



GAS CYLINDER COMPLIANCE WITH THE REVISED PACKAGING WASTE DIRECTIVE

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Amendments to 181/13

Section	Change
	<u>Editorial to align style with EIGA style manual</u>
	<u>Update to reflect current legislation</u>
5.4	<u>Added reference to REACH regulation</u>

NOTE Technical changes from the previous edition are underlined

1 Introduction

This publication provides guidance to EIGA members on compliance of gas cylinders with Directive 94/62/EC on *packaging and packaging waste* (as amended) on the prevention of packaging waste [1].¹

2 Scope and purpose

2.1 Scope

This publication provides guidance on compliance with Directive 94/62/EC on the prevention of packaging waste for gas cylinders [1].

2.2 Purpose

The publication provides guidance to EIGA members on the consistent and practical implementation of the packaging waste directive and to help ensure that member states' implementation does not duplicate or conflict with existing regulations concerning the management of gas cylinders.

3 Definitions

For the purpose of this publication, the following definitions apply.

3.1 Publication terminology

3.1.1 Shall

Indicates that the procedure is mandatory. It is used wherever the criterion for conformance to specific recommendations allows no deviation.

3.1.2 Should

Indicates that a procedure is recommended.

3.1.3 May

Indicates that the procedure is optional.

3.1.4 Will

Is used only to indicate the future, not a degree of requirement.

3.1.5 Can

Indicates a possibility or ability.

3.2 Technical definitions

3.2.1 Packing waste

Article 3 (1) of Directive 94/62/EC defines packaging for purposes of this directive as [1]:

'Packaging` shall mean all products made of any materials of any nature to be used for the containment, protection, handling, delivery and presentation of goods, from raw materials to processed goods, from the producer to the user or the consumer. 'Non-returnable` items used for the same purposes shall also be considered to constitute packaging.

¹ References are shown by bracketed numbers and are listed in order of appearance in the reference section.

'Packaging' consists only of:

(a) Sales packaging or primary packaging, i.e. packaging conceived so as to constitute a sales unit to the final user or consumer at the point of purchase;

(b) grouped packaging or secondary packaging, i.e. packaging conceived so as to constitute at the point of purchase a grouping of a certain number of sales units whether the latter is sold as such to the final user or consumer or whether it serves only as a means to replenish the shelves at the point of sale; it can be removed from the product without affecting its characteristics;

(c) Transport packaging or tertiary packaging, i.e. packaging conceived so as to facilitate handling and transport of a number of sales units or grouped packagings in order to prevent physical handling and transport damage. Transport packaging does not include road, rail, ship and air containers.

3.2.2 Placing on the market

A product is placed on the market when it is made available for the first time on the European Union market [2]. This is considered to take place when the assembled (i.e. packed / filled) packaging is first transferred from the stage of manufacture with the intention of sale, distribution or use on the community market, including the European Economic Area (EEA) market. The concept of placing on the market refers to each individual product, not to a type of product, and whether it was manufactured as an individual unit or in series.

The reuse of packaging for the same purpose for which it was intended is not considered to be a further placing on the market. Therefore, such reused packaging already in circulation is not covered by these regulations. Reusable packaging shall fulfil the essential requirements and other requirements in the regulations on its first placing on the market.

Where packaging has been reconditioned, remanufactured, repainted or altered for a different use it will be considered as new packaging and shall meet the requirements of the regulations when placed on the market. For example, this may apply to either reusable steel drums which transport chemicals or to refillable soft drink bottles.

This means that revalidated (i.e. retested) gas cylinders are not considered new packaging.

4 Gas cylinders and the impact of the packaging waste directive

4.1 Overview

Directive 94/62/EC requires member states to prevent the formation of packaging waste, to ensure that the weight and volume of packaging placed on the market is limited to the minimum, and to develop packaging reuse systems reducing their impact on the environment [1].

Directive 94/62/EC defines, under Article 3(1), packaging and packaging waste that should be subject to measures to ensure minimisation of packaging waste and also that the internal market operates effectively (i.e. member states cannot ban certain types of packaging) [1].

Annex I is used to provide clarification on cases where there is borderline definition between what is packaging and what is not. The Commission's aim of the amendments is to facilitate the implementation and enforcement of the packaging legislative framework and create a level playing field for economic operators across the EU's internal market.

The amendment, Directive 2013/2/EU *amending Annex I to Directive 94/62/EC on packing and packaging waste*, includes in Annex I new illustrative examples for criterion (i) for packaging [3]:

- *Refillable steel cylinders used for various kinds of gas, excluding fire extinguishers; and*
- *rolls tube and cylinders around which flexible material is wound.*

This has the effect of defining gas cylinders as packaging under the directive.

