by the DGP for addition to the excluded list within S-7:2.2.2 for Division 6.1.

1.6 The DGP should note that the highest UN number contained within S-7:2.2.2 across all classes and divisions, is UN 3363 (with exception of UN 8000).

1.7 When cross referenced against the list of UN numbers contained within Attachment 1, Chapter 1, Lists of Proper Shipping Names of the Technical Instructions, the highest UN number (aside from UN 8000) is UN 3548. This results in a difference of 180 UN numbers, of which 24 are potentially new Division 6.1 entries.

1.8 Appendix B contains a complete list of UN numbers in Hazard Division 6.1, Packing Group III only, for review.

## 2. ACTION BY THE DGP

2.1 The DGP is invited to consider forming an out-of-session working group to review the list provided in Appendix B to this working paper for potential inclusion into the list within S-7:2.2.2 of the Supplement for Division 6.1 (as shown in Appendix A to this working paper).

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## APPENDICE A

### PROPOSITION D'AMENDEMENT DE LA PARTIE S-7 DU SUPPLÉMENT AUX INSTRUCTIONS TECHNIQUES

## Partie S-7

# RESPONSABILITÉS DE L'ÉTAT EN CE QUI CONCERNE LES EXPLOITANTS

## RENSEIGNEMENTS SUPPLÉMENTAIRES RELATIFS À LA PARTIE 7 DES INSTRUCTIONS TECHNIQUES

(...)

### Chapitre 2

(...)

### ENTREPOSAGE ET CHARGEMENT

(...)

#### 2.2 CHARGEMENT À BORD D'AÉRONEFS DE PASSAGERS

2.2.2 Il ne peut s'agir que de marchandises dangereuses des classes ou divisions suivantes :

**Division 1.4S**

**Division 2.1** — Aérosols seulement

**Division 2.2** (sauf numéros ONU 2037, 2073 et 2857)

**Classe 3** (sauf numéros ONU 1112, 2047, 2059, 2332, 3054 et 3269)

**Division 4.1** (sauf numéros ONU 1309, 1313, 1314, 1318, 1324, 1330, 1338, 1353, 1869, 2000, 2213, 2714, 2715, 2878, 3089 et 3241)

**Division 5.1** (sauf numéros ONU 1458, 1459, 1467, 1481, 1482, 1483, 2427, 2428, 2429, 2469, 2726, 2984, 3210, 3211, 3213, 3215, 3216, 3218 et 3219)

**Division 6.1** (sauf numéros ONU 1549, 1550, 1551, 1556, 1557, 1593, 1599, 1655, 1686, 1690, 1710, 1812, 1887, 1888, 1897, 1935, 2024, 2025, 2026, 2074, 2077, 2233, 2501, 2505, 2515, 2609, 2655, 2656, 2674, 2713, 2747, 2785, 2788, 2821, 2831, 2853, 2854, 2855, 2856, 2871, 2874, 3141, 3144, 3146, 3283 et 3293)

**Division 6.2**

**Classe 7** — Sauf colis de matières radioactives et colis de catégorie I-Blanc seulement.

**Classe 8** (sauf numéros ONU 1731, 1740, 1755, 1757, 1783, 1787, 1788, 1789, 1814, 1819, 1824, 1848, 1908, 2430, 2496, 2508, 2564, 2578, 2585, 2586, 2672, 2677, 2679, 2681, 2693, 2790, 2803, 2809, 2837, 2869, 3145, 3253 et 3320)

**Classe 9** (sauf numéros ONU 1931, 1941, 1990, 2211, 2590, 3268, 3314, 3316, 3363 et 8000)

(...)

