

Multilateral Agreement M231

according to section 1.5.1 of ADR

on the carriage of chemicals under pressure

(1) By derogation from the provisions of chapter 3.2 and section 4.1.4.1 of ADR, packaged chemicals under pressure (liquids, pastes or powders, pressurized with a propellant which meet the definition of a gas in 2.2.2.1.1 and 2.2.2.1.2 No. 1 or 2) and not meeting the definition of an aerosol, may be carried provided that the following requirements are met:

(2) The chemicals under pressure are assigned to one of the following UN numbers:

UN No	Name and description	Class	Packing Group	Labels	Special Provisions	Limited Quantities	Excepted Quantities	Packing Instruction	Special Packing Provisions	Mixed Packing Provisions	Transport category (Tunnel restriction Code)	Loading, Unloading and Handling	Operation
		2.2	2.1.1.3	5.2.2	3.3	3.4.6	3.5.1.2			4.1.10	1.1.3.6 (8.6)	7.5.11	8.5
3500	CHEMICAL UNDER PRESSURE, N.O.S.	2		2.2	274	0	E0	P2XX		MP9	3 E	CV 9 CV 10 CV12 CV 36	
3501	CHEMICAL UNDER PRESSURE, FLAMMABLE, N.O.S.	2		2.1	274	0	E0	P2XX	PP89	MP9	2 D	CV 9 CV 10 CV12 CV 36	S2
3502	CHEMICAL UNDER PRESSURE, TOXIC, N.O.S.	2		2.2 +6.1	274	0	E0	P2XX	PP89	MP9	1 D	CV 9 CV 10 CV12 CV28 CV 36	
3503	CHEMICAL UNDER PRESSURE, CORROSIVE, N.O.S.	2		2.2 +8	274	0	E0	P2XX	PP89	MP9	1 E	CV 9 CV 10 CV12 CV 36	

3504	CHEMICAL UNDER PRESSURE, FLAMMABLE, TOXIC, N.O.S.	2		2.1 + 6.1	274	0	E0	P2XX	PP89	MP9	1 D	CV 9 CV 10 CV12 CV28 CV 36	S2
3505	CHEMICAL UNDER PRESSURE, FLAMMABLE, CORROSIVE, N.O.S.	2		2.1 +8	274	0	E0	P2XX	PP89	MP9	1 D	CV 10 CV 9 CV12 CV 36	S2

(3) The chemicals under pressure shall be assigned to these UN numbers entries in compliance with the following requirements:

(a) The chemical under pressure shall be classified based on the hazard properties of the components in the different states:

- The propellant;
- The liquid; or
- The solid.

If one of these components, which can be a pure substance or a mixture, needs to be classified as flammable, the chemical under pressure shall be classified as flammable gas. Flammable components are flammable liquids and liquid mixtures, flammable solids and solid mixtures or flammable gases and gas mixtures meeting the following criteria:

- (i) A flammable liquid is a liquid having a flashpoint of not more than 93°C;
- (ii) A flammable solid is a solid which meets the criteria in 2.2.41.1.3 to 2.2.41.1.8;
- (iii) A flammable gas is a gas which meets the criteria for flammable gases in 2.2.2.1.5;

- (b) Toxic gases and gases with a subsidiary risk of 5.1 shall not be used as a propellant in a chemical under pressure;
- (c) Where the liquid or solid components are classified as dangerous goods of Class 6.1, packing groups II or III, or Class 8, packing groups II or III, the chemical under pressure shall be assigned a subsidiary risk of Class 6.1 or Class 8 and the appropriate UN number shall be assigned. Components classified in Class 6.1, packing group I, or Class 8, packing group I, shall not be used for carriage under this proper shipping name;
- (d) In addition, chemicals under pressure with components meeting the properties of Class 1, explosives; Class 3, liquid desensitized explosives; Class 4.1, self-reactive substances and solid desensitized explosives; Class 4.2, substances liable to spontaneous combustion; Class 4.3, substances which, in contact with water, emit flammable gases; Class 5.1 oxidizing substances; Class 5.2, organic peroxides; Class 6.2, Infectious substances or Class 7, Radioactive material, shall not be used for carriage under this proper shipping name;

(e) Substances to which PP86 or TP7 are assigned and therefore require air to be eliminated from the vapour space, shall not be used for carriage under this UN number but shall be carried under their respective UN numbers as listed in Chapter 3.2, Table A.

(4) They shall be packed in accordance with the following packaging provision:

P2XX	PACKING INSTRUCTION	P2XX
	This instruction applies to UN Nos. 3500, 3501, 3502, 3503, 3504 and 3505.	
	Unless otherwise indicated in ADR, cylinders and pressure drums conforming to the applicable requirements of Chapter 6.2 are authorized.	
	(1) The special packing provisions of 4.1.6.1, 4.1.6.2 and 4.1.6.4 to 4.1.6.13 shall be met.	
	(2) The maximum test period for periodic inspection shall be 5 years.	
	(3) Cylinders and pressure drums shall be so filled that at 50°C the non-gaseous phase does not exceed 95% of their water capacity and they are not completely filled at 60°C. When filled, the internal pressure at 65°C shall not exceed the test pressure of the cylinders and pressure drums. The vapour pressures and volumetric expansion of all substances in the cylinders and pressure drums shall be taken into account.	
	(4) The minimum test pressure shall be in accordance with P200 for the propellant but shall not be less than 20 bar.	
	Additional requirement: Cylinders and pressure drums shall not be offered for transport when connected with spray application equipment such as a hose and wand assembly.	
	Special packing provisions: PP89 For UN 3501, 3502, 3503, 3504 and 3505, notwithstanding 4.1.6.9 (b), non-refillable cylinders used may have a water capacity in litres not exceeding 1000 litres divided by the test pressure expressed in bars provided capacity and pressure restrictions of the construction standard comply with ISO 11118:1999, which limits the maximum capacity to 50 litres.	

- (5) In addition to the prescribed details, the consignor shall note in the transport document:
"Carriage agreed according to section 1.5.1 of ADR (M231).
- (6) This agreement shall be valid until 31. December 2012 for the carriage on the territories of those ADR Contracting Parties signatory to this agreement. If it is revoked before then by one of the signatories, it shall remain valid until the above mentioned date only for carriage on the territories of those ADR Contracting Parties signatory to this agreement which have not revoked it.

Bonn, 17 January 2011

For the competent authority for ADR
in the Federal Republic of Germany

For the Ministry of Transport,
Building and Urban Development


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