This publication is intended to be used to illustrate how gas cylinders can comply with the directive.

4.2 Background

EIGA raised the issue to the Commission on the application of the directive to gas cylinders before publication of the directive. At the time the Commission indicated that there would be no exemptions.

The directive was amended by Directive 2004/12/EC *amending Directive 94/62/EC on packaging and packaging waste* to include a list in Annex I of so-called illustrative examples of packaging, which also did not include gas cylinders [4]. Originally gas cylinders did not appear on a list in Annex I either as non-packaging or as packaging so were, in effect, not impacted.

Some member states interpreted cylinders as being subject to the packaging regulations (in particular Poland, Netherland, Czechia, Slovakia), but the majority did not as they considered them equipment regulated under Directive 2010/35/EU *on transportable pressure equipment* (TPED), this led to the Commission tasking the Article 21 committee established by the directive to give a view on whether or not cylinders are obligated packaging under the directive [5].

This process resulted in the amendment to the legislation due to the committee's interpretation that the cylinder is put on the market independently of the contents.

4.3 Impact of amendment of the packing waste directive on EIGA members

This change means that refillable new steel gas cylinders may now be subject to national packaging waste regulations in many more member states as established under the directive when they first come on the market (so this is applicable to new cylinders only). This includes reporting, and various national taxes and cost recovery schemes.

Though the EU illustrative example refers to steel, by logical extension composite cylinders, aluminium alloy cylinders and non-refillable cylinders can be impacted under the scope.

4.4 EIGA position on member state implementation of the directive

Member states' regulations should recognise that existing and new cylinders are reusable long-life industrial packaging owned by the gas company or by a third party (for example a customer of a gas company). The cylinder contents, not the cylinder, are sold and gas companies have already a voluntary system in place to ensure reuse of these cylinders and correct disposal / recycling at the end of their economic life.

Member states should take into account these characteristics when implementing the directive that the objectives of the directive for recycling and reuse are met by gas company rental systems that are already in place.

The following principles should be used by industrial gas companies when dealing with regulatory authorities who may wish to regulate existing cylinders as packaging under the amended packaging waste directive:

a) Cylinders are returnable and reusable

The gas cylinder is a fully reusable package with an economic life well in excess of 20 years, which is fully recyclable at the end of its life.

Refillable and non-refillable cylinders are treated the same, so this means it penalises the former which are long life reusable recyclable containers (Article 4) [1]. Treating gas cylinders as obligated packaging acts against the principle of reuse as it treats single use containers in the same way as long-life reusable gas cylinders.

Directive 94/62/EC also states: "*Whereas Member States may encourage, in accordance with the Treaty, reuse systems of packaging which can be reused in an environmentally sound*

manner, in order to take advantage of the contribution of such systems to environmental protection.” (Recitals and Article 5) [1].

NOTE Member states should recognise systems that encourage the use of returnable and reusable packaging such as gas cylinders: for example, by exempting gas cylinders from these requirements as they already meet the intent of the directive.

See Appendix 1, Article 5, reuse systems for packaging.

b) Cylinders are permanent long-term storage containers for compressed gas, which means that gas cannot be distributed without a cylinder

Industrial gas companies usually take responsibility for the cylinder by retaining ownership and ensuring there are systems in place for return and reuse of the cylinder. If a cylinder is no longer suitable for use (for example it is damaged or fails a test) it is normal practice is to remove any residual gases before sending the cylinder for recycling and recovery of materials. The cylinder enters the waste stream (for recovery) only if it fails its periodic revalidation test.

NOTE Member state interpretation of this characteristic should recognise this for implementation of the directive as a reason why existing cylinders should not be under scope.

See Appendix 1, Article 5, reuse systems for packaging and Article 6, recovery and recycling targets for member states [1].

c) Cylinders are classified and regulated as transportable pressure equipment, under TPED and The European Agreement concerning the International Carriage of Dangerous Goods by Road (ADR) [5, 6]

Gas cylinders are transportable pressure equipment items and fall under the provisions of the legislation on transportable pressure equipment and the legislation considering the transport of dangerous goods by road (ADR) [6].

The respective regulations prescribe in every detail the management of all transportable pressure equipment (including gas cylinders), which require periodical revalidation for continued (re)use and adequate labelling for operation.

Article 2 (2) of the directive (scope of application) stipulates that the provisions of this directive apply without prejudice to existing quality requirements for packaging such as those regarding safety, the protection of health and the hygiene of the packed products or to existing transport requirements [1].