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**APPENDIX B**

**LIST OF DANGEROUS GOODS IN DIVISION 6.1, PACKING GROUP III**

- (a) Red bracketed UN numbers are for review and decision for inclusion in S-7;2.2.2. Those not in red and brackets are already included in S-7;2.2.2.
- (b) Proper shipping name (excluding lightface type in the list)
- (c) Hazard class / division and subsidiary hazard (if applicable)
- (d) Status of UN number “**NEW**” means a UN number after UN3363 and yet to be reviewed for inclusion in S-7;2.2.2.
- (e) Decision of the DGP: **I** = Include in S-7;2.2.2 or **D** = Do not include in S-7;2.2.2

UN NUMBER (a)	PROPER SHIPPING NAME (b)	CLASS/ DIV & SUB HAZ (c)	STATUS UN NUMBER (d)	DECISION (I / D) (e)
2831	1,1,1-Trichloroethane	6.1		
[2716]	1,4-Butynediol	6.1		
[2518]	1,5,9-Cyclododecatriene	6.1		
[2688]	1-Bromo-3-chloropropane	6.1		
[3418]	[2,4-Toluylenediamine solution]	6.1	NEW	
[1709]	2,4-Toluylenediamine, solid	6.1		
[2946]	2-Amino-5-diethylaminopentane	6.1		
[2273]	2-Ethylaniline	6.1		
[2300]	2-Methyl-5-ethylpyridine	6.1		
[2942]	2-Trifluoromethylaniline	6.1		
[2849]	3-Chloropropanol-1	6.1		
[2651]	4,4'-Diaminodiphenylmethane	6.1		
[3410]	4-Chloro-o-toluidine hydrochloride solution	6.1	NEW	
[1579]	4-Chloro-o-toluidine hydrochloride, solid	6.1		
2785	4-Thiapentanal	6.1		
2713	Acridine	6.1		
[3426]	Acrylamide solution	6.1	NEW	
2074	Acrylamide, solid	6.1		
[2205]	Adiponitrile	6.1		
[3140]	Alkaloid salts, liquid, n.o.s.*	6.1		
[1544]	Alkaloid salts, solid, n.o.s.*	6.1		
[3140]	Alkaloids, liquid, n.o.s.*	6.1		
[1544]	Alkaloids, solid, n.o.s.*	6.1		
[2937]	alpha-Methylbenzyl alcohol, liquid	6.1		
[3438]	alpha-Methylbenzyl alcohol, solid	6.1	NEW	
2077	alpha-Naphthylamine	6.1		
[2512]	Aminophenols	6.1		
[3424]	Ammonium dinitro-o-cresolate solution	6.1	NEW	

UN NUMBER (a)	PROPER SHIPPING NAME (b)	CLASS/ DIV & SUB HAZ (c)	STATUS UN NUMBER (d)	DECISION (I / D) (e)
2505	Ammonium fluoride	6.1		
2854	Ammonium fluorosilicate	6.1		
[1548]	Aniline hydrochloride	6.1		
[2431]	Anisidines	6.1		
3141	Antimony compound, inorganic, liquid, n.o.s.*	6.1		
1549	Antimony compound, inorganic, solid, n.o.s.*	6.1		
1550	Antimony lactate	6.1		
1551	Antimony potassium tartrate	6.1		
2871	Antimony powder	6.1		
1556	Arsenic compound, liquid, n.o.s.*	6.1		
1557	Arsenic compound, solid, n.o.s.*	6.1		
[2994]	Arsenical pesticide, liquid, toxic*	6.1		
[2993]	Arsenical pesticide, liquid, toxic, flammable	6.1 (3)		
[2759]	Arsenical pesticide, solid, toxic*	6.1		
[1564]	Barium compound, n.o.s.*	6.1		
[1884]	Barium oxide	6.1		
[1566]	Beryllium compound, n.o.s.*	6.1		
[3411]	beta-Naphthylamine solution	6.1	NEW	
[3016]	Bipyridilium pesticide, liquid, toxic*	6.1		
[3015]	Bipyridilium pesticide, liquid, toxic, flammable,	6.1 (3)		
[2781]	Bipyridilium pesticide, solid, toxic*	6.1		
1887	Bromochloromethane	6.1		
2515	Bromoform	6.1		
[2667]	Butyltoluenes	6.1		
[2570]	Cadmium compound	6.1		
[2992]	Carbamate pesticide, liquid, toxic*	6.1		
[2991]	Carbamate pesticide, liquid, toxic, flammable,	6.1 (3)		
[2757]	Carbamate pesticide, solid, toxic*	6.1		
[2516]	Carbon tetrabromide	6.1		
2233	Chloroanisidines	6.1		
[2235]	Chlorobenzyl chlorides, liquid	6.1		
[3427]	Chlorobenzyl chlorides, solid	6.1	NEW	
[2669]	Chlorocresols solution	6.1		
1888	Chloroform	6.1		
[2237]	Chloronitroanilines	6.1		
[2433]	Chloronitrotoluenes, liquid	6.1		
[3457]	Chloronitrotoluenes, solid	6.1	NEW	
[2021]	Chlorophenols, liquid	6.1		
[2020]	Chlorophenols, solid	6.1		
[3429]	Chlorotoluidines, liquid	6.1	NEW	
[2239]	Chlorotoluidines, solid	6.1		
[3010]	Copper based pesticide, liquid, toxic*	6.1		

