

INDEX

PART 1 - GENERAL PROVISIONS AND DEFINITIONS	3
CHAPTER 1.1 - GENERAL PROVISIONS	4
Introductory Notes	4
1.1.1 Scope and application	4
1.1.2 Standards of the Brazilian Association of Technical Standards applicable to the transport of dangerous products.....	9
1.1.3 Road transport flows of dangerous products	9
1.1.4 Information and clarification in case of emergency or transport accident Road transport of dangerous goods	10
1.1.5 Collection of waste of health services regularly instituted under the power Public	11
CHAPTER 1.2 - DEFINITIONS AND UNITS OF MEASURE	12
1.2.1 Definitions	12
1.2.2 Units of measure	30
PART 2 - CLASSIFICATION	36
CHAPTER 2.0 - INTRODUCTION	37
2.0.0 Responsibilities	37
2.0.1 Classes, Subclasses, Packing Groups	37
2.0.2 UN numbers and appropriate shipping names	40
2.0.3 Precedence of risk characteristics	43
2.0.4 Transportation of samples	47
CHAPTER 2.1 - CLASS 1 - EXPLOSIVES	48
Introductory Notes	48
2.1.1 Definitions and general provisions	48
2.1.2 Compatibility groups	51
2.1.3 Classification procedures	54

CHAPTER 2.2 - CLASS 2 - GASES	71
2.2.1 Definitions and general provisions	71
2.2.2 Subclasses	72
2.2.3 Mixtures of gases	74
CHAPTER 2.3 - CLASS 3 - FLAMMABLE LIQUIDS	76
Introductory Notes	76
2.3.1 Definition and general provisions	76
2.3.2 Allocation to Packing Groups	77
2.3.3 Determination of the flash point	79
2.3.4 Determination of the initial boiling point	81
CHAPTER 2.4 - CLASS 4 - FLAMMABLE SOLIDS; SUBSTANCES SUBJECT TO SPONTANEOUS COMBUSTION AND SUBSTANCES WHICH, WATER, SEND FLAMMABLE GASES	82
Introductory Notes	82
2.4.1 Definitions and general provisions	82
2.4.2 Subclass 4.1 - Flammable solids, self-reactive substances and solid explosives Desensitized	83
2.4.3 Subclass 4.2 - Substances liable to spontaneous combustion	99
2.4.4 Subclass 4.3 - Substances which emit flammable gases when in contact with Water	101
2.4.5 Classification of organometallic substances	102
CHAPTER 2.5 - CLASS 5 - OXIDANT SUBSTANCES AND ORGANIC PEROXIDES	104
Introductory note	104
2.5.1 Definitions and general provisions	104
2.5.2 Subclass 5.1 - Oxidizing substances	104
2.5.3 Subclass 5.2 - Organic peroxides	109
CHAPTER 2.6 - CLASS 6 - TOXIC SUBSTANCES AND INFECTING SUBSTANCES	136
Introductory Notes	136

2.6.1	Definitions	136
-------	-------------------	-----

II

Page 3

2.6.2	Subclass 6.1 - Toxic substances	136
-------	---------------------------------------	-----

2.6.3	Subclass 6.2 - Infectious substances	145
-------	--	-----

CHAPTER 2.7 - CLASS 7 - RADIOACTIVE MATERIALS 153

2.7.1	153
-------	-------	-----

CHAPTER 2.8 - CLASS 8 - CORROSIVE SUBSTANCES 154

2.8.1	Definition	154
-------	------------------	-----

2.8.2	Allocation to Packing Groups	154
-------	------------------------------------	-----

CHAPTER 2.9 - CLASS 9 - DANGEROUS SUBSTANCES AND DANGEROUS ARTICLES 157

2.9.1	Definition	157
-------	------------------	-----

2.9.2	Classification in Class 9	157
-------	---------------------------------	-----

2.9.3	Substances presenting a risk to the environment (aquatic environment)	
-------	---	--

2.9.4	Lithium Batteries	179
-------	-------------------------	-----

PART 3 - RELATION OF DANGEROUS PRODUCTS AND EXCEPTIONS FOR QUANTITIES LIMITED 181**CHAPTER 3.1 - GENERAL PROVISIONS 182**

3.1.1	Scope and general provisions	182
-------	------------------------------------	-----

3.1.2	Proper shipping name	183
-------	----------------------------	-----

3.1.3	Mixes or solutions	186
-------	--------------------------	-----

CHAPTER 3.2 - RELATION OF HAZARDOUS PRODUCTS 188

3.2.1	Structure of the List of Hazardous Products	188
-------	---	-----

3.2.2	Abbreviations and symbols	191
-------	---------------------------------	-----

3.2.3	Number of risk	191
-------	----------------------	-----

CHAPTER 3.3 - SPECIAL PROVISIONS APPLICABLE TO CERTAIN ARTICLES OR SUBSTANCES 199**CHAPTER 3.4 - HAZARDOUS PRODUCTS IN LIMITED QUANTITIES 246**

