

Table of Provisions

	Page
<u>Foreword</u>	iii
<u>Acknowledgements</u>	v
<u>Review of the ADG Code</u>	vi
<u>Readers' Guide</u>	vii
VOLUME 1	
PART 1 <u>General Provisions, Definitions and Interpretation</u>	1
Chapter 1.1 <u>General Provisions</u>	3
1.1.1 Scope and application	3
1.1.2 Dangerous goods forbidden from transport	4
Chapter 1.2 <u>Interpretation, Definitions, Units of Measurement and References</u>	5
1.2.0 Interpretation	5
1.2.1 Definitions	5
1.2.2 Units of measurement	22
1.2.3 References	24
1.2.4 Competent Authorities for road and rail transport	27
Chapters 1.3 – 1.5 <u><Reserved></u>	29
PART 2 <u>Classification</u>	31
Chapter 2.0 <u>Introduction</u>	33
2.0.0 <Reserved>	33
2.0.1 Classes, divisions, packing groups	34
2.0.2 UN numbers and proper shipping names	35
2.0.3 Precedence of hazard characteristics	37
2.0.4 Transport of samples	39
Chapter 2.1 <u>Class 1 – Explosives</u>	41
2.1.1 Definitions and general provisions	41
2.1.2 Compatibility groups	43
2.1.3 Classification procedure	45
Chapter 2.2 <u>Class 2 – Gases</u>	53
2.2.1 Definitions and general provisions	53
2.2.2 Divisions	54
2.2.3 Mixtures of gases	55

Chapter 2.3	<u>Class 3 – Flammable Liquids</u>	57
2.3.1	Definition and general provisions	57
2.3.2	Assignment of packing groups	58
2.3.3	Determination of flash point	59
Chapter 2.4	<u>Class 4 – Flammable Solids; Substances Liable to Spontaneous Combustion; Substances which, in Contact with Water, Emit Flammable Gases</u>	61
2.4.1	Definitions and general provisions	61
2.4.2	Division 4.1 - Flammable solids, self-reactive substances and solid desensitized explosives	62
2.4.3	Division 4.2 - Substances liable to spontaneous combustion	71
2.4.4	Division 4.3 - Substances which in contact with water emit flammable gases	73
2.4.5	Classification of organometallic substances	73
Chapter 2.5	<u>Class 5 – Oxidizing Substances and Organic Peroxides</u>	75
2.5.1	Definitions and general provisions	75
2.5.2	Division 5.1 - Oxidizing substances	75
2.5.3	Division 5.2 - Organic peroxides	77
Chapter 2.6	<u>Class 6 – Toxic and Infectious Substances</u>	91
2.6.1	Definitions	91
2.6.2	Division 6.1 - Toxic substances	91
2.6.3	Division 6.2 - Infectious substances	96
Chapter 2.7	<u>Class 7 – Radioactive Material</u>	103
2.7.1	Definitions	103
2.7.2	Classification	104
Chapter 2.8	<u>Class 8 – Corrosive Substances</u>	127
2.8.1	Definition	127
2.8.2	Assignment of packing groups	127
Chapter 2.9	<u>Class 9 – Miscellaneous Dangerous Substances and Articles</u>	129
2.9.1	Definitions	129
2.9.2	Assignment to Class 9	129
2.9.3	Environmentally hazardous substances (aquatic environment)	129
PART 3	<u>Dangerous Goods Lists, Special Provisions and Limited Quantities Exceptions</u>	139
Chapter 3.1	<u>General</u>	141
3.1.1	Scope and general provisions	141
3.1.2	Proper shipping name	142
3.1.3	Mixtures and solutions containing one dangerous substance	144

Chapter 3.2	<u>Dangerous Goods List</u>	145
3.2.0	Introduction	145
3.2.1	Structure of the Dangerous Goods List	146
3.2.2	Abbreviations and symbols	147
3.2.3	Dangerous Goods List	148
3.2.4	Alphabetical Index of Substances and Articles	235
3.2.5	Australian specific [AUST.] entries	268
3.2.6	Generic and N.O.S. proper shipping names	270
Chapter 3.3	<u>Special Provisions Applicable to Certain Articles or Substances</u>	281
3.3.1	Introduction	145
3.3.2	UN Special Provisions	281
3.3.3	Australian Special Provisions	298
Chapter 3.4	<u>Dangerous Goods Packed in Limited Quantities</u>	299
Chapter 3.5	<u>Dangerous Goods Packed in Excepted Quantities <Reserved></u>	301