UN NUMBER (a)	PROPER SHIPPING NAME (b)	CLASS/ DIV & SUB HAZ (c)	STATUS UN NUMBER (d)	DECISION (I / D) (e)
[3009]	Copper based pesticide, liquid, toxic, flammable,	6.1 (3)		
[2775]	Copper based pesticide, solid, toxic*	6.1		
[3026]	Coumarin derivative pesticide, liquid, toxic*	6.1		
[3025]	Coumarin derivative pesticide, liquid, toxic, flammable	6.1 (3)		
[3027]	Coumarin derivative pesticide, solid, toxic*	6.1		
1935	Cyanide solution, n.o.s.*	6.1		
[1588]	Cyanides, inorganic, solid, n.o.s.*	6.1		
[2872]	Dibromochloropropanes	6.1		
[2664]	Dibromomethane	6.1		
[2873]	Dibutylaminoethanol	6.1		
1593	Dichloromethane	6.1		
[1597]	Dinitrobenzenes, liquid	6.1		
1599	Dinitrophenol solution	6.1		
[3142]	Disinfectant, liquid, toxic, n.o.s.*	6.1		
[1601]	Disinfectant, solid, toxic, n.o.s.*	6.1		
[1602]	Dye intermediate, liquid, toxic, n.o.s.*	6.1		
[1602]	Dye intermediate, liquid, toxic, n.o.s.*	6.1		
[3143]	Dye intermediate, solid, toxic, n.o.s.*	6.1		
[3143]	Dye, solid, toxic, n.o.s.*	6.1		
[2525]	Ethyl oxalate	6.1		
[2941]	Fluoroanilines	6.1		
2856	Fluorosilicates, n.o.s.*	6.1		
2874	Furfuryl alcohol	6.1		
[2689]	Glycerol alpha-monochlorohydrin	6.1		
[2661]	Hexachloroacetone	6.1		
[2729]	Hexachlorobenzene	6.1		
[2279]	Hexachlorobutadiene	6.1		
[2875]	Hexachlorophene	6.1		
3293	Hydrazine, aqueous solution	6.1		
[2206]	Isocyanate solution, toxic, n.o.s.*	6.1		
[2206]	Isocyanates, toxic, n.o.s.*	6.1		
[2290]	Isophorone diisocyanate	6.1		
[1616]	Lead acetate	6.1		
[2291]	Lead compound, soluble, n.o.s.*	6.1		
2853	Magnesium fluorosilicate	6.1		
[1851]	Medicine, liquid, toxic, n.o.s.	6.1		
[3249]	Medicine, solid, toxic, n.o.s.	6.1		
[3012]	Mercury based pesticide, liquid, toxic*	6.1		
[3011]	Mercury based pesticide, liquid, toxic, flammable,	6.1 (3)		
[2777]	Mercury based pesticide, solid, toxic*	6.1		
2024	Mercury compound, liquid, n.o.s.*	6.1		

