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**Glass in building — Coated glass —**

Part 1:  
**Physical defects**

*Verre dans la construction — Verre à couche — Partie 1: Défauts physiques*

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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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO 11479-1 was prepared by Technical Committee ISO/TC 160, *Glass in building*, Subcommittee SC 1, *Product considerations*.

ISO 11479 consists of the following parts, under the general title *Glass in building — Coated glass*:

- *Part 1: Physical defects*
- *Part 2: Colour of façade*

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# Glass in building — Coated glass —

## Part 1: Physical defects

### 1 Scope

This part of ISO 11479 specifies optical quality requirements for coatings applied to glass using either pyrolytic, sol-gel or vacuum (sputtering) deposition methods for use in building glazing. More specifically, this part of ISO 11479 relates to low-e and solar-control coated glass. This part of ISO 11479 is not applicable to patterned or other optically distorting glass.

### 2 Terms and definitions

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

#### 2.1 Basic definitions

##### 2.1.1

##### **method of deposition**

method of adding a single or multilayer coating consisting of metal, oxide, nitride, fluoride or other compound to the surface of the glass by vacuum (sputtering), sol-gel or pyrolytic deposition

##### 2.1.2

##### **coated glass**

glass substrate to which a coating has been applied on one or both sides in order to modify one or more of its properties

##### 2.1.3

##### **coating**

one or more layers applied to the glass using either the pyrolytic, sol-gel or vacuum (sputtering) deposition method

##### 2.1.4

##### **finished size glass**

flat glass sheet cut to the dimensions required for final fabrication or use

##### 2.1.5

##### **stock size glass**

##### **jumbo size glass**

standard size of annealed flat glass sheet that may be cut down to a smaller finished size for fabrication

##### 2.1.6

##### **daylight illumination**

uniform overcast sky, with or without direct sunlight

##### 2.1.7

##### **glass substrate**

glass to which the coating is applied to either one or both sides

**NOTE** Examples of glass substrates are: basic float glass (clear or body-tinted), thermally or chemically toughened safety glass, thermally toughened borosilicate safety glass, heat-strengthened glass, heat-strengthened borosilicate glass, laminated glass, laminated safety glass, alkaline earth silicate glass, or toughened alkaline earth silicate glass.

**2.1.8**

**pyrolytic deposition  
online coating**

method of manufacture of a coating, whereby the coating is applied to hot glass, usually at the time of flat glass manufacturing

**2.1.9**

**sol-gel coating  
offline coating**

method of manufacture of a coating, whereby the coating is applied to flat glass on a wet coating line

**2.1.10**

**vacuum deposition  
offline coating**

method of manufacture of a coating, whereby the coating is applied to flat glass in a vacuum chamber

**2.2 Definition of physical defects**

**2.2.1**

**coating rub**

surface abrasion of appreciable width that has a partial or complete removal of the coating, producing a hazy appearance

**2.2.2**

**corrosion**

change in the colour or level of reflected or transmitted light over all or part of the glass surface as a result of degradation of the coating from external sources

**2.2.3**

**crazing**

conglomeration of fine lines or cracks in the coating

**2.2.4**

**punctual defect**

punctual disturbance of the visual transparency when looking through the glass and of the visual reflectance when looking at the glass

NOTE Spots, pinholes and scratches are types of punctual defect.

**2.2.5**

**spot**

punctual defect that commonly looks dark against the surrounding coating, when viewed in transmission

**2.2.6**

**pinhole**

punctual void in the coating with partial or total absence of coating

**2.2.7**

**scratch**

partial, or complete, removal of the coating along a thin, straight or curved line

**2.2.8**

**stain**

defect in the coating which is larger than a punctual defect, often irregularly shaped and partially of a mottled or patchy structure