VOLUME 2

PART 4	<u>Packing, Tank, Container, Vehicle and Equipment Provisions</u>	303
Chapter 4.1	<u>Use of Packagings, Including Intermediate Bulk Containers (IBCs) and Large Packagings</u>	305
4.1.1	General provisions for the packing of dangerous goods in packagings, including IBCs and large packagings	305
4.1.2	Additional general provisions for the use of IBCs	309
4.1.3	General provisions concerning packing instructions	310
4.1.4	List of packing instructions	313
4.1.4.1	Packing instructions concerning the use of packagings (except IBCs and large packagings)	313
4.1.4.2	Packing instructions concerning the use of IBCs	369
4.1.4.3	Packing instructions concerning the use of large packagings	375
4.1.5	Special packing provisions for goods of Class 1	378
4.1.6	Special packing provisions for goods of Class 2	380
4.1.7	Special packing provisions for organic peroxides (Division 5.2) and self-reactive substances of Division 4.1	381
4.1.8	Special packing provisions for infectious substances of Category A (Division 6.2, UN 2814 and UN 2900)	383
4.1.9	Special packing provisions for Class 7 <Reserved>	384

Chapter 4.2	<u>Use of Portable Tanks and Multiple-Element Gas Containers (Megcs)</u>	385
4.2.1	General provisions for the use of portable tanks for the transport of substances of Class 1 and Classes 3 to 9	385
4.2.2	General provisions for the use of portable tanks for the transport of non-refrigerated liquefied gases	389
4.2.3	General provisions for the use of portable tanks for the transport of refrigerated liquefied gases	390
4.2.4	General provisions for the use of multiple-element gas containers (MEGCs)	392
4.2.5	Portable tank instructions and special provisions	393
Chapter 4.3	<u>Use of Bulk Containers (for Solids)</u>	405
4.3.1	General provisions	405
4.3.2	Additional provisions applicable to bulk goods of Divisions 4.2, 4.3, 5.1, 6.2 and Classes 7 and 8	407
Chapter 4.4	<u>Use of Vehicles, Tank Vehicles, Freight Containers, Equipment and Segregation Devices</u>	409
4.4.1	General	409
4.4.2	Use of tank vehicles	409
4.4.3	Use of freight containers	410
4.4.4	Use of equipment on vehicles	410
4.4.5	Use of segregation devices	411
PART 5	<u>Consignment Procedures – Including Labelling, Marking and Placarding</u>	413
Chapter 5.1	<u>General Provisions</u>	415
5.1.1	Application and general provisions	415
5.1.2	Use of overpacks	415
5.1.3	Empty packagings	416
5.1.4	Mixed packing	416
Chapter 5.2	<u>Marking and Labelling</u>	417
5.2.1	Marking	417
5.2.2	Labelling	419
Chapter 5.3	<u>Placarding and Marking of Transport Units and Placardable Units</u>	429
5.3.1	General placarding requirements	429
5.3.2	Marking	437
5.3.3	Placarding Placardable Units	439
5.3.4	Placarding portable tanks and bulk containers	440
5.3.5	Placarding freight containers	440
5.3.6	Placarding road vehicles	441
5.3.7	Placarding rail wagons	444