3.4.1	General provisions	246
-------	--------------------------	-----

3.4.2	Quantities limited by inner packagings or by articles	246
-------	---	-----

III

Page 4

3.4.3	Limited quantities per vehicle	250
3.4.4	Transport of dangerous goods in limited quantities by internal packaging, For sale in the retail trade	251
3.4.5	Transport of personal hygiene products, cosmetics and perfumery	253

**CHAPTER 3.5 - PACKAGING (INCLUDING LARGE IBCs AND PACKAGING) EMPTY
DO NOT CLEAN WHICH HAVE DANGEROUS PRODUCTS.**

PART 4 - PROVISIONS CONCERNING PACKAGING AND TANKS 256

**CHAPTER 4.1 - USE OF PACKINGS, INCLUDING INTERMEDIATE CONTAINERS
FOR GRANÉS (IBCs) AND BIG PACKAGES 257**

4.1.1	General provisions for the packaging of dangerous goods in packagings, Including IBCs and large packagings.	257
4.1.2	Additional general provisions for the use of IBCs	267
4.1.3	General Instructions for Packaging Instructions	268
4.1.4	Instructions for packaging, IBCs and large packagings	274
4.1.5	Special provisions for packaging of Class 1 products - Explosives	389
4.1.6	Special provisions for packaging of Class 2 products - Gases	391
4.1.7	Special provisions for packaging of Subclass 5.2 - Organic peroxides and Self-reactive substances of Subclass 4.1	395
4.1.8	Special provisions for packaging of Category A infectious substances (Subclass 6.2, UN numbers 2814 and 2900)	398
4.1.9	Special provisions for packaging Class 7 - Radioactive material	399

**CHAPTER 4.2 - USE OF PORTABLE TANKS AND ELEMENT GAS CONTAINERS
MULTIPLES (MEGCs) 400**

4.2.1	General provisions for the use of portable tanks for the transport of Class 1 and Classes 3 to 9	400
4.2.2	General provisions for the use of portable tanks for the transport of gases Non-refrigerated liquids and pressure chemicals	408
4.2.3	General provisions for the use of portable tanks for the transport of gases Refrigerated liquefied	410
4.2.4	General provisions regarding the use of Multiple Element Gas Containers (MEGCs)	412

4.2.5	Special instructions and arrangements for transporting portable tanks	414
-------	---	-----

IV

Page 6

4.2.6	Transitional provisions	432
-------	-------------------------------	-----

CHAPTER 4.3 - USE OF CONTAINERS FOR GRANÉIS **433**

4.3.1	General provisions	433
-------	--------------------------	-----

4.3.2	Additional provisions applicable to Bulk Containers for Subclasses 4.2, 4.3, 5.1, 6.2 and Classes 7 and 8	436
-------	--	-----

