

ECONOMIC COMMISSION FOR EUROPE

INF.16A

INLAND TRANSPORT COMMITTEE

**Working Party on the Transport of
Dangerous Goods**

**(Seventy-first session,
Geneva, 5-9 November 2001)**

Item 7 of the agenda

Working Party on the Transport of Dangerous Goods

(Geneva, 5-5 November 2001)

Information regarding the development of EN standards for reference in the ADR/RID

Transmitted by the European Committee for Standardisation (CEN)

The document in Appendix is issued as an update of the document that was presented by CEN as Inf.22 at the Spring session of the Joint Meeting in Bern.

The document indicates for the different parts of the ADR the status of the CEN standards that are considered as eventual candidates for reference in ADR/RID.

The following table gives an overview of the status of standards in ADR/RID

Parts of the ADR	Adopted as reference	Considered as <u>candidates</u> for reference	<u>Candidates</u> available for comments
Part 4	7	0	-
Chapter 6.1	0	5	2
Chapter 6.2	15	21	17
Chapter 6.5	0	3	1
Chapter 6.8	3 + [2]	12	8
Total	25 + [2]	41	28 out of 41

The majority of the standards that will be proposed for reference in the ADR/RID are available for comments (28 out of 41). Those documents, at their different stages of approval, can be requested from the CEN National Members (the countries of EEA + Czech Republic) or from the Affiliates or Corresponding Members. The list of the relevant standardisation institutes (from 36 countries in total) with contact data (tel; fax; email; webaddress) was included in appendix 2 of Trans/WP.15/AC.1/2000/9. The CEN website <http://www.cenorm.be/aboutcen/whatis/membership/> can be consulted for more recent information on its members, affiliates or corresponding members.

Reference in RID/ADR (restructured) to published standards and standards in preparation at CEN TC 23/256/261/268/286/296

Notes: the standards (published or in preparation) are noted in the following lists as follows:

1. in **normal bold**: standards that have been adopted for reference
2. in **italic bold**: standards that have been proposed for future reference
3. in normal: standards in preparation for future reference
4. in *italic*: “supporting” standards; i.e. standards published or in preparation that are not candidates for future reference in ADR/RID but that are related to the provisions of ADR/RID and useful for the users of the regulations

Part 1 General provisions, definitions and training

1.2 Definitions and units of measurements

Standards referred to in 1999 edition:

ASTM D 4359-90 in the definition of “liquid” and “solid”

Part 2 Classification

2.2 Class specific provisions

2.2.2 Class 2 Gases

2.2.2.1 Criteria

Standards referred to in 1999 edition:

ISO 10156: 1990 flammability and oxidising ability

~~**ISO 10298: 1995** toxicity criteria:(only for the LC50's values) reference deleted at JM Sep.2001~~

2.2.3 Class 3 Flammable liquids

2.2.3.1 Criteria

Standards referred to in 1999 edition:

ASTM D 4359-90

ISO 2431: 1984

2.2.41 Class 4.1 Flammable solids

2.2.41 Criteria

Standards referred to in 1999 edition:

ASTM D 4359-90

ISO 2431: 1984

2.2.8 Class 8 Corrosive substances

2.2.8.1 Criteria

Standards referred to in 1999 edition:

ASTM G31-72

ISO 9328

2.3 Test methods

2.3.2 tests relating to flammable liquids of Classes 3, 6.1 and 8

Standards referred to in 1999 edition:

for flash-point

ISO 1516; ISO 1523: 1983; ISO 2719: 1988; ISO 3679:1983; ISO 3680: 1983;

EN 22719: 1994

ASTM D56: 1993; ASTM D93: 1994; BS 2000 Part170: 1995; DIN 51755; Part1: 1974; DIN 51755, Part2: 1978; DIN 53213, Part 1: 1978; NF MO7-011:1988; ; NF MO7-036:1984; NF T66-009: 1969

IP 34: 1988

for fluidity

ISO 2137: 1985

Part 3 Dangerous goods list

no reference to standards foreseen

Part 4 Packing requirements (including use of packagings, IBC's, tanks, containers and vehicles for packing purposes)

