

ISO 4586-2:2018 (E)

High-pressure decorative laminates (HPL, HPDL) — Sheets based on thermosetting resins (usually called laminates) — Part 2: Determination of properties

Contents

	Foreword
	Introduction
1	Scope
2	Normative references
3	Terms and definitions
4	Assessment of appearance
4.1	Principle
4.2	Apparatus
4.3	Test specimen
4.4	Procedure
4.5	Test report
5	Determination of thickness
5.1	Principle
5.2	Apparatus
5.3	Test specimen
5.4	Procedure
5.5	Test report
6	Determination of length and width
6.1	Principle
6.2	Apparatus
6.3	Test specimen
6.4	Procedure
6.5	Expression of results
6.6	Test report
7	Determination of edge straightness
7.1	Principle
7.2	Apparatus
7.3	Test specimen
7.4	Procedure
7.5	Expression of results
7.6	Test report
8	Determination of edge squareness (Method A)
8.1	Principle
8.2	Apparatus
8.3	Test specimen
8.4	Procedure
8.5	Expression of results
8.6	Test report
9	Determination of edge squareness (Method B)
9.1	Principle
9.2	Apparatus
9.3	Test specimen

- 9.4 Procedure
- 9.5 Expression of results
- 9.6 Test report
- 10 Determination of flatness
 - 10.1 Principle
 - 10.2 Apparatus
 - 10.3 Test specimens
 - 10.4 Procedure
 - 10.5 Expression of results
 - 10.6 Test report
- 11 Resistance to surface wear
 - 11.1 Principle
 - 11.2 Materials
 - 11.3 Apparatus
 - 11.4 Test specimens
 - 11.5 Preparation of specimens and abrasive paper
 - 11.6 Procedure
 - 11.6.1 Preparation of abrasive wheels
 - 11.6.2 Calibration of abrasive paper
 - 11.6.3 Abrasion of specimen
 - 11.7 Expression of results
 - 11.8 Test report
- 12 Resistance to abrasion (Flooring grade laminates)
 - 12.1 Principle
 - 12.2 Materials
 - 12.3 Apparatus
 - 12.4 Test specimens
 - 12.5 Preparation of specimens and abrasive paper
 - 12.6 Procedure
 - 12.6.1 Preparation of abrasive wheels
 - 12.6.2 Calibration of abrasive paper
 - 12.6.3 Abrasion of specimen
 - 12.7 Expression of results
 - 12.8 Test report
- 13 Resistance to immersion in boiling water
 - 13.1 Principle
 - 13.2 Apparatus
 - 13.3 Test specimens
 - 13.4 Procedure
 - 13.5 Expression of results
 - 13.6 Test report
- 14 Substrate protection against water vapour
 - 14.1 Principle
 - 14.2 Apparatus
 - 14.3 Test specimens
 - 14.4 Procedure
 - 14.5 Expression of results
 - 14.6 Test report
- 15 Resistance to water vapour
 - 15.1 Principle
 - 15.2 Apparatus
 - 15.3 Test specimen
 - 15.4 Procedure
 - 15.5 Expression of results
 - 15.6 Test report
- 16 Resistance to wet conditions (Exterior grade laminates)
 - 16.1 Principle

- 16.2 Apparatus
- 16.3 Test specimens
- 16.4 Procedure
- 16.5 Expression of results
- 16.6 Test report
- 17 Resistance to dry heat (Method A)
 - 17.1 Principle
 - 17.2 Apparatus and materials
 - 17.3 Test specimen
 - 17.4 Test procedure
 - 17.5 Examination of the test specimen
 - 17.6 Expression of results
 - 17.7 Test report
- 18 Resistance to dry heat (Method B)
 - 18.1 Principle
 - 18.2 Materials
 - 18.3 Apparatus
 - 18.4 Test specimen
 - 18.5 Procedure
 - 18.6 Expression of results
 - 18.7 Test report
- 19 Dimensional stability at elevated temperature (Method A)
 - 19.1 Principle
 - 19.2 Apparatus
 - 19.3 Test specimens
 - 19.4 Procedure
 - 19.5 Expression of results
 - 19.6 Test report
- 20 Dimensional stability at elevated temperature (Method B)
 - 20.1 Principle
 - 20.2 Apparatus
 - 20.3 Test specimens
 - 20.4 Procedure
 - 20.4.1 General
 - 20.5 Expression of results
 - 20.6 Test report
- 21 Dimensional stability at ambient temperature (Method A)
 - 21.1 Principle
 - 21.2 Apparatus
 - 21.3 Test specimens
 - 21.4 Procedure
 - 21.5 Expression of results
 - 21.6 Test report
- 22 Dimensional stability at ambient temperature (Method B)
 - 22.1 Principle
 - 22.2 Apparatus
 - 22.3 Test specimens
 - 22.4 Procedure
 - 22.5 Expression of results
 - 22.6 Test report
- 23 Resistance to climatic shock (exterior grade laminates)
 - 23.1 Principle
 - 23.2 Apparatus
 - 23.3 Test specimens
 - 23.4 Procedure
 - 23.5 Expression of results
 - 23.6 Test report