NOTE Cylinders are already regulated under TPED and can be exempted under regulations implementing the packing waste directive [5].

d) Cylinders are granted free movement of goods status

Having to comply with separate legislation in each member state would conflict with the fact that gas cylinders are already granted free movement of goods status under TPED [5]. This issue is particularly important to gas cylinders which are transferred freely in the European market. The requirement to register and re-register these items under packaging regulations would provide a considerable trade barrier, as well as the related levies. Trying to achieve compliance with the packaging directive would impede free movement of goods as cylinders already on the market may be taxed several times (Article 1) [1]. This can also trigger taxation through packaging taxes and possible exemptions would not be consistent across member states.

The packaging directive is a harmonising measure under Article 95(1), thus common definitions shall be applied in member states to prevent distortion of competition and to ensure free movement of goods [1]. There is no corresponding environmental benefit to these measures.

In addition, the recital of the directive includes conditions for free movement of goods and prevention of the risk of competition distortion due to differences in application across member states.

NOTE Member states' regulations shall ensure that free movement of goods is respected, so there is no double counting for placing on the market of existing cylinders, where cylinders have already been placed on the market in other member states. Cylinders themselves bought or sold outside the EU or to other member states shall be accounted for when reporting packaging put on the market, but cylinders transferred to other member states as part of supplying the gas should not be reported as this infringes the principle of free movement of goods.

See Appendix 1, Article 8, freedom to place on the market [1].

5 Implementation guidance for new cylinders

5.1 Compliance

As Annex I is an illustrative list, it is still open to the member states to define cylinders as non-packaging or to give formal exemption to gas cylinders, and the reasoning in 4.4 may be used by gas companies when discussing implementation proposals with the regulatory authorities.

If a member state authority explicitly cites the references in implementing regulations from Annex I, then gas cylinders will become obligated industrial packaging under the packaging waste directive. The consequences of this and guidance on how to comply are set out below and in the table in Appendix 1. The specific implementing regulations and requirements may vary between member states, but EIGA is striving for a consistent approach in line with the guidance below.

5.2 Placing on the market

Gas cylinders are obligated packaging only when they first come on the European market (so this is applicable to new cylinders only) and are then subject to national packaging waste regulations established under the directive, which can include reporting, and various national taxes and cost recovery schemes (Refer also to 4.4).

5.3 Package design and labelling

Cylinders are subject to the requirements of the regulations on transportable pressure equipment (TPED) [5]. If these requirements are not met, the cylinders are not permitted to be placed on the market or be in operation.

New packaging placed on the market after 1st Jan 1998 shall meet certain essential requirements (Article 9) on reusability and recyclability [1]. For packages meeting CEN or recognised national standards these requirements are deemed to be met. Thus, cylinders already comply with the essential requirements.

Testing and monitoring of new and existing gas cylinders is carried out under TPED and ADR, see Article 9 – essential requirements [5, 6, 1].

For labelling, see the summary table in Appendix 1, Article 8 for actions required for marking and identification [1].

5.4 Maximum heavy metal content

The directive (Article 11) establishes a maximum heavy metal content of packaging and packaging components. Cylinder valves can contain up to 1% lead, so that the brass can be machined, but this is less than 1% overall of the complete cylinder. In fact, the valves are recovered and recycled, and the lead does not enter the environment. Cylinder valves are designed in accordance with standards such as ISO 10297, Gas Cylinders – Cylinder Valves – Specification and Testing, but there is no requirement regarding lead content [7].

Lead content of valves is also subject to the REACH regulation and should be reported in the Substances of Concern In articles as such or in complex objects (Products) (SCIP) database where lead content exceeds 0.1%w/w [8, 9].

5.5 General issues to ensure implementation

The general issues are:

- ensuring that cross border movement of cylinders does not trigger additional taxes or double counting, and that difference in treatment in member states' regulations does not lead to competitive economic distortions; and
- ensuring the rental / demurrage systems used by EIGA members can be used and are compatible with national regulations on packaging.

5.6 Reporting

New gas cylinders should be reported when they are first put on the EU market in the relevant member state as industrial packaging and do not need to be reported again if they are transferred to other member states, as they have not been put on the market again (see 4.4).

5.7 Contents of cylinders and definition of waste

The definition of waste from Directive 2008/98/EC on waste shall be correctly applied (see EIGA Doc 106, *Environmental Issues Guide* and EIGA Doc 166, *Guidelines on Management of Waste Gas Cylinders*). Gas cylinders are only defined as waste when they reach the end of their life (fail retest etc) not when returned from the customer for refilling [10, 11, 12]

Empty cylinders are not to be considered as waste until they have finished their technical / economic life. Empty cylinders returned to the supplier do not contain waste, but residues, and are not transported as waste.

Cylinders with residual content of dangerous substances shall be designated as waste by a competent person, usually the gas supplier and owner of the container. They are classed as hazardous waste.