4.1.4 List of packing instructions

in P200:

Published standards referred to in 2001 edition:

Doc ref	Title of document
EN 1439:1996	Transportable refillable welded steel cylinders for liquefied petroleum gases (LPG) - Procedures for checking before, during and after refilling (ADR only)
EN 1440:1996	Transportable refillable welded steel cylinders for liquefied petroleum gases (LPG) - Periodic requalification
EN 1801:1998	Filling conditions for single acetylene cylinders
EN 12755:2000	Filling conditions for acetylene bundles
"Supporting" standards (see note on top of document)	
EN 1919:2000	Cylinders for liquefiable gases (excluding acetylene) - Inspection at time of filling
EN 1920:2000	Cylinders for permanent gases - Inspection at time of filling
prEN 12754	Transportable gas cylinders -Cylinders for dissolved acetylene - Inspection at time of filling
prEN 13096	Transportable gas cylinders - Conditions for filling gases into cylinders - Single component gases
prEN 13099	Transportable gas cylinders - Conditions for filling gas mixtures into cylinders
prEN 13365	Transportable gas cylinders - Cylinder bundles for permanent and liquefied gases (excluding acetylene) - Inspection at the time of filling
prEN 13952	LPG cylinders- Filling procedures

In P203:

Standards to refer to:

- no reference to standards foreseen

In P204:

Standards referred to: .

- for aerosol dispensers (1950 aerosols):Annex to the **Council Directive 75/324/EEC** as amended by Commission Directive 94/1/EC

- for 2037 gas cartridges containing 1965 hydrocarbon gas mixture, liquefied:

EN 417: 1992 Non-refillable metallic gas cartridges for liquefied petroleum gases, with or without a valve, for use with portable appliances - Construction, inspection, testing and marking

4.1.6 Special packing provisions for goods of Class 2

Published standards referred to in 2001 edition:

Doc ref	Title of document
EN 1795:1997	Gas cylinders (excluding LPG) - Procedures for change of gas service
EN 962:1996/A2:2000	Valve protection caps and valve guards for industrial and medical gas cylinders- design, construction and tests- Amendment 2

Standards to refer to in future editions when published:

WI n°	Doc ref	Title of document	Status
	Annex A of EN 849:1996/A2:2001	Cylinder valves: Specifications and type testing - Amendment 2	adopted at JM Sep 2001 for 2003 edition
286009	EN 13152:2001 (impact testing only)	Specifications and testing for liquefied petroleum gas (LPG) - cylinder valves-self closing	submitted to JM at May 2001 meeting
286010	EN 13153:2001 (impact testing only)	Specifications and testing for liquefied petroleum gas (LPG) - cylinder valves-manually operated	submitted to JM at May 2001 meeting

4.2 Use of UN portable tanks

no reference to CEN standard foreseen

4.3 Use of fixed tanks, tank-vehicles, demountable tanks, battery vehicles and RID/ADR tank-containers

“Supporting” standards (see note on top of document)

<i>Doc ref</i>	<i>Title of document</i>
<i>prEN 13385</i>	<i>Transportable gas cylinders - Battery vehicles for permanent and liquefied gases (excluding acetylene) - Inspection at the time of filling</i>
<i>prEN 13720</i>	<i>Filling conditions for acetylene cylinder battery trailers</i>
<i>prEN 13776</i>	<i>Filling and discharge procedures for LPG road tankers</i>
	<i>Discharge procedures for LPG rail tankers</i>
	<i>Tanks for transport of liquid dangerous goods with vapour pressure not exceeding 110 kPa at 50°C and gravity drained (including petrol) - Operating conditions</i>

Part 5 Consignments procedures

5.2 Marking and labelling of packages

Published standards adopted for reference in 2001 edition in 5.2.2.1.2:

Doc ref	Title of document
ISO 7225:1994 (Dimensions only)	Precautionary labels for gas cylinders-Design, content and application

“Supporting” standards (see note on top of document)

<i>EN 1089-3:1997</i>	<i>Transportable gas cylinders - Gas cylinder identification - Part 3: Colour coding</i>
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Part 6 Requirements for the construction and testing of packagings, IBC's and tanks

