

# Australian Code for the Transport of Dangerous Goods by Road & Rail: differences between edition 7.5 and edition 7.6

Edition 7.6 of the Australian Code for the Transport of Dangerous Goods by Road & Rail (the Code) includes UN and Australian based changes.

Below is a summary of the important changes from edition 7.5 of the Code and the *Model Subordinate Instrument on the Transport of Dangerous Goods by Road or Rail* (the MSI).

Refer to the actual section of the Code or the MSI to understand the change. References to changes to the MSI appear in **bold and italic** in the corresponding entry for the change in the Code.

Information contained in this document is intended for reference purposes only. Where there is a discrepancy between the information in this document and the text in the Code or MSI, the wording in the Code or MSI takes precedence.

#### **GENERAL**

Area	Subsection	Explanation of Change
Websites	Throughout	Update of website addresses, where required
Names	Throughout	Update of Department and company names and addresses, where required
Outdated references	Throughout	removal of outdated references and updating of MSI clause numbers where needed
Improper use of the term 'risk'	Throughout	UN20 replaces the word 'risk' with the word 'hazard' when referring to the primary or subsidiary classification of dangerous goods (inherent hazards of the substance or article). For example, the term 'subsidiary risk' or 'sub-risk' is now 'subsidiary hazard' or 'sub-hazard' throughout UN20 as it had been determined that the word 'risk' was being incorrectly used.  To lessen the impact on duty holders, the following clause has been added to the Code:  Clause 1.2.0.1 - For the purpose of compliance with this code the words subsidiary risk have the same meaning as subsidiary hazard.  MSI 2.1.4 Subsidiary hazard (definition updated and terms changed throughout as relevant)

## LIMITED QUANTITIES - NEW CATEGORIES AND EXCEPTED QUANTITIES

Area	Subsection	Explanation of Change
Mixed Packet (Lower Risk) Dangerous Goods	3.4.11	New LQ category to allow Mixed Packet (Lower Risk) Dangerous Goods to be transported with a lower level of regulation.  Mixed Packet (Lower Risk) Dangerous Goods are: Dangerous goods packed in limited quantities — other than aerosols, dangerous goods that are pool or spa cleaners or a Division 2.3 dangerous good — that are dangerous goods:  of a kind marketed, labelled, packaged or otherwise clearly intended for use as a household cleaner; and is in a package that weighs no more than 10kg containing at least 50% non-dangerous goods (by volume).
Personal Care Products	3.4.12	New LQ category to provide certain exemptions to personal care products in consumer packaging to be transported with a lower level of regulation. personal care products in consumer packaging are:  A substance or preparation intended for placement in contact with any external part of the human body, including the mucous membranes of the oral cavity and the teeth, with a view to:  • altering the odours of the body;  • changing its appearance;  • cleansing it;  • maintaining it in good condition;  • perfuming it; or  • protecting it.  Note: Aerosols are excluded from the personal care exemption
Excepted Quantities	Chapter 3.5	Adoption of Excepted Quantities as per UN 20 Chapter 3.5 to allow reduced requirements for very small quantities of certain dangerous goods. Excepted Quantities are shown in Column 7(b) of the Dangerous goods List (Table 3.2.3) The adopting of chapter 3.5 better aligns the Code with international practices.  MSI 5.1.1 (5) and 5.1.1 (6) Meaning of appropriately marked (updated to include marking for Chapter 3.5 of the Code - Excepted quantities)
Transport documentation	11.1.3.4.2	New clause that DG Transport Documentation is not required for DG transported under 3.4.11, 3.4.12 or 3.5.