6 References

Unless otherwise specified, the latest edition shall apply.

- [1] Directive 94/62/EC on packaging and packaging waste, www.europa.eu.
- [2] C272, *The Blue Guide*, www.europa.eu.
- [3] Directive 2013/2/EU amending Annex I to Directive 94/62/EC on packing and packaging waste, www.europa.eu.
- [4] Directive 2004/12/EC amending Directive 94/62/EC on packaging and packaging waste, www.europa.eu.
- [5] Directive 2010/35/EU on transportable pressure equipment (TPED), www.europa.eu.
- [6] The European Agreement concerning the International Carriage of Dangerous Goods by Road (ADR), www.unece.org.
- [7] ISO 10297:2014, *Gas Cylinders – Cylinder Valves – Specification and Testing*, www.iso.org.
- [8] Regulation (EC) 1907/2006 concerning the *Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)*, www.europa.eu.

- [9] *Substances of Concern In articles as such or in complex objects (Products) (SCIP) database*, www.echa.europa.eu.
- [10] Directive 2008/98/EC on waste, www.europa.eu.
- [11] EIGA Doc 106, *Environmental Issues Guide*, www.eiga.eu.
- [12] EIGA Doc 166, *Guidelines on Management of Waste Gas Cylinders*, www.eiga.eu.

Appendix 1 Summary table on EIGA guidance on compliance of gas cylinders with packaging waste directive

Article	Requirement	How to demonstrate Compliance
<p>Article 1</p> <p>Objectives 1. This directive aims to harmonise national measures concerning the management of packaging and packaging waste in order, on the one hand, to prevent any impact thereof on the environment of all member states as well as of third countries or to reduce such impact, thus providing a high level of environmental protection, and, on the other hand, to ensure the functioning of the internal market and to avoid obstacles to trade and distortion and restriction of competition within the Community</p> <p>2. To this end this directive lays down measures aimed, as a first priority, at preventing the production of packaging waste and, as additional fundamental principles, at reusing packaging, recycling and other forms of recovering packaging waste and, hence, at reducing the final disposal of such waste</p>	For information only	For information only
<p>Packaging has a vital social and economic function and therefore measures provided for in this directive should apply without prejudice to other relevant legislative requirements affecting quality and transport of packaging or packaged goods</p>	For information only	For information only
<p>Article 2, sub 2. This directive shall apply without prejudice to existing quality requirements for packaging such as those regarding safety, the protection of health and the hygiene of the packed products or to existing transport requirements or to the provisions of Directive 2008/98/EC [10]</p>	For information only	Cylinders comply with TPED so need not be further regulated
<p>Article 4</p> <p>Prevention</p>		
<p>Article 5</p> <p>Reuse systems for packaging</p>	Member states may encourage reuse systems of packaging, which can be reused	National associations can encourage member states to use this article to exempt

Article	Requirement	How to demonstrate Compliance
	in an environmentally sound manner, in conformity with the treaty	gas cylinders from some requirements of their packaging waste legislation
Article 6 Recovery and recycling targets for member states	Cylinders become part of the targets	Cylinders are already recovered and recycled >90%
Article 7 Return collection and recovery systems in member states	Comply with implementing member states regulations	These shall be compatible with the principles of the directive, so that cylinders can be freely used: <ul style="list-style-type: none"> • free movement of goods in EU under this Directive and TPED; and • demurrage / rental systems can be used
Article 8 Marking and identification	Marking of cylinder to enable recovery	EIGA recommends that further labels on cylinders are not necessary, as they would only serve to confuse the end user
Article 9 Essential requirements	CEN standards defining packaging requirements	In CEN standards for cylinders, environmental aspects of standardisation <u>are documented</u> For packages meeting CEN or recognised national standards these requirements are deemed to be met
Article 10 Standardisation	CEN standards defining packaging requirements	In CEN standards for cylinders, environmental aspects of standardisation <u>are documented</u> For packages meeting CEN or recognised national standards these requirements are deemed to be met
Article 11 Heavy metal content	The directive (Article 11) establishes a maximum heavy metal content of 'packaging and packaging components'	Cylinder valves can contain up to 1% lead, but overall below thresholds

Article	Requirement	How to demonstrate Compliance
<p>Article 18 Freedom to place on the market</p>	<p>Member states shall not impede the placing on the market of packaging in <u>their territory</u> which satisfies the provisions of this directive.</p>	<p>Ensuring that cross border movement of cylinders does not trigger additional taxes or double counting, and that difference in treatment in member states' regulations does not lead to competitive economic distortions</p> <p>Ensuring the rental / demurrage systems used by EIGA members can be used and are compatible with national regulations on packaging</p>