

# DIN EN 13830:2020-11 (E)

## Curtain walling - Product standard (includes Amendment :2020)

---

<b>Contents</b>		<b>Page</b>
European foreword .....		6
Introduction .....		7
<b>1</b>	<b>Scope .....</b>	<b>8</b>
<b>2</b>	<b>Normative references .....</b>	<b>8</b>
<b>3</b>	<b>Terms, definitions and abbreviated terms .....</b>	<b>12</b>
<b>3.1</b>	<b>Definitions .....</b>	<b>12</b>
<b>3.2</b>	<b>Abbreviations used in this standard .....</b>	<b>14</b>
<b>4</b>	<b>Product characteristics .....</b>	<b>14</b>
<b>4.1</b>	<b>Reaction to fire (of components, when relevant) .....</b>	<b>14</b>
<b>4.2</b>	<b>Fire resistance .....</b>	<b>15</b>
<b>4.3</b>	<b>Fire propagation (to upper levels) .....</b>	<b>15</b>
<b>4.4</b>	<b>Watertightness .....</b>	<b>15</b>
<b>4.5</b>	<b>Resistance to its own dead load .....</b>	<b>15</b>
<b>4.6</b>	<b>Wind load resistance .....</b>	<b>15</b>
<b>4.7</b>	<b>Resistance to snow load (only for elements subjected to snow load) .....</b>	<b>16</b>
<b>4.8</b>	<b>Impact resistance .....</b>	<b>16</b>
<b>4.8.1</b>	<b>General .....</b>	<b>16</b>
<b>4.8.2</b>	<b>Internal .....</b>	<b>16</b>
<b>4.8.3</b>	<b>External .....</b>	<b>16</b>
<b>4.9</b>	<b>Resistance to live horizontal loads at sill level .....</b>	<b>16</b>
<b>4.10</b>	<b>Seismic resistance .....</b>	<b>16</b>
<b>4.10.1</b>	<b>General .....</b>	<b>16</b>
<b>4.10.2</b>	<b>Safety in use .....</b>	<b>17</b>
<b>4.10.3</b>	<b>Serviceability (where specially required) .....</b>	<b>17</b>
<b>4.11</b>	<b>Thermal shock resistance .....</b>	<b>17</b>
<b>4.12</b>	<b>Direct airborne sound insulation .....</b>	<b>17</b>
<b>4.13</b>	<b>Flanking sound transmission .....</b>	<b>17</b>
<b>4.14</b>	<b>Thermal transmittance .....</b>	<b>17</b>
<b>4.15</b>	<b>Air permeability .....</b>	<b>17</b>
<b>4.16</b>	<b>Water vapour permeability .....</b>	<b>17</b>
<b>4.17</b>	<b>Radiation properties .....</b>	<b>18</b>
<b>4.18</b>	<b>Durability .....</b>	<b>18</b>
<b>4.18.1</b>	<b>General .....</b>	<b>18</b>
<b>4.18.2</b>	<b>Durability of watertightness .....</b>	<b>18</b>
<b>4.18.3</b>	<b>Durability of thermal transmittance .....</b>	<b>18</b>
<b>4.18.4</b>	<b>Durability of air permeability .....</b>	<b>18</b>
<b>5</b>	<b>Testing, assessment and sampling methods .....</b>	<b>19</b>
<b>5.1</b>	<b>Sampling .....</b>	<b>19</b>
<b>5.1.1</b>	<b>General .....</b>	<b>19</b>
<b>5.1.2</b>	<b>Sequence of testing .....</b>	<b>19</b>
<b>5.2</b>	<b>Reaction to fire (of components, when relevant) .....</b>	<b>20</b>
<b>5.3</b>	<b>Fire resistance .....</b>	<b>20</b>
<b>5.4</b>	<b>Fire propagation (to upper levels) .....</b>	<b>20</b>
<b>5.5</b>	<b>Watertightness .....</b>	<b>20</b>
<b>5.6</b>	<b>Resistance to its own dead load .....</b>	<b>20</b>
<b>5.7</b>	<b>Wind load resistance .....</b>	<b>21</b>