## **Lithium Batteries**

Area	Subsection	Explanation of Change
Assignment to Class 9	2.9.2	New entry UN No. 3536 LITHIUM BATTERIES INSTALLED IN CARGO TRANSPORT UNIT
Test summaries	2.9.4 (f)	New conditions inserted for lithium batteries containing both primary lithium metal cells and rechargeable lithium ion cells that are not designed to be externally charged.
Special provision 188	3.3.2 SP 188	Minor wording change to clarify that the protection required for cells and batteries includes protection against contact with electrically conductive material.
Special provision 188	3.3.2 SP 188	New Note 2 inserted - lithium batteries packed and marked in accordance with relevant requirements for Air are deemed to meet SP 188.
Special provision 188	3.3.2 SP 188(f)	Additional text inserted for packages placed in overpacks. The word "OVERPACK" to be clearly visible.
Special provision 188	3.3.2 SP 188(h)	Additional text added to clarify that references to 'equipment' in SP 188 means apparatus for which lithium batteries provide electrical power.
Special provision 310	3.3.2 SP 310	Packing Instruction LP905 added for Production Runs of not more than 100 cells or batteries
Special provision 376	3.3.2 SP 376	More detailed packing and transporting instructions and marking and document requirements inserted for damaged or defective lithium batteries.
Special provision 384	3.3.2 384	Wording added to clarify that Placard corresponding to Model No 9 (not 9A) is to be used for placarding cargo transport units containing lithium batteries.
Special provision 387	3.3.2 SP 387	New – lithium content limits set for lithium batteries containing both primary lithium metal cells and rechargeable lithium ion cells transported in accordance with SP188
Special provision 389	3.3.2 SP 389	New – requirements relating to lithium batteries installed in cargo transport units. New UN Number - UN3536
Packing instructions	4.1.4 P908, P909, P910	Inclusion of the word 'electrically' before 'non-conductive' for the purposes of lining materials and cushioning material for the transport of damaged lithium batteries. Applies to UN3090, UN3091, UN3480, UN3481
Packing instructions	4.1.4 P911 LP906	New packing instruction for damaged or defective cells and batteries - UN3090, UN3091, UN3480, UN3481
Packing instructions	4.1.4 LP903	Editorial and rewording only, no changes to requirements - UN3090, UN3091, UN3480, UN3481

Area	Subsection	Explanation of Change
Packing instructions	4.1.4 LP904	Application of instruction expanded to include damaged or defective cells and batteries contained in single items or equipment. Consequential changes made throughout the instruction. UN3090, UN3091, UN3480, UN3481
Packing instruction	4.1.4 LP905	New – applies to UN3090, UN3091, UN3480, UN3481 production runs or pre-production prototypes transported for testing.
Lithium battery mark	5.2.1.9	Flexibility has been added to allow the symbol for the mark to be black on white or suitable contrasting background.

## **Changes Impacting Multiple Sections**

Area	Subsection	Explanation of Change
Ammonium Nitrate Based Fertilisers		
	2.5.2.1	New subsection 2.5.2.1.2 provides that by exception solid ammonium nitrate based fertilizers must be classified in accordance with section 39 of the manual of tests and criteria.
Assignment to Class 9	2.9.2	New entry for Ammonium Nitrate Based Fertilizers - must be classified in accordance with procedure in Manual of Tests and Criteria, Part III, Section 39.
		Subsequent removal of UN 2071 - AMMONIUM NITRATE BASED FERTILIZER entry under 'Other substances presenting a danger but not meeting definitions of another class'
Special provision 193	3.3.2 SP 193	Wording change to be applicable only to ammonium nitrate based compound fertilizers. Different classification requirements are also inserted.
Special provision 307	3.3.2 SP 307	Composition limits for uniform mixtures containing ammonium nitrate removed. SP307 is only to be used for ammonium nitrate based fertilizers.