UN NUMBER (a)	PROPER SHIPPING NAME (b)	CLASS/ DIV & SUB HAZ (c)	STATUS UN NUMBER (d)	DECISION (I / D) (e)
2025	Mercury compound, solid, n.o.s.*	6.1		
[3281]	Metal carbonyls, liquid, n.o.s.*	6.1		
[3466]	Metal carbonyls, solid, n.o.s.*	6.1	NEW	
[2299]	Methyl dichloroacetate	6.1		
[2533]	Methyl trichloroacetate	6.1		
[2432]	N,N-Diethylaniline	6.1		
[2272]	N-Ethylaniline	6.1		
[2753]	N-Ethylbenzyltoluidines, liquid	6.1		
[3460]	N-Ethylbenzyltoluidines, solid	6.1	NEW	
[2274]	N-Ethyl-N-benzylaniline	6.1		
3144	Nicotine compound, liquid, n.o.s.*	6.1		
1655	Nicotine compound, solid, n.o.s.*	6.1		
[1656]	Nicotine hydrochloride, liquid	6.1		
[1656]	Nicotine hydrochloride, solution	6.1		
[3144]	Nicotine preparation, liquid, n.o.s.*	6.1		
1655	Nicotine preparation, solid, n.o.s.*	6.1		
[1658]	Nicotine sulphate solution	6.1		
[3276]	Nitriles, liquid, toxic, n.o.s.*	6.1		
[3439]	Nitriles, solid, toxic, n.o.s.*	6.1	NEW	
[2730]	Nitroanisoles, liquid	6.1		
[3458]	Nitroanisoles, solid	6.1	NEW	
[2732]	Nitrobromobenzenes, liquid	6.1		
[3459]	Nitrobromobenzenes, solid	6.1	NEW	
[3434]	Nitrocresols, liquid	6.1	NEW	
[2446]	Nitrocresols, solid	6.1		
[1663]	Nitrophenols	6.1		
[2660]	Nitrotoluidines (mono)	6.1		
[2294]	N-Methylaniline	6.1		
[1591]	o-Dichlorobenzene	6.1		
[3280]	Organoarsenic compound, liquid, n.o.s.*	6.1		
[3465]	Organoarsenic compound, solid, n.o.s.*	6.1	NEW	
[2996]	Organochlorine pesticide, liquid, toxic*	6.1		
[2995]	Organochlorine pesticide, liquid, toxic, flammable,	6.1 (3)		
[2761]	Organochlorine pesticide, solid, toxic*	6.1		
[3282]	Organometallic compound, liquid, toxic, n.o.s.*	6.1		
[3467]	Organometallic compound, solid, toxic, n.o.s.*	6.1	NEW	
[3278]	Organophosphorus compound, liquid, toxic, n.o.s.*	6.1		
[3464]	Organophosphorus compound, solid, toxic, n.o.s.*	6.1	NEW	
[3018]	Organophosphorus pesticide, liquid, toxic*	6.1		
[3017]	Organophosphorus pesticide, liquid, toxic, flammable,	6.1 (3)		
[2783]	Organophosphorus pesticide, solid, toxic*	6.1		



