

Cable management systems - Test method for content of halogens

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

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English Version

Cable management systems - Test method for content of halogens

Systèmes de gestion de câblage - Méthode d'essai relative
à la teneur en halogènes

Kabelführungssysteme - Prüfverfahren für Halogengehalt

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European foreword

This document (EN 50642:2018) has been prepared by CLC/TC 213 "Cable management systems".

The following dates are fixed:

- latest date by which this document has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2019-03-26
- latest date by which the national standards conflicting with this document have to be withdrawn (dow) 2021-03-26

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1 Scope

This European Standard specifies a method for the determination of the content of halogens in Cable Management System (CMS) components or products made of polymeric material(s). The determination is made by combustion and subsequent analysis of the combustion product by Ion Chromatography. This standard specifies how CMS components or products can be declared as halogen free.

This European Standard is for environmental performance only.

Compliance with this standard does not imply the absence of toxicity, corrosivity or opacity of produced smoke, or other reaction to fire characteristics. If any of these characteristics are to be evaluated, the appropriate standards can be used.

The detection limit of this test method is typically 0,025 g of halogen per kg (0,002 5 %).

Halides insoluble in aqueous solution present in the original sample or produced during the combustion step are not determined by this method.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN ISO 3696, *Water for analytical laboratory use - Specification and test methods (ISO 3696)*

3 Terms and definitions

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

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- IEC Electropedia: available at <http://www.electropedia.org/>
- ISO Online browsing platform: available at <http://www.iso.org/obp>

3.1

halogen content

content of fluorine, chlorine, bromine and iodine as organic and inorganic compounds that can be converted to halides (fluoride, chloride, bromide, iodide) by combustion and then absorbed or dissolved in an aqueous solution

Note 1 to entry: The above definition is valid for this European Standard only and does not strictly comply with scientific definition of halogen content.

4 Principle

The test sample is oxidized by combustion in a closed system containing oxygen under pressure using a calorimetric decomposition bomb (bomb).

Nearly all of the halogens in compounds are converted to halides (fluoride, chloride, bromide and iodide), and nearly all of these (see Clause 5) are dissolved in an absorption solution.

The detection limit of this test method is typically 0,025 g of halogen per kg (0,002 5 %). It may be used for poorly burning samples, therefore a combustion enhancer may be used.

5 Interferences

5.1 General

Inorganic halides insoluble in aqueous solution present in the original samples or produced during the combustion step are not determined by the method described here. 5.2 and 5.3 show the differences that occur between the determination of the content of organic halogenated compounds and inorganic halogen