## PART 1 – GENERAL PROVISIONS, DEFINITIONS AND INTERPRETATION

Area	Subsection	Explanation of Change
Exempted consignments of dangerous goods	Table 1.1.1.2	Clarification - footnote (b) removed as there are no exempted quantities for Division 6.2
Exempted consignments of dangerous goods	1.1.1.2 NOTE: (3)(a) Regulation 1.1.6(2) further exemptions	Correction of typographical error - Wording for very small consignments changed from 'where the aggregate quantity of dangerous goods is <u>below</u> the following limits' to 'where the aggregate quantity of dangerous goods is <u>not more</u> than the following limits'.  MSI 1.1.6 (2)(a) – Further exemptions
Application of Code to Mobile Processing Units (MPU)	1.1.1.2 NOTES:	New Note (4) ADG Code doesn't apply to transport of dangerous goods by a mobile processing unit (MPU) for the purpose of manufacturing explosives  MSI 1.1.6 (3) and 1.1.6 (4) Further exemptions (new provisions added to exempt and define MPU)_
Definitions		
a) Minor amendments	1.2	The following definitions have been slightly amended for address changes, updates in reference material or small wording changes:  • Animal material  • GHS  • Intermediate Bulk Container (IBC)  • Manual of Tests and Criteria
b) New definitions		Subsidiary hazard     Clause 1.2.0.1 - For the purpose of compliance     with this code the words subsidiary risk     have the same meaning as subsidiary hazard.
c) Removed definitions		Subsidiary risk

## **PART 2 – CLASSIFICATION**

Area	Subsection	Explanation of Change
Precedence of hazard characteristics	2.0.3.1	For the purposes of the 'Precedence of hazards' table an additional use is to assign appropriate entries for articles containing dangerous goods N.O.S (UN Nos. 3537 to 3548)
Transport of Samples		
a) Energetic materials for testing purposes	2.0.4.3	New section to allow transport of substances for testing that have indicative explosive or self-reactive properties. Although not designed to be, they fit explosives of Class 1 and therefore would otherwise be prohibited from transport.
a) Articles containing dangerous goods N.O.S.	2.0.5	New section reflecting new provisions accepted by the Sub-Committee of Experts about the carriage of articles containing dangerous goods, not otherwise specified.
Explosives		
a) Waterfall fireworks	2.1.3.5.1(a), Table 2.1.3.5.5	Changes to classification criteria. Corresponding amendments made to Default fireworks classification table
b) Flash composition	2.1.3.5.5 (Note 2)	Amended to include waterfall fireworks
c) Sparklers	Table 2.1.3.5.5	Changes to specification for Sparklers
Class 2 - Gases	2.2.2.1	Editorial change – 'flammable' replaced with 'flammability'
Division 4.1 Self- reactive substances		
a) List of currently assigned self-reactive substances in packagings	2.4.2.3.2.3	Additional text inserted to allow formulations listed in particular instructions to be transported in accordance with packing method OP8
b) Phosphorothioic Acid	2.4.2.3.2.3	Phosphorothioic Acid included in list. Includes clarification that it applies to the technical mixture in n-butanol
Division 4.1 Polymerizing substances and mixtures (stabilised)	2.4.2.5.2	Note inserted to clarify that substances meeting the criteria of a polymerizing substance and also for inclusion in Classes 1 to 8 are subject to special provision 386 of Chapter 3.3
Classification of organic peroxides		
a) packing instructions	2.5.3.2.4	Additional text added to allow formulations listed in packing instruction IBC 520 and portable tank instruction T23 to be transported in accordance with packing method OP8 of packing instruction P520

Area	Subsection	Explanation of Change	
b) list of assigned organic peroxides in packagings – new entries	2.5.3.2.4	The following substances have been added:  • PEROXYDICARBONATE  • PHENYLETHYL HYDROPEROXIDE	
c) list of assigned organic peroxides in packagings – amended entry		New concentration (%) (≤ 42 (as a stable dispersion in water)) added to entry for DIISOBUTYRYL PEROXIDE	
Toxic and Infectious Substances	Chapter heading and 2.6.3.1.4	Minor editorial change	
Infected animals	2.6.3.6.2	Subsection about animal material affected by pathogens of Category A has been deleted	
Assignment to Class 8 – Corrosive Substances	2.8	Chapter 2.8 has been substantially revised to reflect a proposal agreed to by the UN TDG subcommittee and the GHS sub-committee. The revised wording covers definitions, criteria to determine hazard classification for skin corrosivity and criteria for assignment of packing groups.	
Environmentally hazardous substances (aquatic environment)			
a) Categories for substances hazardous to the aquatic environment	Table 2.9.1 (b)(ii)	Concentration levels for rapidly degradable substances for which there are adequate chronic toxicity data available has been amended to be consistent with UN 20 table 2.9.1	
b) Classification of mixtures with ingredients without useable information	2.9.3.4.6.5	Requirement to have additional statement about hazards to the aquatic environment for mixtures with ingredients without any useable information has been removed.	

