

# ISO 17168-2:2025-11 (E)

## Fine ceramics (advanced ceramics, advanced technical ceramics) - Test method for air-purification performance of semiconducting photocatalytic materials under indoor lighting environment - Part 2: Removal of acetaldehyde

---

| <b>Contents</b>   |  | <b>Page</b> |
|---|--|-------------|
| <b>Foreword</b> .....   |  | <b>iv</b>   |
| <b>Introduction</b> .....   |  | <b>v</b>    |
| <b>1 Scope</b> .....  |  | <b>1</b>    |
| <b>2 Normative references</b> .....   |  | <b>1</b>    |
| <b>3 Terms and definitions</b> .....  |  | <b>2</b>    |
| <b>4 Symbols</b> .....  |  | <b>2</b>    |
| <b>5 Principle</b> .....  |  | <b>2</b>    |
| <b>6 Apparatus</b> .....  |  | <b>3</b>    |
| 6.1 Test equipment.....   |  | 3           |
| 6.2 Test gas supply.....  |  | 4           |
| 6.3 Photoreactor.....   |  | 4           |
| 6.4 Light source.....   |  | 4           |
| 6.5 UV sharp cut-off filter.....  |  | 4           |
| 6.6 Analytical system for acetaldehyde.....   |  | 4           |
| 6.7 Analytical system for CO <sub>2</sub> .....   |  | 6           |
| <b>7 Test piece</b> .....   |  | <b>6</b>    |
| <b>8 Procedure</b> .....  |  | <b>6</b>    |
| 8.1 General aspects.....  |  | 6           |
| 8.2 Pretreatment of test piece.....   |  | 7           |
| 8.3 Preparation for the test.....   |  | 7           |
| 8.4 Pretest.....  |  | 7           |
| 8.5 Test of acetaldehyde removal and CO <sub>2</sub> conversion.....                          |  | 7           |
| 8.6 Test of acetaldehyde removal (when CO <sub>2</sub> concentration cannot be measured)..... |  | 8           |
| <b>9 Calculation</b> .....  |  | <b>9</b>    |
| 9.1 Calculation method.....   |  | 9           |
| 9.2 Removal percentage and removed quantity of acetaldehyde.....                              |  | 9           |
| 9.3 Conversion to CO <sub>2</sub> .....   |  | 10          |
| <b>10 Test method for test pieces with lower performance</b> .....                            |  | <b>11</b>   |
| <b>11 Test report</b> .....   |  | <b>11</b>   |
| <b>Annex A (informative) Results of an interlaboratory test</b> .....                         |  | <b>12</b>   |
| <b>Bibliography</b> .....   |  | <b>14</b>   |