PART 5 - DISPATCH PROCEDURES **440**
CHAPTER 5.1 - GENERAL PROVISIONS **441**

5.1.0	General Settings	441
-------	------------------------	-----

5.1.1	Application and general provisions	442
-------	--	-----

5.1.2	Use of overpacks	442
-------	------------------------	-----

5.1.3	Empty and unclean packagings containing dangerous products	443
-------	--	-----

5.1.4	Packaging with various dangerous products	443
-------	---	-----

5.1.5	General provisions for Class 7	444
-------	--------------------------------------	-----

CHAPTER 5.2 - IDENTIFICATION OF VOLUMES, ARTICLES AND PACKAGING **445**

5.2.1.	Marking	44
--------	---------------	----

5.2.2	Labeling	446
-------	----------------	-----

5.2.3	Other applicable symbols	459
-------	--------------------------------	-----

**CHAPTER 5.3 - SIGNALING OF VEHICLES AND EQUIPMENT
TRANSPORT** **464**

Introductory Notes	464
--------------------------	-----

5.3.1	Risk Labels	464
-------	-------------------	-----

5.3.2.	Security panels	470
--------	-----------------------	-----

5.3.3	Other applicable symbols	474
-------	--------------------------------	-----

CHAPTER 5.4 - DOCUMENTATION **476**

Introductory Notes	476
--------------------------	-----

5.4.1	Information for the transport of dangerous goods	476
-------	--	-----

CHAPTER 5.5 - SPECIAL PROVISIONS	486	
5.5.2	Special provisions for fumigated vehicles and transport equipment (UN 3359)	486
5.5.3	Special provisions applicable to volumes, vehicles and transport equipment Containing substances posing a risk of suffocation when used for the purpose of Refrigeration or conditioning (eg, dry ice, UN 1845, or nitrogen, Refrigerated liquid, UN 1977; Or argon, refrigerated liquid, UN 1951)	489
PART 6 - REQUIREMENTS FOR MANUFACTURING AND TESTING PACKAGING, CONTAINERS INTERMEDIARIES FOR GRANÉS (IBCs), BIG PACKAGING, PORTABLE TANKS, MULTIPLE ELEMENT CONTAINERS FOR GAS (MEGCs) AND GRANITE CONTAINERS		
		494
CHAPTER 6.1 - REQUIREMENTS FOR MANUFACTURING AND TESTING PACKAGING (EXCEPT PACKAGING FOR SUBCLASSES SUBSTANCES 6.2)	495	495
6.1.1	General Provisions	495
6.1.2	Code for designation of packing types	496
6.1.3	Marking	501
6.1.4	Requirements for packaging	507
6.1.5	Tests required for packaging	524
CHAPTER 6.2 - REQUIREMENTS FOR MANUFACTURE AND TESTING OF CONTAINERS UNDER PRESSURE, AEROSOL APPLICATORS, SMALL CONTAINERS CONTAINING GAS (GAS CARTRIDGES), BATTERY CARTRIDGES FUEL CONTAINING LIQUEFIED FLAMMABLE GAS		
		536
Introductory note		536
6.2.1	General requirements	536
6.2.2	Requirements for pressure vessels marked "UN"	544
6.2.3	Requirements for pressure vessels which do not contain "UN" marking	562
6.2.4	Requirements for aerosol dispensers, small gas-containing containers (Gas cartridges) and cartridges of fuel cells containing liquefied gas	563
CHAPTER 6.3 - REQUIREMENTS FOR MANUFACTURING AND TESTING PACKAGING FOR SUBCLASSIVE SUBSTANCES OF THE SUBCLASS 6.2 - CATEGORY A		
		568
6.3.1	General provisions	568
6.3.2.	Requirements for packaging	568

6.3.3	Codes for designation of packaging typesSAW.....	568
-------	--	-----

6.3.4	Marking	569
-------	---------------	-----

6.3.5	Tests required for packaging	570
-------	------------------------------------	-----

CHAPTER 6.4 - REQUIREMENTS FOR MANUFACTURING AND TESTING PACKAGING FOR CLASS 7 MATERIAL 578

6.4.1	578
-------	-------	-----

CHAPTER 6.5 - REQUIREMENTS FOR MANUFACTURE AND TESTING OF CONTAINERS INTERMEDIARIES FOR GRANÉS (IBCs) 579

6.5.1	General provisions	579
-------	--------------------------	-----

6.5.2	Markings	585
-------	----------------	-----

6.5.3	Requirements for the manufacture	590
-------	--	-----

6.5.4	Testing, certification and inspection	591
-------	---	-----

6.5.5	Specific requirements for IBCs	594
-------	--------------------------------------	-----

6.5.6	Essays required for IBCs	606
-------	--------------------------------	-----

CHAPTER 6.6 - REQUIREMENTS FOR MANUFACTURING AND TESTING PACKAGING BIG ONES 621

6.6.1	General provisions	621
-------	--------------------------	-----

6.6.2	Code for designation of large packagings	622
-------	--	-----

6.6.3	Marking	622
-------	---------------	-----

6.6.4	Specific requirements for large packagings	625
-------	--	-----

6.6.5	Tests required for large packagings	629
-------	---	-----

CHAPTER 6.7 - REQUIREMENTS FOR THE DESIGN, MANUFACTURE, INSPECTION AND TESTING OF PORTABLE TANKS AND CONTAINERS OF MULTIPLE ELEMENTS FOR GAS (MEGCs) 637

6.7.1	Application and general requirements	637
-------	--	-----

6.7.2	Requirements for the design, manufacture, inspection and testing of portable tanks Intended for the carriage of substances of Class 1 and Classes 3 to 9	638
-------	--	-----

6.7.3	Requirements for the design, manufacture, inspection and testing of portable tanks Intended for the carriage of non-refrigerated liquefied gases.	669
-------	--	-----

6.7.4	Requirements for the design, manufacture, inspection and testing of portable tanks Intended for the carriage of refrigerated liquefied gases	693
-------	--	-----