## PART 3 – DANGEROUS GOODS LISTS, SPECIAL PROVISIONS AND LIMITED QUANTITIES EXCEPTIONS

Area	Subsection	Explanation of Change			
Proper shipping name	Proper shipping name				
a) Multiple proper shipping names	3.1.2.2	Direction that only the most appropriate proper shipping name be shown on transport documents when several are listed under a single UN number has been rephrased. There is no change to obligations.			
b) Temperature controlled substances	3.1.2.6	The words 'TEMPERATURE CONTROLLED' must now be added to the proper shipping name if temperature control is used to stabilise substances.			
c) Generic or "not otherwise specified" (N.O.S.) names	3.1.2.8.2	The requirement about display of constituents with respect to hazard mixtures now includes <b>mixtures of articles containing dangerous</b> goods as well as mixtures of dangerous goods.			
d) Generic or "not otherwise specified" (N.O.S.) names	3.1.2.8.3	An additional example illustrating the selection of a proper shipping name has been added. "UN 3540 ARTICLES CONTAINING FLMMABLE LIQUIDS N.O.S. (pyrrolidine)"			
Dangerous goods list					
Column headings	3.2.1 Table 3.2.3	Column 7 "Limited Quantities" has been renumbered as 7a and a new Column 7b "Excepted Quantities" inserted			
New entries	Table 3.2.3 3.2.4	<ul> <li>The following new entries are included</li> <li>UN0510 – ROCKET MOTORS</li> <li>UN1471 – PG II entry added</li> <li>UN3535 – UN3548 toxic solids (2), lithium batteries (1), articles N.O.S. (12)</li> </ul>			
Deleted entries Table 3.2.3		UN No. 3316 – CHEMICAL KIT or FIRST AID KIT There are two entries for UN3316. The second entry is removed. The packing group is removed from the remaining entry.			
Corrections Table 3.2.3		<ul> <li>The following typographical errors in the Code edition 7.5 have been corrected:</li> <li>UN3144 – packing group III entry has been amended to omit '5.1' from the Class or Division column (column 3)</li> <li>UN3475 – packing group II added</li> </ul>			
Special provisions	Table 3.2.3 (column 6)	The following special provisions have been added:  • UN0349 – SP 347  • UN0367 – SP 347  • UN0384 – SP 347  • UN0481 – SP 347  • UN1945 – SP 293  • UN2908 – SP 368  • UN2913 – SP 325  • UN3166 – SP 388			

Area	Subsection	Explanation of Change
		<ul> <li>UN3171 – SP 388</li> <li>UN3302 – SP 386</li> <li>UN3326 – SP 326</li> <li>UN3475 – SP 333</li> <li>The following special provisions have been removed:</li> <li>UN2067 – SP 186</li> <li>UN2071 – SP 186</li> <li>UN3166 – SP 312, SP 380, SP 385</li> <li>UN3171 – SP 240</li> <li>UN3326 – SP 323</li> </ul>
Packagings & IBCs	Table 3.2.3 (columns 8 and 9)	Packing and special packing provisions are amended as follows:  UN3223 – PP94 & PP95 added  UN3224 – PP94 & PP95 added
Portable tanks and bulk containers	Table 3.2.3 (columns 10 and 11)	Instructions and special provisions are amended as follows:  • UN1363 – BK2 added  • UN1386 – BK2 added  • UN1398 – BK2 added  • UN1435 – BK2 added  • UN2071 – BK2 added  • UN2216 – BK2 added  • UN2217 – BK2 added  • UN2793 – BK2 added
Special Provisions, 3.3	3.2	
Determination of ammonium nitrate content	186	Deleted
Vehicles powered by wet batteries, sodium batteries, lithium metal batteries or lithium ion batteries.	240	Deleted
Chemical or First Aid kits	251	Wording change to limit quantity of dangerous goods in kits
Machinery or apparatus containing dangerous goods	301	Reworded
Stabilisation of fishmeal	308	More detail inserted about stabilisation of fishmeal and how to achieve it.
Vehicles powered by a fuel cell engine	312	Deleted
Chemical kits, first aid kits and polyester resin kits	340	New SP Authorisation of Excepted Quantities, including Division 5.2 substances
Engines or machinery powered by dangerous goods	363	Application requirement inserted i.e. 363 may only be used if conditions met. If so, no other requirements apply.

