

# ISO 16891:2016-01 (E)

## Test methods for evaluating degradation of characteristics of cleanable filter media

---

<b>Contents</b>		<b>Page</b>
Foreword .....		iv
Introduction .....		v
<b>1</b>	<b>Scope .....</b>	<b>1</b>
<b>2</b>	<b>Normative references .....</b>	<b>1</b>
<b>3</b>	<b>Terms and definitions .....</b>	<b>1</b>
<b>4</b>	<b>Symbols and abbreviated terms .....</b>	<b>4</b>
<b>5</b>	<b>Principle .....</b>	<b>5</b>
<b>6</b>	<b>Test specimen, equipment and test procedure .....</b>	<b>6</b>
6.1	General .....	6
6.2	Preparation of sheets for gas exposure .....	7
6.2.1	Shape and size of tensile specimen .....	7
6.2.2	Sample sheet for exposure .....	7
6.2.3	Selection of sample sheet through air permeability measurement .....	8
6.2.4	Filter media for exposure .....	8
6.3	Sample preparation .....	9
6.3.1	Exposure system .....	9
6.3.2	Heating system .....	11
6.3.3	Test gas supply system .....	11
6.3.4	Gas analyzer .....	11
6.3.5	Gas treatment device .....	12
6.4	Exposure conditions and procedures .....	12
6.4.1	Exposure conditions .....	12
6.4.2	Exposure period and number of exposure .....	12
6.4.3	Attachment of filter sample sheets in the sample case .....	13
6.4.4	Implementation of the exposure .....	13
<b>7</b>	<b>Tensile strength measurement of exposed specimen .....</b>	<b>14</b>
7.1	Tensile test device .....	14
7.2	Preparation of a tensile test specimen .....	14
7.3	Method of tensile test .....	14
7.4	Characterization of the degradation .....	15
<b>8</b>	<b>Test report .....</b>	<b>16</b>
<b>Annex A (informative) Causes and results of degradation of fabrics .....</b>		<b>17</b>
<b>Annex B (informative) Possible evaluation method for characteristic change of fabrics .....</b>		<b>18</b>
<b>Annex C (informative) Theoretical consideration of degradation mechanism .....</b>		<b>19</b>
<b>Annex D (informative) Determination of specimen size .....</b>		<b>22</b>
<b>Annex E (informative) Experimental setup for gas exposure .....</b>		<b>26</b>
<b>Annex F (informative) Service temperature of filter materials .....</b>		<b>30</b>

<b>Annex G (informative) Examples of measured data of fabric at different circumstances .....</b>	<b>31</b>
<b>Annex H (informative) Example of test report .....</b>	<b>37</b>
<b>Bibliography .....</b>	<b>41</b>