



**SLOVENSKI STANDARD**  
**kSIST-TS FprCEN/TS 16765:2014**  
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**Oprema in pribor za utekočinjeni naftni plin (UNP) - Upoštevanje varstva okolja pri standardih CEN/TC 286**

LPG equipment and accessories - Environmental considerations for CEN/TC 286 standards

Flüssiggas-Geräte und Ausrüstungsteile - Umweltgesichtspunkte für Normen des CEN/TC 286

Équipements pour GPL et leurs accessoires - Considérations environnementales pour les normes du CEN/TC 286

**Ta slovenski standard je istoveten z: FprCEN/TS 16765**

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**ICS:**

13.020.01	Okolje in varstvo okolja na splošno	Environment and environmental protection in general
23.020.30	Tlačne posode, plinske jeklenke	Pressure vessels, gas cylinders

**kSIST-TS FprCEN/TS 16765:2014**      **en,fr,de**



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**FINAL DRAFT**  
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English Version

## LPG equipment and accessories - Environmental considerations for CEN/TC 286 standards

Équipements pour GPL et leurs accessoires -  
Considérations environnementales pour les normes du  
CEN/TC 286

Flüssiggas-Geräte und Ausrüstungsteile -  
Umweltgesichtspunkte für Normen des CEN/TC 286

This draft Technical Specification is submitted to CEN members for formal vote. It has been drawn up by the Technical Committee CEN/TC 286.

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Recipients of this draft are invited to submit, with their comments, notification of any relevant patent rights of which they are aware and to provide supporting documentation.

**Warning** : This document is not a Technical Specification. It is distributed for review and comments. It is subject to change without notice and shall not be referred to as a Technical Specification.

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EUROPEAN COMMITTEE FOR STANDARDIZATION  
COMITÉ EUROPÉEN DE NORMALISATION  
EUROPÄISCHES KOMITEE FÜR NORMUNG

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## Foreword

This document (FprCEN/TS 16765:2014) has been prepared by Technical Committee CEN/TC 286 “Liquefied petroleum gas equipment and accessories”, the secretariat of which is held by NSAI.

This document is currently submitted to the Formal Vote.

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**FprCEN/TS 16765:2014 (E)****Introduction**

Protection of the environment is a key political issue in Europe and elsewhere. Protection of the environment is taken in a very broad sense.

Provisions need to be restricted to a general guidance. Limit values are specified in national laws.

It is recommended that manufacturers develop an environmental management policy. For guidance see the EN ISO 14000 series.

It has been assumed in the drafting of this European Standard that the execution of its provisions is entrusted to appropriately qualified and experienced people.

Some of the environmental aspects also have an implication for occupational health and safety.

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## 1 Scope

Protection of the environment needs to be considered during the total life-cycle of a particular product, e.g. impact on the environment including expenditure of energy during all phases of its life-cycle, from mining of raw materials, production, testing, packaging, distribution, maintenance and use, end-of-life disposal and recycling of materials, etc.

This Technical Specification provides information on the environmental aspects of equipment and accessories produced for the LPG industry. The following is addressed:

- a) design;
- b) manufacture;
- c) packaging;
- d) use and operation;
- e) disposal.

## 2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 14717, *Welding and allied processes — Environmental check list*

## 3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

### 3.1

#### **environmental aspect**

element of an organization's activities or products or services that can interact with the environment

Note 1 to entry: A significant environmental aspect has or can have a significant environmental impact.

### 3.2

#### **environmental impact**

change to the environment, whether adverse or beneficial, wholly or partially resulting from an organization's environmental aspects

### 3.3

#### **life-cycle assessment**

LCA

compilation and evaluation of the inputs, outputs and the potential environmental impacts of a product system throughout its life-cycle

### 3.4

#### **prevention of pollution**

use of processes, practices, techniques, materials, products, services or energy to avoid, reduce or control (separately or in combination) the creation, emission or discharge of any type of pollutant or waste, in order to reduce adverse environmental impacts

**FprCEN/TS 16765:2014 (E)**

Note 1 to entry: Prevention of pollution can include source reduction or elimination, process, product or service changes, efficient use of resources, material and energy substitution, reuse, recovery, recycling, reclamation and treatment.

### **3.5 packaging**

all items made of any material 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

Note 1 to entry: In this report the goods are referred to as “packaged product” or just “product”, in order to distinguish it from the packaging.