6.1 Requirements for the construction and testing of packagings

Standards to refer to in 6.1.5 when published:

WI n°	Doc ref	Title of document	Status
261231	prEN ISO 16101	Packaging - Transport packages for dangerous goods - Plastics compatibility testing	Document available for comment
261232		Packaging - Transport packages for dangerous goods - Quality assurance programmes for the manufacture and testing of packaging and IBCs	No document ready for comment
261255	prEN ISO16104	Packaging - Transport packages for dangerous goods - Test methods for packaging	Document available for comment
261258		Packaging - Transport packages for dangerous goods - Leak proof testing	No document ready for comment
261999		Packaging - Transport packages for dangerous goods - Recycled plastics material	No document ready for comment

6.2 Requirements for the construction and testing of receptacles, aerosols and cartridges for gases

Published standards referred to in 2001 edition in 6.2.2:

Doc ref	Title of document
CYLINDERS	
Annex I, Parts 1 to 3 to 84/525/EEC	Council directive on the approximation of the laws of the Member States relating to seamless steel gas cylinders
Annex I, Parts 1 to 3 to 84/526/EEC	Council directive on the approximation of the laws of the Member States relating to welded unalloyed steel gas cylinders
Annex I, Parts 1 to 3 to 84/527/EEC	Council directive on the approximation of the laws of the Member States relating to seamless, unalloyed aluminium and aluminium alloy gas cylinders
EN 1442:1998	Transportable refillable welded steel cylinders for liquefied petroleum gas (LPG) - Design and

	construction
EN 1800:1998	Transportable gas cylinders - Acetylene cylinders- Basic requirements and definitions
EN 1964-1:1999	Transportable gas cylinders - Specification for the design and construction of refillable transportable seamless steel gas cylinders of capacity from 0.5 litre up to 150 litre - Part 1: Seamless steel with a maximum Rm value of 1100 N/mm ²
EN 1964-3:2000	Transportable gas cylinders - Specification for the design and construction of refillable transportable seamless steel gas cylinders of capacity from 0.5 litre up to 150 litre - Part 3: Cylinders made of stainless steel
EN 1975:1999 (except Annex G)	Transportable gas cylinders - Specification for the design and construction of refillable transportable seamless aluminium alloy gas cylinders of capacity from 0.5 litre up to 150 litre
EN12862:2000	Transportable gas cylinders - Specification for the design and construction of refillable transportable welded aluminium alloy gas cylinders
TUBES	
EN ISO 11120:1999	Gas cylinders - Refillable seamless steel tubes for compressed gas transport of water capacity between 150 litre and 3000 litre - Design, construction and testing
PRESSURE DRUMS	
CRYOGENIC RECEPTACLES	
EN 1251-1:2000	Cryogenic vessels- Transportable, vacuum insulated, of not more than 1000 litres volume - Part 1: Fundamental requirements
EN 1251-2:2000	Cryogenic vessels- Transportable, vacuum insulated, of not more than 1000 litres volume - Part 2: Design, fabrication, inspection and testing
EN 1251-3:2000	Cryogenic vessels- Transportable, vacuum insulated, of not more than 1000 litres volume - Part 3: Operational requirements
CYLINDER BUNDLES	
MATERIALS	
EN 1797-1:1998 :2001	Cryogenic vessels-Gas/material compatibility - Part 1: Oxygen compatibility (modification of title and reference adopted at JM Sep.2001)
EN ISO 11114-1:1997	Transportable gas cylinders - Compatibility of cylinder and valve materials with gas contents- Part 1: Metallic materials
EN ISO 11114-2:2000	Transportable gas cylinders - Compatibility of cylinder and valve materials with gas contents- Part 2: Non-metallic materials
MARKING	
EN 1089-1:1996	Gas cylinder identification Part 1: Stampmarking
VALVES	
EN 849:1996 (except Annex-A) /A2 :2001	Cylinder valves: Specifications and type testing (modification of reference adopted at JM Sep.2001)

Standards to refer to in future editions when published:

