

**PLAHVATUSOHTLIKUD KESKKONNAD. OSA 10-1:  
PIIRKONDADE LIIGITUS. PLAHVATUSOHTLIKUD  
GAASKESKKONNAD**

**Explosive atmospheres - Part 10-1: Classification of  
areas - Explosive gas atmospheres**

**EESTI STANDARDI EESSÕNA****NATIONAL FOREWORD**

See Eesti standard EVS-EN 60079-10-1:2016 sisaldab Euroopa standardi EN 60079-10-1:2015 ingliskeelset teksti.	This Estonian standard EVS-EN 60079-10-1:2016 consists of the English text of the European standard EN 60079-10-1:2015.
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Explosive gas atmospheres  
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Atmosphères explosives - Partie 10-1: Classement des  
emplacements - Atmosphères explosives gazeuses  
(IEC 60079-10-1:2015 + COR1:2015)

Explosionsgefährdete Bereiche - Teil 10-1: Einteilung der  
Bereiche - Gasexplosionsgefährdete Bereiche  
(IEC 60079-10-1:2015 + COR1:2015)

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## European foreword

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In the official version, for Bibliography, the following notes have to be added for the standards indicated:

IEC 60079-10-2	NOTE	Harmonized as EN 60079-10-2.
IEC 61285:2004	NOTE	Harmonized as EN 61285:2004 (not modified).
IEC 60079-20-1	NOTE	Harmonized as EN 60079-20-1.

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1) COR1:2015 applies to English version only.

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## INTRODUCTION

In areas where dangerous quantities and concentrations of flammable gas or vapour may arise, protective measures need to be applied in order to reduce the risk of explosions. This part of IEC 60079 sets out the essential criteria against which the ignition hazards can be assessed, and gives guidance on the design and control parameters which can be used in order to reduce such hazards.

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## EXPLOSIVE ATMOSPHERES –

### Part 10-1: Classification of areas – Explosive gas atmospheres

#### 1 Scope

This part of IEC 60079 is concerned with the classification of areas where flammable gas or vapour hazards may arise and may then be used as a basis to support the proper selection and installation of equipment for use in hazardous areas.

It is intended to be applied where there may be an ignition hazard due to the presence of flammable gas or vapour, mixed with air, but it does not apply to:

- a) mines susceptible to firedamp;
- b) the processing and manufacture of explosives;
- c) catastrophic failures or rare malfunctions which are beyond the concept of abnormality dealt with in this standard (see 3.7.3 and 3.7.4);
- d) rooms used for medical purposes;
- e) commercial and industrial applications where only low pressure fuel gas is used for appliances e.g. for cooking, water heating and similar uses, where the installation is compliant with relevant gas codes;
- f) domestic premises;
- g) where a hazard may arise due to the presence of combustible dusts or combustible flyings but the principles may be used in assessment of a hybrid mixture (refer also IEC 60079-10-2).

NOTE Additional guidance on hybrid mixtures is provided in Annex I.

Flammable mists may form or be present at the same time as flammable vapour. In such case the strict application of the details in this standard may not be appropriate. Flammable mists may also form when liquids not considered to be a hazard due to the high flash point are released under pressure. In these cases the classifications and details given in this standard do not apply. Information on flammable mists is provided in Annex G.

For the purpose of this standard, an area is a three-dimensional region or space.

Atmospheric conditions include variations above and below reference levels of 101,3 kPa (1 013 mbar) and 20 °C (293 K), provided that the variations have a negligible effect on the explosion properties of the flammable substances.

In any process plant, irrespective of size, there may be numerous sources of ignition apart from those associated with equipment. Appropriate precautions will be necessary to ensure safety in this context. This standard is applicable with judgement for other ignition sources.

This standard does not take into account the consequences of ignition of an explosive atmosphere.

#### 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