		If engines or machinery contains lithium batteries other provisions must be met.  New condition inserted that requirements of packing instruction P005 of 4.1.4.1 must be met.
Uranium hexafluoride	369	The Note re classification of uranium hexafluoride has been removed.
Vehicles powered by a flammable liquid and a flammable gas internal combustion engine	380	Deleted
Vehicles powered by flammable liquid or gas internal combustion engines or fuel cells	385	Deleted
Vehicles powered by flammable liquid or gas internal combustion engines or fuel cells	388	New – specification of appropriate UN Nos. UN3166, UN3171,
Articles requiring competent authority approval to transport	391	New – specification of Articles required to be transported under conditions approved by the competent authority. UN3537, UN3538, UN 3539, UN3540, UN3541, UN3542, UN3543, UN3544, UN3545, UN3546, UN3547, UN3548

## PART 4 – PACKING, TANK, CONTAINER, VEHICLE AND EQUIPMENT PROVISIONS

Ar	ea	Subsection	Explanation of Change		
Pa	Packing instructions – new or amended				
a)	Composite packagings	P001	In 'composite packagings' – plastics drum added for plastics receptacle in steel or aluminium and '6HH1; added. Other minor amendments		
b)	Articles n.o.s.	P006 LP03	New – applies to UN3537, UN3538, UN3540, UN3541, UN3546, UN3547, UN3548		
c)	Approval markings	P101	Guidance inserted about appropriate markings for packagings approved by competent authorities.		
d)	Liquid component	P200	Use of 'liquid component' changed to "liquefied gas" for consistency with the use of that term throughout the instruction.		
e)	Liquids	P206	Minor wording change for liquid descriptions.		
f)	Small amounts of energetic samples	P520 – PP94, PP95	PP94 and PP95 added to P520 – applies to UN3223 and UN3224		
g)	Fissile excepted materials	P603	The limits in 6.4.11.2 are removed for fissile excepted materials under UN3507.		
h)	Temperature	P620	Rewording of requirement about temperatures that packagings must be capable of withstanding.		
i)	Material used to separate layers of stacked batteries	P801	Clarification that separation layers for stacked batteries must be electrically non-conductive.		
j)	Weight limits for inner packagings	P901	Weight limits removed for inner packagings.		
k)	Unpackaged articles	P902	Minor rewording to movement of unpackaged articles		
l)	Equipment – definition	P903	New definition of 'equipment' inserted.		
m)	Transformers, condensers, etc.	P906	The term 'devices' has been replaced with the term 'articles'.		
n)	Organic peroxides and self-reactive substances of type F	IBC520 T23	New formulations inserted. Additional allowance that listed formulations may also be transported in accordance with packing method OP8 of packing instruction P520		
o)	SAFETY DEVICES, electronically initiated	LP902	Additional detail inserted about what materials packagings may be made of e.g. plywood. For unpackaged articles, additional detail inserted about movement limits.		
p)	Transport of Bromine in portable tanks	TP10	Additional allowance inserted about use of portable tanks after the expiry of the last required lining inspection.		