WI n°	Doc ref	Title of document	Status
CYLINDERS			
23006	prEN 13293	Transportable gas cylinders - Specification for the design and construction of refillable transportable seamless normalised carbon manganese steel gas cylinders up to and including 1litre	Document available for comment
23008	prEN 13322-1	Transportable gas cylinders - Refillable welded steel gas cylinders - Design and construction - Part 1: Welded steel	Document available for comment
23009	prEN 13322-2	Transportable gas cylinders - Refillable welded stainless steel gas cylinders - Design and construction - Part 1: Welded stainless steel	Document available for comment
[23013]	prEN 12245	Transportable gas cylinders - Fully wrapped composite cylinders	Document ready for formal vote; submitted to JM Sep. 2000 in Inf.Doc.8]
[23014]	EN 12205:2001	Transportable gas cylinders - Non refillable metallic gas cylinders	Document available for comment; submitted to JM Sep.99 by Inf. Doc. 7]
[23050]	prEN 12257	Transportable gas cylinders - Seamless, hoop wrapped composite cylinders -Specification	Document ready for formal vote; submitted to JM Sep. 2000 in Inf.Doc.8]

[23053]	EN 1964-2:2001	Transportable gas cylinders - Specification for the design and construction of refillable transportable seamless steel gas cylinders of capacity from 0.5 litre up to 150 litre - Part 2: Tensile strength (R_m max) > 1100 N/mm ²	submitted to JM at Sep. 2001 meeting;]
[286002]	EN 12807/2001	Transportable refillable brazed steel cylinders for liquefied petroleum gas (LPG) - Design and construction	Document at final vote ; submitted to JM Sep.2000 in Inf.Doc.8]
286037	prEN 13110	Transportable refillable welded aluminium cylinders for liquefied petroleum gas (LPG) - Design and construction	Document available for comment
286056		Transportable refillable welded steel cylinders for liquefied petroleum gas (LPG) - Alternative design and construction	No document ready for comment
286057		Transportable refillable composite cylinders for LPG - design and construction	No document ready for comment
PRESSURE DRUMS			
23054		Welded steel drums: cap < 1000l	No document ready for comment
BUNDLES OF CYLINDERS			
23069	prEN 13769	Transportable gas cylinders - Cylinder bundles -Design, manufacture, identification and testing	Document available for comment
VALVES			
286009	EN 13152:2001	Specifications and testing for liquefied petroleum gas (LPG) - cylinder valves-self closing	Issued for CEN formal approval; submitted to JM at May 2001 meeting in Inf.8;]; to be submitted for adoption at JM Mar.2002
286010	EN 13153:2001	Specifications and testing for liquefied petroleum gas (LPG) - cylinder valves-manually operated	Issued for CEN formal approval; submitted to JM at May 2001 meeting in Inf. 8;]; to be submitted for adoption at JM Mar.2002
PERIODIC INSPECTION			
[23040]	EN 1968:2001	Transportable gas cylinders - Periodic inspection and testing of seamless steel gas cylinders (excluding LPG)	submitted for comments to JM at Sep. 2001 meeting]; to be submitted for adoption at JM Mar.2002
[23052]	EN ISO 11623:2001	Transportable gas cylinders - Periodic inspection and testing of composite gas cylinders	Document ready for final vote; submitted to JM Sep. 2000 in Inf.Doc.8];]; to be submitted for adoption at JM Mar.2002
23057	prEN 12863	Transportable gas cylinders - Periodic inspection and maintenance of dissolved acetylene cylinders	Document available for comment
[23064]	EN 1802:2001	Transportable gas cylinders - Periodic inspection and testing of seamless aluminium gas cylinders	submitted for comments to JM at Sep. 2001 meeting]; to be submitted for adoption at JM Mar.2002]
23065	EN 1803:2001	Transportable gas cylinders - Periodic inspection and testing of welded steel gas cylinders (excluding LPG)	to be submitted to JM at Mar. 2002 meeting
286032		Brazed steel cylinders for LPG - Periodic requalification	No document ready for comment

“Supporting” standards (see note on top of document)