5.8	Resistance to snow load (only for elements subject to snow load)	21
5.9	Impact resistance	21
5.10	Resistance to live horizontal loads at sill level	22
5.11	Seismic resistance	22
5.11.1	Safety in use	22
5.11.2	Serviceability (where specially required)	22
5.12	Direct airborne sound insulation	22
5.13	Flanking sound transmission	22
5.14	Thermal transmittance	22
5.15	Air permeability	23
5.16	Radiation properties	23
5.17	Durability	23
5.17.1	General	23
5.17.2	Durability of watertightness	23
5.17.3	Durability of thermal transmittance	24
5.17.4	Durability of air permeability	24
6	Assessment and verification of constancy of performance (AVCP)	25
6.1	General	25
6.2	Type testing	25
6.2.1	General	25
6.2.2	Test samples, testing and compliance criteria	26
6.2.3	Test reports	27
6.2.4	Cascading determination of the product type results	27
6.3	Factory production control (FPC)	28
6.3.1	General	28
6.3.2	Requirements	29
6.3.3	Product specific requirements	32
6.3.4	Initial inspection of factory and of FPC	32
6.3.5	Continuous surveillance of FPC (only for curtain walling kits covered by AVCP system 1)	33
6.3.6	Procedure for modifications	33
6.3.7	One-off products, pre-production products (e.g. prototypes) and products produced in very low quantity	33
Annex A "	(informative) Resistance to actions: guidance on the use of Eurocodes	38
A.1	Introduction of the annex	38
A.2	Scope of the annex	38
A.3	Symbols and abbreviations in the annex	38
A.4	Definition and principle	39
A.4.1	General	39
A.4.2	Classes of consequence	40
A.4.3	Curtain walling kit operating as safety barrier	40
A.4.4	Loaded area "A"	40
A.4.5	System redundancy	42
A.5	Requirements	42
A.6	Actions	42
A.6.1	Dead load action	42
A.6.2	Wind action	42
A.6.3	Actions for curtain walling serving as parapets	43
A.7	Assumptions related the combinations of actions	44
A.7.1	General	44
A.7.2	Combinations of actions: generalities	45
Annex B "	(normative) Seismic resistance	50
B.1	General principles	50
B.1.1	Required performance limits	50
B.1.2	Factors affecting seismic performance	50
B.2	Assessment of seismic serviceability limit	50
B.3	Assessment of seismic safety limit	51

<b>B.4</b>	<b>Seismic movement regime .....</b>	<b>51</b>
<b>B.4.1</b>	<b>General .....</b>	<b>51</b>
<b>B.4.2</b>	<b>Principles .....</b>	<b>52</b>
<b>B.4.3</b>	<b>Test apparatus .....</b>	<b>52</b>
<b>B.4.4</b>	<b>Test procedure .....</b>	<b>52</b>
<b>Annex C "</b>	<b>(normative) Selection, preparation, mounting and fixing of test specimen for reaction to fire tests of curtain walling and field of direct application .....</b>	<b>58</b>
<b>C.1</b>	<b>General .....</b>	<b>58</b>
<b>C.2</b>	<b>EN ISO 11925-2:2010 (Single flame test) .....</b>	<b>59</b>
<b>C.2.1</b>	<b>Profile .....</b>	<b>59</b>
<b>C.2.2</b>	<b>Infill .....</b>	<b>61</b>
<b>C.2.3</b>	<b>Sealing between infill and profile .....</b>	<b>61</b>
<b>C.2.4</b>	<b>Organic coating/top layers .....</b>	<b>63</b>
<b>C.3</b>	<b>Mounting and fixing for EN 13238 (SBI-test) .....</b>	<b>63</b>
<b>C.4</b>	<b>EN ISO 1182 (Non-combustibility test) .....</b>	<b>64</b>
<b>C.5</b>	<b>EN ISO 1716 (Determination of the heat of combustion) .....</b>	<b>65</b>
<b>C.6</b>	<b>Field of direct application .....</b>	<b>65</b>
<b>Annex D "</b>	<b>(normative) Characteristics and range of direct application .....</b>	<b>67</b>
<b>D.1</b>	<b>General .....</b>	<b>67</b>
<b>D.2</b>	<b>Selection of a representative test specimen .....</b>	<b>74</b>
<b>Annex E "</b>	<b>(informative) Characteristics and performances of curtain walling kit .....</b>	<b>77</b>
<b>Annex F "</b>	<b>(informative) Interchangeability between characteristics and components .....</b>	<b>80</b>
<b>Annex G "</b>	<b>(informative) Basic approach to durability .....</b>	<b>83</b>
<b>Annex ZA</b>	<b>(informative) Relationship to this European Standard with Regulation (EU) No.305/2011 (When applying this standard as a harmonized standard under Regulation (EU) No. 305/2011, manufacturers and Member States are obliged by this regulation to use this Annex) " .....</b>	<b>85</b>
<b>ZA.1</b>	<b>Scope and relevant characteristics .....</b>	<b>85</b>
<b>ZA.2</b>	<b>System of Assessment and Verification of Constancy of Performance (AVCP)" .....</b>	<b>87</b>
<b>ZA.3</b>	<b>Assignment of AVCP tasks .....</b>	<b>87</b>
<b>Bibliography</b>	<b>.....</b>	<b>90</b>