5.3.8	Placarding intermodal loads	445
5.3.9	Placard removal	445
Chapter 5.4	<u><Reserved></u>	451
Chapter 5.5	<u>Special Provisions for Fumigated Units</u>	453
5.5.1	Application	453
5.5.2	Documentation and identification of fumigated units	453
PART 6	<u>Requirements for the Construction & Testing of Packagings, IBCs, Large Packagings, Portable Tanks, Megcs, Bulk Containers, Tank Vehicles, Freight Containers & Segregation Devices</u>	455
Chapter 6.1	<u>Requirements for the Construction and Testing of Packagings (Other than for Division 6.2 Substances)</u>	457
6.1.1	General	457
6.1.2	Code for designating types of packagings	458
6.1.3	Marking	461
6.1.4	Requirements for packagings	464
6.1.5	Test requirements for packagings	475
Chapter 6.2	<u>Requirements for the Construction and Testing of Pressure Receptacles, Aerosol Dispensers, Small Receptacles Containing Gas (Gas Cartridges) and Fuel Cell Cartridges Containing Liquefied Flammable Gas</u>	483
6.2.1	General requirements	483
6.2.2	Requirements for UN pressure receptacles	488
6.2.3	Requirements for non-UN pressure receptacles	502
6.2.4	Requirements for aerosol dispensers, small receptacles containing gas (gas cartridges) and fuel cell cartridges containing liquefied flammable gas	502
Chapter 6.3	<u>Requirements for the Construction and Testing of Packagings for Division 6.2 Infectious Substances of Category A</u>	505
6.3.1	General	505
6.3.2	Requirements for packagings	505
6.3.3	Code for designating types of packagings	505
6.3.4	Marking	505
6.3.5	Test requirements for packagings	506
Chapter 6.4	<u>Packagings for Class 7 <Reserved></u>	511
Chapter 6.5	<u>Requirements for the Construction and Testing of Intermediate Bulk Containers</u>	513
6.5.1	General requirements	513
6.5.2	Marking	516
6.5.3	Construction requirements	518

6.5.4	Testing, certification and inspection	519
6.5.5	Specific requirements for IBCs	520
6.5.6	Test requirements for IBCs	528
Chapter 6.6	<u>Requirements for the Construction and Testing of Large Packagings</u>	537
6.6.1	General	537
6.6.2	Code for designating types of large packagings	537
6.6.3	Marking	538
6.6.4	Specific requirements for large packagings	539
6.6.5	Test requirements for large packagings	541
Chapter 6.7	<u>Requirements for the Design, Construction, Inspection and Testing of Portable Tanks and Multiple-Element Gas Containers (Megcs)</u>	547
6.7.1	Application and general requirements	547
6.7.2	Portable tanks intended for the transport of substances of Class 1 and Classes 3 to 9	547
6.7.3	Portable tanks intended for the transport of non-refrigerated liquefied gases	565
6.7.4	Portable tanks intended for the transport of refrigerated liquefied gases	578
6.7.5	Multiple-element gas containers (MEGCs) intended for the transport of non-refrigerated gases	589
Chapter 6.8	<u>Requirements for the Design, Construction, Inspection and Testing of Bulk Containers</u>	597
6.8.1	Definitions	597
6.8.2	Application and general requirements	597
6.8.3	Freight containers used as bulk containers	598
6.8.4	Bulk containers other than freight containers	599
Chapter 6.9	<u>Requirements for the Design, Construction, Inspection, Testing and Approval of Tank Vehicles</u>	601
6.9.1	Application	601
6.9.2	Requirements for tank vehicles	601
Chapter 6.10	<u>Freight Containers</u>	603
6.10.1	Standards for freight containers	603
Chapter 6.11	<u>Segregation Devices</u>	605
6.11.1	Types of Segregation Devices	605
6.11.2	Overpacking Drum Segregation Device	605
6.11.3	Type I Segregation Device	605
6.11.4	Type II Segregation Device	606
6.11.5	Design type tests for Type II Segregation Devices	607
6.11.6	Marking	608

PART 7	<u>Provisions Concerning Transport Operations</u>	609
Chapter 7.1	<u>Transport Provisions</u>	611
7.1.1	General provisions	611
7.1.2	<Reserved>	611
7.1.3	<Reserved>	611
7.1.4	Special provisions applicable to the transport of Class 2 substances and articles	611
7.1.5	Special provisions applicable to the transport of self-reactive substances of Division 4.1 and organic peroxides of Division 5.2	612
7.1.6	Special provisions applicable to the transport of substances stabilized by temperature control (other than self-reactive substances and organic peroxides)	615
7.1.7	Special provisions applicable to the transport of Division 6.1 (toxic) and Division 6.2 (infectious) substances	615
7.1.8	<Reserved>	616
7.1.9	<Reserved>	616
7.1.10	Special provisions applicable to the transport of Division 4.3	616
Chapter 7.2	<u>Transport of Empty Packagings and Containers</u>	617
7.2.1	Application	617
7.2.2 – 7.2.4	<Reserved>	617
7.2.5	Transport of pre-labelled packagings, IBCs and cylinders	617
7.2.6	Transport of nominally empty receptacles	617
7.2.7	Transport of nominally empty storage vessels	618
Chapter 7.3	<u>Retail Distribution Loads</u>	619
7.3.1	Characteristics	619
7.3.2	Documentation	620
7.3.3	Marking and Labelling	620
7.3.4	Placarding	620
PART 8	<u>Stowage and Restraint</u>	621
Chapter 8.1	<u>Stowage and Restraint On or In Transport Units</u>	623
8.1.1	Application	623
8.1.2	General Requirements for stowage and restraint	623
8.1.3	Open and non-rigid sided vehicles and containers	624
Chapter 8.2	<u>Restraint of Transport Units On Vehicles</u>	625
8.2.1	Restraining Freight Containers	625
8.2.2	Restraining Portable Tanks	625
8.2.3	Restraining Bulk Containers	625
PART 9	<u>Segregation</u>	627
Chapter 9.1	<u>Incompatible Goods</u>	629
9.1.1	Interpretation	629