<i>Doc ref</i>	<i>Title of document</i>
EN ISO 13340:2001	Transportable gas cylinders - Cylinder valves for non-refillable cylinders - Specifications and type testing
Tech. Report	Transportable gas cylinders - High porosity porous masses for acetylene cylinders
WI 23084	Transportable gas cylinders - Gas cylinder valves - Inspection and maintenance
WI 23030	Gas cylinders - Safety devices to protect the cylinder against over-pressurisation - Specification and testing (bursting discs, relief valves, fusible plugs,...)
EN ISO 11114-3: 1997	Transportable gas cylinders - Compatibility of cylinder and valve materials with gas contents- Part 3: Autogenous ignition test in oxygen atmosphere
PrEN 13953	Pressure relief valves for LPG cylinders

Published standards referred to in 2001 edition in 6.2.4:

Doc ref	Title of document
AEROSOLS	
Annex to the Council Directive 75/324/EEC as amended by Commission Directive 94/1/EC	
GAS CARTRIDGES	
EN 417:1992	Non-refillable metallic gas cartridges for liquefied petroleum gases, with or without a valve, for use with portable appliances - Construction, inspection, testing and marking

6.3 Requirements for the construction and testing of packagings for Class 6.2 substances

Standards to refer to:

no reference to CEN standard foreseen

6.5 Requirements for the construction and testing of intermediate bulk containers (IBC's),

Standards to refer to:

WI n°	Doc ref	Title of document	Status
261206	prEN ISO 16467	Packaging - Transport packages for dangerous goods -Test methods for IBCs	document available for comment
261232		Packaging - Transport packages for dangerous goods - Quality assurance programmes for the manufacture and testing of packaging and IBCs	No document ready for comment
261xxx		Packaging - Transport packages for dangerous goods - Recycled plastics material	No document ready for comment

6.8 Requirements for the construction and testing of fixed tanks (tank-vehicles), demountable tanks, battery-vehicles and RID/ADR tank-containers

Standards referred to:

ISO R 148

Standards to refer to in 6.8.2

WI n°	Doc ref	Title of document	Status
GENERIC TANKS			
296002	prEN 13094	Tanks for the transport of dangerous goods - Non-pressure metallic tanks - Design and construction	Document available for comment
296003	prEN 14025	Tanks for transport of dangerous goods -P >50 kPa - design and construction	Document available for comment
296008	prEN 13314	Tanks for transport of dangerous goods - Service equipment - Fill hole cover	Document available for comment
296011	prEN 13308	Tanks for transport of dangerous goods - Service equipment - Non pressure balanced footvalve	Document available for comment
296018	EN 12972:2001 (except annex C and D)	Tanks for transport of dangerous goods - Testing, inspection and marking of metallic tanks.	adopted at JM May 2001 for 2003 edition
296020	prEN 13316	Tanks for transporting dangerous goods - Service equipment - Pressure balanced footvalve	Document available for comment
296024		Tanks for transport of dangerous goods - Tank equipment for the transport of liquid chemicals - Foot valve	No document ready for comment
296025		Tanks for transport of dangerous goods - Tank equipment for the transport of liquid chemicals - Hinged manholes, collars and fixing	No document ready for comment
296027	prEN 13317	Tanks for transporting dangerous goods - Service equipment - Manhole cover assembly	Document available for comment
LPG TANKS			
[286007]	EN 12493:2001	Design and manufacture of welded steel tanks for LPG road tankers.	submitted to WP15 Nov 2000]
286008		Design and manufacture of welded steel tanks for LPG rail tankers.	No document ready for comment
[286021]	EN 12252:2000	Equipping of LPG road tankers	Document published; submitted to WP15 Nov2000]
CRYOGENIC TANKS			
268022		Large transportable non-vacuum insulated vessels -Part 2: Design, fabrication, inspection and testing	No document ready for comment

268025	prEN 13530-2	Cryogenic vessels - Large transportable vacuum insulated vessels - Part 2: Design, fabrication, inspection and testing	Document at final vote; submitted to WP15 Nov.2001
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Standards to refer to in 6.8.3