## **4 Environmental aspects to be considered for systematically addressing environmental issues**

There is a need to reduce the potential adverse impacts on the environment of a product that can occur during all stages of its life. The potential environmental impacts of products can be reduced by taking into account environmental issues.

The impact on the environment from the product life-cycle is caused by:

- depletion of resources; and
- pollution including, air emissions, effluent, waste materials and other releases.

Each of the aspects of the product life-cycle shall be examined in order to reduce these impacts on the environment, referred to as a life-cycle assessment. These include:

- design;
- procurement, raw material acquisition, recycling of materials;
- production and testing;
- packaging and distribution;
- maintenance and use; and
- end-of-life disposal, reuse or recycling.

Prevention of pollution can take many forms and can be incorporated at all stages of the product life-cycle. For example, hazardous, toxic or otherwise harmful substances and materials prescribed in product standards should be substituted by other less harmful substances and materials, whenever possible and feasible, as long as it can be demonstrated that at least an equivalent level of quality and safety can be provided and any applicable regulations do not impair such substitution.

## **5 Design**

Product design is the strongest tool for avoiding potential environmental impacts at all stages of the product life-cycle. There are several approaches to product design that consider elements of resource conservation and prevention of pollution.

Manufacturers should develop an environmental management policy; for guidance see the EN ISO 14000 series.

The design of LPG equipment and accessories should take account of the following:



- procurement;
- minimizing the use of materials;
- efficient transport of the finished product;
- minimizing the environmental impact of in service maintenance; and
- minimizing the environmental impact of end of life disposal.

The LPG equipment and accessories shall be designed so that its use is straightforward with minimal complexity, reducing the risk of accidental misuse that could lead to adverse environmental impacts.

## 6 Procurement

The manufacturer should endeavour to acquire materials and components from suppliers who have a declared environmental policy, see EN ISO 14021, EN ISO 14024 and EN ISO 14025.

Table 1 provides recommendations related to the selection and acquisition of raw materials, pre-manufactured materials and components.

It is important in the procurement of raw materials that the depletion of resources is considered when choosing the particular materials for the product.

The manufacturer should endeavour to minimize wastage of material by selecting appropriately sized materials related to the finished parts required for manufacture. Unavoidable waste/scrap material should be recycled.

Materials reuse, ease of recycling and recovery are important factors that should influence the choice of materials.

Materials should be chosen to ensure that end-of-life disposal is minimized.

## FprCEN/TS 16765:2014 (E)

Table 1 — Acquisition of raw material, pre-manufactured material and components

Recommendations	Examples of choices and limitations
Using the smallest possible amounts of materials	A decision should be made when a higher amount of a material A with abundant resources is compared with a smaller amount of a material B with very limited resources.
Using materials which can be easily recovered or recycled	Choices should be made for packaging when, a light-weight flexible packaging disposed of by incineration or land-filling is compared with a heavy rigid container, e.g. a cardboard box or a steel can that is easy to recycle.
Using recycled or reused materials	As a criterion, the end-of-life recycling rate should be preferred to the percentage of recycled material in a product. A lack of knowledge of the quality of the recycled material e.g. the chemical composition (hazardous substances, contaminations) may limit the use of those materials.
Using renewable resources and minimizing the use of non-renewable raw materials	This criterion is only valid if renewable resources are sustainably managed and are not depleted faster than they can re-grow.
Checking the merits of a reusable version of the product	Choices should be made if a reused product consumes more energy than a new product.
Restricting the use of hazardous substances to the unavoidable functional need, with special regard to toxic and very toxic, carcinogenic, mutagenic and reprotoxic substances	Choices should be made if small traces of hazardous materials are dissolved in recycled materials. In such cases, the bioavailability of the dissolved hazardous materials needs to be considered.
Selecting raw materials to optimize durability and lifetime	No known limitations or decision conflicts/No example provided.
Using standardized elements, parts, components for easy maintenance, reuse or recycling	No known limitations or decision conflicts/No example provided.
Minimizing the number of different materials	No known limitations or decision conflicts/No example provided.
Reusing components in or from other products	Choices should be made if a reusable component uses more energy or has other increased environmental impacts compared with a new component.
Minimizing the use of energy and the emission of greenhouse gases during raw material acquisition	A decision conflict may occur, for example, between the use of steel and aluminium in road and rail vehicles, where energy use in the operational stage may be a critical environmental aspect.
Prescribing performance criteria, which includes environmental performance, rather than materials or substances to be used	This usually requires comprehensive specification by the producer and further testing of the product. Technical performance and environmental performance criteria can contradict each other.