9.1.2	Incompatibility based on classification	629
9.1.3	Specific examples of incompatible goods	631
Chapter 9.2	<u>Segregation</u>	633
9.2.1	Application and Principles	633
9.2.2	Segregation methods	633
9.2.3	Special segregation provisions	635
9.2.4	Additional rail provisions	636
PART 10	<u>Bulk Transfer of Dangerous Goods</u>	639
Chapter 10.1	<u>Transfer Equipment</u>	641
10.1.1	Application and definitions	641
10.1.2	Transfer equipment and hose assemblies	641
10.1.3	Hose testing	642
Chapter 10.2	<u>Transfer Requirements</u>	645
10.2.1	Where to transfer dangerous goods	645
10.2.2	Preventing fire during a transfer operation	646
10.2.3	Transfer of dangerous goods—general requirements	646
10.2.4	Transfer of gas	647
10.2.5	Transfer of dangerous goods of Class 3	648
Chapter 10.3	<u>Ullage And Maximum Permitted Filling Ratio</u>	649
10.3.1	Ullage	649
10.3.2	Maximum permitted filling ratio —Class 2 liquid	650
PART 11	<u>Documentation</u>	651
Chapter 11.1	<u>Transport Documentation</u>	653
11.1.1	Form of the transport document	653
11.1.2	Content	653
11.1.3	Special documentation provisions	656
11.1.4	Road transport documentation	657
11.1.5	Rail transport documentation	658
Chapter 11.2	<u>Emergency Information</u>	659
11.2.1	Definitions	659
11.2.2	Placement of emergency information holder	659
PART 12	<u>Safety Equipment for Road Vehicles</u>	661
Chapter 12.1	<u>Safety Equipment for Road Vehicles</u>	663
12.1.1	Application	663
12.1.2	Fire extinguishers	663
12.1.3	Personal protective equipment and safety equipment	664

PART 13	<u>Procedures During Road Transport</u>	667
Chapter 13.1	<u>Procedures During Transport</u>	669
13.1.1	Application	669
13.1.2	Breakdowns	669
13.1.3	General precautions during transport	669
13.1.4	Routes	671
APPENDICES		673
Appendix A	<u>Goods Too Dangerous to be Transported</u>	675
Appendix B	<u>Forms</u>	681
B 1	Multimodal dangerous goods form	681
B 2	Sample generic transport document for retail distribution loads	681
B 3	Revised HAZCHEM emergency action code pocket card	681
Appendix C	<u>Emergency Action Codes</u>	687
C1	Scope and application	687
C2	HAZCHEM codes	687
C3.	List of Emergency Action Codes	693
C4	Hazard Identification Number (HIN)	701
Appendix D	<u>Code of Practice for Reprocessing Steel Drums</u>	705
D1.	Scope	705
D2.	Definitions and prohibited practices	705
D3.	Selection of drums	706
D4.	Equipment	706
D5.	Testing of drums	706
D6.	Marking of drums	707
D7.	Approval of reprocessors	707
D8.	Training	707
D9.	Drum and process Selection	708
D10.	Pictorial Guide	710
	<u>INDEX OF DEFINED AND OTHER FREQUENTLY USED TERMS</u>	713
	<u>ADG 7 INFORMATION GUIDE</u>	Gi – G58