WI n°	Doc ref	Title of document	Status
23070	prEN 13807	Cylinder battery trailers -design, manufacture, identification and testing	document available for comment

Standards to refer to in 6.8.5:

WI n°	Doc ref	Title of document	Status
	EN 1252-1: 1998	Cryogenic vessels - Materials - Part 1: Toughness requirements for temperature below -80°C	In 2001 edition in 6.2.2; moved to 6.8.5 for 2003 edition
	EN 1252-2:2001	Cryogenic vessels - Materials - Part 1: Toughness requirements for temperature between -80°C and -10°C	adopted at JM May 2001 for 2003 edition]

“Supporting” standards (see note on top of document)

Doc ref	Title of document
EN 12561-1:1998	Railway applications - Tank wagons - Part1: Marking of tank wagons for the carriage of dangerous goods
prEN 12561-2	Railway applications - Tank wagons - Part 2: Bottom emptying devices for liquid products including vapour return
prEN 12561-3	Railway applications - Tank wagons - Part 3: Bottom filling and emptying devices for gases liquefied under pressure
prEN 12561-4	Railway applications - Tank wagons - Part 4: Top devices for top emptying and filling of liquid products.
prEN 12561-5	Railway applications - Tank wagons - Part 5: Top devices for bottom emptying and top filling of liquid products.
prEN 12561-6	Railway applications - Tank wagons - Part 6: Manholes .
EN 13081:2001	Tanks for transport of dangerous goods - Service equipment for tanks - Vapour collection adaptor and vapour collection coupler
EN 13082:2001	Tanks for transport of dangerous goods - Service equipment - Vapour transfer valve
EN 13083:2001	Tanks for transport of dangerous goods - Service equipment - Adaptor for bottom loading and unloading
296009	Tanks for transport of liquid dangerous goods - Tanks with vapour pressure not exceeding 110kPa at 50°C - Service equipment for tanks - Pressure and vacuum breather vent
296010	Tanks for transport of liquid dangerous goods - Tanks with vapour pressure not exceeding 110kPa at 50°C - Service equipment for tanks - Emergency venting
prEN 13315	Tanks for transport of dangerous goods - Service equipment - Gravity discharge coupler
296022	Tanks for transport of dangerous goods - Tank equipment for the transport of liquid chemicals - Air inlet and discharge valve
prEN 13530-1	Cryogenic vessels - Large transportable vacuum insulated vessels - Part 1: Fundamental requirements
268003	Large transportable non-vacuum insulated vessels- part 1: Fundamental requirements
prEN 13530-3	Cryogenic vessels - Large transportable vacuum insulated vessels - Part 3: Operational requirements
268004	Large transportable non-vacuum insulated vessels -Part 3: Operational requirements
prEN 13648-1	Cryogenic vessels - Safety devices for protection against excessive pressure - Part 1: Safety valves for cryogenic services
prEN 13648-2	Cryogenic vessels - Safety devices for protection against excessive pressure - Part 2: Bursting discs for cryogenic services
prEN 13648-3	Cryogenic vessels - Safety devices for protection against excessive pressure - Part 3: Determination of required discharge capacity and sizing for relief devices
EN 1626:1999	Cryogenic vessels- valves for cryogenic service
EN 12300:1998	Cryogenic vessels - Cleanliness for cryogenic service
EN 12434: 2000	Cryogenic vessels - Cryogenic flexible hoses
prEN 13799	Contents gauge for LPG tanks
prEN 14071	Pressure relief valves for LPG tanks - Ancillary equipment
286024	Inspection and testing of LPG road tankers
286028	Requalification procedures for LPG rail tankers
PrEN 16421	Pressure relief valves for LPG tanks

Part 7 Provisions concerning the conditions of carriage, loading, unloading and handling

7.5.1 Handling and stowage

“Supporting” standards (see note on top of document)

<i>EN 12640:2000</i>	<i>Securing of cargo on road vehicles – lashing points on commercial vehicles for goods transportation – Minimum requirements and testing</i>
<i>prEN 12642</i>	<i>Securing of cargo on road vehicles - Body structure of commercial vehicles- Minimum requirements</i>