## PART 5 – CONSIGNMENT PROCEDURES - INCLUDING LABELLING, MARKING AND PLACARDING

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Area	Subsection	Explanation of Change	
Marking and Labelling			
a) Salvage packagings	5.2.1.3	Additional wording added to clarify that the requirement for marking salvage packagings with the word 'SALVAGE' also applies to large salvage packagings.	
b) Articles n.o.s.	5.2.2.1.13 5.2.2.1.13.1 5.2.2.1.13.2	New labelling requirements added for new UN Nos. 3537, 3538, 3539, 3540, 3541, 3542, 3543, 3544, 3545, 3546, 3547, 3548	
c) Label elements	5.2.2.2.1.1.2 5.2.2.2.1.1.3 5.2.2.2.1.2 5.2.2.2.1.3	Requirements reworded to remove some of the prescriptions relating to inside edge line. Additional detail added for label 9A (lithium batteries)	
d) Label Specimens	5.2.2.2	Specimen labels are now presented in table format for ease of reading	
Placarding and Marking of Cargo Transport Units and Bulk Containers			
a) Placarding	5.3.1.1 5.3.1.1.2 5.3.1.1.3	Scope of requirement has been expanded to include bulk containers	
b) Environmentally hazardous mark	5.3.2.3 5.3.2.3.1 5.3.2.3.2	Scope of requirement has been expanded to include bulk containers	

# PART 6 – REQUIREMENTS FOR THE CONSTRUCTION AND TESTING OF PACKAGINGS, IBCS, LARGE PACKAGINGS, PORTABLE TANKS, MEGCS, BULK CONTAINERS, TANK VEHICLES, FREIGHT CONTAINERS & SEGREGATION DEVICES

Area	Subsection	Explanation of Change
Infectious substances	Chapter 6.1	Division 6.2 Infectious Substances other than Category A are no longer excluded from the requirements of this Chapter
Information to be included on test reports	6.1.5.7 6.5.6.14	For test reports, additional particulars requirements inserted for plastics packagings subject to the internal pressure test and rigid plastics and composite IBCs subjected to the hydraulic pressure test – the temperature of the water used must be included in the test report.
Periodic inspection and test of refillable pressure receptacles	6.2.1.6.1	Recast of note 2 that for inspection and tests of refillable pressure receptacles that are seamless steel cylinders and tubes particular checks and tests may be replaced by a procedure that conforms with ISO 16148:2016  Editorial change to note 3
Referenced Standards	for UN press	
a) Pressure receptacles	6.2.2.1.1	New - ISO 11118:2015 – Gas cylinders – Non-refillable metallic gas cylinders – Specification and test methods. ISO 11118:1999 may be used until 31/12/20
b) UN tubes	6.2.2.1.2	New - ISO 111120:2015 – Gas cylinders – refillable seamless steel tubes of water capacity between 150l and 3000l – design, construction and testing. ISO 11120:1999 may be used until 31/12/22.
c) Pressure Drums	6.2.2.1.8	Three new Standards referenced
d) Service equipment	6.2.2.3	Two new standards inserted for particular gas cylinder valves applicable for manufacture until further notice.  ISO 13340:2001 – may be used until 31/12/20.
e) Periodic inspection and test of UN cylinders and their closures	6.2.2.4	Two new standards inserted for particular gas cylinder valves. ISO 13340:2001 – may be used until 31/12/20.
f) UN metal hydride storage systems		New - ISO 16111:2008 - Transportable gas storage devices – Hydrogen absorbed in reversible metal hydride
Drop test for IBCs – method of testing	6.5.6.9.3	For dropping of IBCs, the same or different IBCs may be used, however, they must now be of the same design.

#### PART 7 - PROVISIONS CONCERNING TRANSPORT OPERATIONS

Area	Subsection	Explanation of Change
Special provisions applicable to the transport of self-reactive substances of Division 4.1, organic peroxides of Division 5.2 and substances stabilized by temperature control (other than self-reactive substances and organic peroxides)	7.1.5.1 – 7.1.5.4.5 and 7.1.6	<ul> <li>There has been a substantial recasting of the entire area.</li> <li>Changes include:</li> <li>Polymerizing substances now specifically included.</li> <li>Changes to temperature control provisions, control and emergency temperatures, transport of goods under temperature control</li> </ul>
Transport of empty packagings	7.2	MSI 7.1.1 (2) and 7.1.1 (3) Application (updated to give legal effect to Chapter 7.2 of the Code)

#### PART 8 – STOWAGE AND RESTRAINT

Area	Subsection	Explanation of Change
Bundles of Cylinders	8.1.3.5	Bundles of Cylinders included in items not subject to 8.1.3.2 (rigid sides or gates) if restrained in accordance with the Load Restraint Guide.