
Fine ceramics (advanced ceramics, advanced technical ceramics) — Test method for complete decomposition performance of semiconducting photocatalytic materials under indoor lighting environment — Decomposition of acetaldehyde

Céramiques fines (céramiques avancées, céramiques techniques avancées) — Méthode d'essai pour déterminer la performance de décomposition complète des matériaux photocatalytiques semi-conducteurs dans un environnement d'éclairage intérieur — Décomposition de l'acétaldéhyde





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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

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This document was prepared by Technical Committee ISO/TC 206, *Fine ceramics*.

Fine ceramics (advanced ceramics, advanced technical ceramics) — Test method for complete decomposition performance of semiconducting photocatalytic materials under indoor lighting environment — Decomposition of acetaldehyde

1 Scope

This document specifies a test method for the determination of complete decomposition performance of indoor light-active photocatalytic materials under an indoor lighting environment using acetaldehyde. In this document, photocatalytic materials are usually made from semiconducting metal oxides, such as titanium dioxide, tungsten trioxide or other ceramic materials, and they are treated in powder form. This document does not apply to film, flat sheet, board and other plate-shape materials.

This method is not suitable for the determination of other performance attributes of photocatalytic materials, i.e. decomposition of water contaminants, self-cleaning, antifogging and antibacterial actions.

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.

ISO 4224, *Ambient air — Determination of carbon monoxide — Non-dispersive infrared spectrometric method*

ISO 14605, *Fine ceramics (advanced ceramics, advanced technical ceramics) — Light source for testing semiconducting photocatalytic materials used under indoor lighting environment*

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:

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

3.1

photocatalyst

substance that performs one or more functions based on oxidation and reduction reactions under photoirradiation, including decomposition and removal of air and water contaminants, deodorization, and antibacterial, self-cleaning and antifogging actions

3.2

indoor lighting environment

environment with artificial light source for general lighting service

Note 1 to entry: Does not include sunlight.