6.7.5	Requirements relating to the design, manufacture, inspection and testing of Multiple Gas Elements (MEGCs) for the Refrigerated	714
-------	--	-----

CHAPTER 6.8 - REQUIREMENTS FOR THE DESIGN, MANUFACTURE, INSPECTION AND TESTING OF CONTAINERS FOR GRANÉIS 728

6.8.1	Definitions	728
6.8.2	Application and general requirements	728
6.8.3	Requirements for design, manufacture, inspection and testing of general cargo containers Used as Bulk Containers BK1 and BK2	729
6.8.4	Requirements for the design, manufacture and approval of Bulk Containers BK1 and BK2 other than bulk cargo containers	731
6.8.5	Requirements for Design, Manufacture, Inspection and Testing of Flexible Containers for Bulk BK3	731

PART 7 - REQUIREMENTS CONCERNING TRANSPORT OPERATIONS 739

CHAPTER 7.1 - GENERAL PROVISIONS RELATING TO TRANSPORT OPERATIONS TERRESTRIAL 740

7.1.1	Application and general provisions and requirements for transportation, loading and Downloading	740
7.1.2	Segregation of hazardous products	748
7.1.3	Special provisions applicable to the transport of explosives	749
7.1.4	Special provisions applicable to the transport of gases	758
7.1.5	Special provisions applicable to the transport of self-reactive substances from Subclass 4.1 and organic peroxides of Subclass 5.2	760
7.1.6	Special provisions for the transport of stabilized substances By means of temperature control (excluding self-acting substances and peroxides Organic)	764
7.1.7	Special provisions applicable to the carriage of substances Toxic substances of Subclass 6.1 and infectors of Subclass 6.2	765
7.1.8	Special provisions applicable to the transport of radioactive material	768
7.1.9	Transport of luggage and small expeditions	769
7.1.10	Maintenance of transport information of dangerous products	769

CHAPTER 7.2 - SPECIFIC CONCERNING OPERATIONS	
TRANSPORT IN MODAL ROAD AND RAIL	770
7.2.1 Application	770
7.2.2 Requirements applicable to vehicles and land transport equipment	770
7.2.3 Service requirements applicable to inland transport	771
7.2.4 Requirements for road transport vehicles	773
7.2.5 Service requirements applicable to road transport	774
7.2.6 Requirements for rail vehicles	774
7.2.7 Service requirements for rail transport	776
APPENDICES	777
APPENDIX A: LIST OF NAMES SUITABLE FOR BOARDING: NAMES	
GENERIC AND NON-SPECIFIED	778
APPENDIX B: GLOSSARY OF TERMS	795
APPENDIX C: LIST OF SYNONYMS	813

INDEX OF FIGURES

FIGURE 2.1.1:	SCHEDULE OF PROCEDURE FOR CLASSIFICATION OF SUBSTANCE OR ARTICLE	58
FIGURE 2.4.1:	FLOWCHART FOR CLASSIFICATION OF AUTO-REAGENTS	95
FIGURE 2.4.2:	FLOW CHART FOR CLASSIFICATION OF SUBSTANCES ORGANOMETHICS	102
FIGURE 2.5.1:	PEROXIDE CLASSIFICATION FLOWCHART ORGANIC	132
FIGURE 2.6.1:	TOXICITY TO VAPOR INHALATION: LIMITS OF PACKING	140
FIGURE 2.9.1:	CATEGORIES FOR SUBSTANCES THAT PRESENT RISK FOR THE LONG-TERM AQUATIC ENVIRONMENT	167
FIGURE 2.9.2:	STRATIFIED APPROACH TO CLASSIFY MIXTURES THAT PRESENT ACUTE AND LONG-TERM RISK FOR THE AQUATIC ENVIRONMENT	170
FIGURE 3.4.1:	SYMBOL FOR VOLUMES CONTAINING DANGEROUS PRODUCTS IN LIMITED QUANTITIES	248
FIGURE 5.2.1:	RISK LABEL FOR VOLUMES, ARTICLES AND PACKAGING ..	450
FIGURE 5.2.2:	SYMBOL FOR THE TRANSPORT OF DANGEROUS SUBSTANCES FOR THE ENVIRONMENT	460
FIGURE 5.2.3:	ORIENTATION ARROWS	461
FIGURE 5.2.4:	SYMBOL FOR THE TRANSPORT OF BATTERIES OR LITHIUM	463
FIGURE 5.3.1:	RISK LABEL FOR VEHICLES AND EQUIPMENT TRANSPORT	468
FIGURE 5.3.2:	LABEL FOR RADIOACTIVE MATERIAL - CLASS 7	469
FIGURE 5.3.3:	SAFETY PANEL	474
FIGURE 5.3.4:	SYMBOL FOR TRANSPORTATION OF SUBSTANCES ELEVATED TEMPERATURE	475
FIGURE 5.5.1:	SYMBOL FOR VEHICLES OR TRANSPORTATION EQUIPMENT UNDER FUMIGATION	487