UN NUMBER (a)	PROPER SHIPPING NAME (b)	CLASS/ DIV & SUB HAZ (c)	STATUS UN NUMBER (d)	DECISION (I / D) (e)
2788	Organotin compound, liquid, n.o.s.	6.1		
3146	Organotin compound, solid, n.o.s.	6.1		
[3020]	Organotin pesticide, liquid, toxic*	6.1		
[3019]	Organotin pesticide, liquid, toxic, flammable	6.1 (3)		
[2786]	Organotin pesticide, solid, toxic*	6.1		
[2903]	Pesticide, liquid, toxic, flammable	6.1 (3)		
[2902]	Pesticide, liquid, toxic, n.o.s.*	6.1		
[2588]	Pesticide, solid, toxic, n.o.s.*	6.1		
[2311]	Phenetidines	6.1		
2821	Phenol solution	6.1		
[3348]	Phenoxyacetic acid derivative pesticide, liquid, toxic*	6.1		
[3347]	Phenoxyacetic acid derivative pesticide, liquid, toxic, flammable	6.1 (3)		
[3345]	Phenoxyacetic acid derivative pesticide, solid, toxic	6.1		
[2470]	Phenylacetonitrile, liquid	6.1		
[1673]	Phenylenediamines	6.1		
2026	Phenylmercuric compound, n.o.s.*	6.1		
[3413]	Potassium cyanide solution	6.1	NEW	
[3422]	Potassium fluoride solution	6.1	NEW	
1812	Potassium fluoride, solid	6.1		
2655	Potassium fluorosilicate	6.1		
[3352]	Pyrethroid pesticide, liquid, toxic	6.1		
[3351]	Pyrethroid pesticide, liquid, toxic, flammable	6.1 (3)		
[3349]	Pyrethroid pesticide, solid, toxic	6.1		
2656	Quinoline	6.1		
[2876]	Resorcinol	6.1		
[3440]	Selenium compound, liquid, n.o.s.*	6.1	NEW	
3283	Selenium compound, solid, n.o.s.*	6.1		
[2473]	Sodium arsenilate	6.1		
1686	Sodium arsenite, aqueous solution	6.1		
[2659]	Sodium chloroacetate	6.1		
[3414]	Sodium cyanide solution	6.1	NEW	
[3415]	Sodium fluoride solution	6.1	NEW	
1690	Sodium fluoride, solid	6.1		
2674	Sodium fluorosilicate	6.1		
[3014]	Substituted nitrophenol pesticide, liquid, toxic*	6.1		
[3013]	Substituted nitrophenol pesticide, liquid, toxic, flammable,	6.1 (3)		
[2779]	Substituted nitrophenol pesticide, solid, toxic*	6.1		
[3284]	Tellurium compound, n.o.s.*	6.1		
2747	tert-Butylcyclohexyl chloroformate	6.1		

UN NUMBER (a)	PROPER SHIPPING NAME (b)	CLASS/ DIV & SUB HAZ (c)	STATUS UN NUMBER (d)	DECISION (I / D) (e)
[2504]	Tetrabromoethane	6.1		
1897	Tetrachloroethylene	6.1		
[3006]	Thiocarbamate pesticide, liquid, toxic*	6.1		
[3005]	Thiocarbamate pesticide, liquid, toxic, flammable,	6.1 (3)		
[2771]	Thiocarbamate pesticide, solid, toxic*	6.1		
[3287]	Toxic liquid, inorganic, n.o.s.*	6.1		
[2810]	Toxic liquid, organic, n.o.s.*	6.1		
[3288]	Toxic solid, inorganic, n.o.s.*	6.1		
[2811]	Toxic solid, organic, n.o.s.*	6.1		
[3172]	Toxins, extracted from living sources, liquid, n.o.s.*	6.1		
[3462]	Toxins, extracted from living sources, solid, n.o.s.*	6.1	NEW	
2609	Triallyl borate	6.1		
[2998]	Triazine pesticide, liquid, toxic*	6.1		
[2997]	Triazine pesticide, liquid, toxic, flammable,	6.1 (3)		
[2763]	Triazine pesticide, solid, toxic*	6.1		
[2321]	Trichlorobenzenes, liquid	6.1		
1710	Trichloroethylene	6.1		
[2328]	Trimethylhexamethylene diisocyanate	6.1		
2501	Tris-(1-aziridiny) phosphine oxide solution	6.1		
[3285]	Vanadium compound, n.o.s.*	6.1		
[2862]	Vanadium pentoxide	6.1		
2855	Zinc fluorosilicate	6.1		

*Note: The list has been sorted in alphabetical order according to Proper Shipping Name for ease of reviewing potential like/related dangerous goods.*