FIGURE 5.5.2:	SYMBOL FOR VEHICLES OR TRANSPORTATION EQUIPMENT CONTAINING HAZARDOUS PRODUCTS USED AS REFRIGERANT OR CONDITIONING	492
FIGURE 6.3.1:	EXAMPLE OF CYLINDRICAL STEEL BAR FOR DRILLING	576
FIGURE 6.5.1:	SYMBOL FOR STACKABLE IBC	588
FIGURE 6.5.2:	SYMBOL FOR NON-PICK-UP IBC	588
FIGURE 6.6.1:	SYMBOL FOR BIG PACKAGING EMPILHAVEL	624
FIGURE 6.6.2:	SYMBOL FOR BIG PACKAGING NOT NON-PICK-UP	624
Figure 6.7.2.20.1:	NAMEPLATE EXAMPLE	668
Figure 6.7.3.16.1:	NAMEPLATE EXAMPLE	692
Figure 6.7.4.15.1:	NAMEPLATE EXAMPLE	713
Figure 6.7.5.13.1:	NAMEPLATE EXAMPLE	726

INDEX OF TABLES

TABLE 2.0.3:	PRECEDENCE OF HAZARD CHARACTERISTICS	45
TABLE 2.1.2.1.1:	CODE CLASSIFICATION	52
TABLE 2.1.2.1.2:	SCHEME OF EXPLOSIVES CLASSIFICATION COMBINATION SUBCLASS OF COMPATIBILITY WITH GROUP	54
TABLE 2.1.3.5.5:	TABLE STANDARD FIRES CLASSIFICATION FIREWORKS	60
Table 2.4.2.3.2.3:	LIST OF SUBSTANCES AUTORREAGENTES PACKED CURRENTLY CLASSIFIED	88
TABLE 2.5.3.2.4:	RELATIONSHIP OF ORGANIC PACKAGED PERÓXIOS CURRENTLY RATED	112
Table 2.6.2.2.4.1:	CRITERIA OF A SUBSTANCE OF ALLOCATION TO GROUPS OF PACKAGING FOR ORAL INGESTION, CONTACT SKIN AND POST OF INHALATION AND fogs	138
Table 2.6.3.2.2.1:	INDICATIVE OF SUBSTANCES INFECTIVE EXAMPLES INCLUDED IN CATEGORIA The	147
TABLE 2.8.5:	SUMMARY OF ALLOCATION CRITERIA TO GROUPS SUBSTÂNCAIS CONTAINERS CORROSIVE	156
TABLE 2.9.1:	CATEGORY FOR SUBSTÂNCAIS PRESENTING RISK FOR AQUATIC	165
TABLE 2.9.2:	SCHEME FOR SUBSTANCES THAT CLASSIFICATION PRESENTING RISK FOR AQUATIC	168
TABLE 2.9.3:	CLASSIFICATION OF A MIXTURE FOR RISKS TREBLE, COM BASED ON THE SUM OF CONCENTRATION OF COMPONENTS CLASSIFIED	176
TABLE 2.9.4:	CLASSIFICATION OF A MIXTURE FOR LONG RISK TERM, BASED ON THE SUM OF THE MERGER COMPONENTS RATED	177
TABLE 2.9.5:	MULTIPLICATION FACTORS FOR COMPONENTS HIGHLY TOXIC MIX	178
Table 4.1.1.10:	MARKING EXAMPLE OF TEST PRESSURES REQUIRED PACKAGING (INCLUDING IBCs)	263

TABLE 5.2.2.1.4:	RISK OF LABELS FOR CLASS 2 GASES WITH RISK (S) Subsidiary (S)	447
TABLE 5.2.2.2.1.1.3.1:	DIMENSIONS MINIMUM OF RISK AND OTHER LABELS SYMBOLS APPLIED FOR USE IN CONTAINERS SIZE REDUCED	451
Table 6.1.2.7:	CODES FOR PACKAGING TYPES OF NAME	498
TABLE 6.3.5.2.2:	REQUIRED FOR PACKAGING TYPES	573 TESTS
TABLE 6.5.6.3.5:	TESTS REQUIRED FOR DESIGN-TYPE AND ORDER ACHIEVEMENT	608
Table 6.8.2.3:	CODES FOR APPOINTMENT OF CONTAINER TYPES FOR BULK	729