- 24** **Resistance to impact by small diameter ball**
 - 24.1 **Principle**
 - 24.2 **Materials**
 - 24.3 **Apparatus**
 - 24.4 **Test specimens**
 - 24.5 **Calibration of the impact tester**
 - 24.6 **Procedure**
 - 24.7 **Expression of results**
 - 24.8 **Test report**

- 25** **Resistance to impact by large diameter ball**
 - 25.1 **Principle**
 - 25.2 **Materials**
 - 25.3 **Apparatus**
 - 25.4 **Test specimens**
 - 25.5 **Procedure**
 - 25.6 **Expression of results**
 - 25.7 **Test report**

- 26** **Resistance to impact by large diameter ball (Flooring grade laminates)**
 - 26.1 **Principle**
 - 26.2 **Materials**
 - 26.3 **Apparatus**
 - 26.4 **Test specimens**
 - 26.5 **Procedure**
 - 26.6 **Expression of results**
 - 26.7 **Test report**

- 27** **Resistance to cracking under stress (Laminates \leq 2 mm thick)**
 - 27.1 **Principle**
 - 27.2 **Apparatus**
 - 27.3 **Test specimens**
 - 27.4 **Procedure**
 - 27.5 **Expression of results**
 - 27.6 **Test report**

- 28** **Resistance to crazing (Compact laminates)**
 - 28.1 **Principle**
 - 28.2 **Apparatus**
 - 28.3 **Test specimens**
 - 28.4 **Procedure**
 - 28.5 **Expression of results**
 - 28.6 **Test report**

- 29** **Resistance to scratching**
 - 29.1 **Principle**
 - 29.2 **Materials**
 - 29.3 **Apparatus**
 - 29.4 **Calibration of apparatus**
 - 29.5 **Test specimen**
 - 29.6 **Procedure**
 - 29.7 **Expression of results**
 - 29.8 **Test report**

- 30** **Resistance to staining (Method A)**
 - 30.1 **Principle**
 - 30.2 **Staining agents**
 - 30.3 **Materials**
 - 30.4 **Apparatus**
 - 30.5 **Test specimens**
 - 30.6 **Procedure**
 - 30.7 **Expression of results**
 - 30.8 **Test report**

- 31 Resistance to staining (Method B)**
 - 31.1 Principle**
 - 31.2 Materials**
 - 31.3 Apparatus**
 - 31.4 Test specimens**
 - 31.5 Procedure**
 - 31.6 Expression of results**
 - 31.7 Test report**
- 32 Lightfastness (xenon arc) (Method A)**
 - 32.1 Principle**
 - 32.2 Apparatus**
 - 32.3 Test specimen**
 - 32.4 Procedure**
 - 32.5 Assessment and expression of results**
 - 32.6 Test report**
- 33 Lightfastness (xenon arc) (Method B)**
 - 33.1 Principle**
 - 33.2 Apparatus**
 - 33.3 Test specimen**
 - 33.4 Procedure**
 - 33.5 Expression of results**
 - 33.6 Test report**
- 34 Resistance to UV light (Exterior grade laminates)**
 - 34.1 Principle**
 - 34.2 Apparatus**
 - 34.3 Test specimens**
 - 34.4 Procedure**
 - 34.5 Evaluation and expression of results**
 - 34.5.1 Contrast**
 - 34.5.2 Appearance**
 - 34.6 Test report**
- 35 Resistance to artificial weathering (Exterior grade laminates)**
 - 35.1 Principle**
 - 35.2 Apparatus**
 - 35.3 Test specimens**
 - 35.4 Procedure**
 - 35.5 Examination and expression of results**
 - 35.5.1 General**
 - 35.5.2 Contrast**
 - 35.5.3 Appearance**
 - 35.6 Test report**
- 36 Resistance to radiant heat**
 - 36.1 Principle**
 - 36.2 Apparatus**
 - 36.3 Test specimen**
 - 36.4 Procedure**
 - 36.5 Test report**
- 37 Formability (Method A)**
 - 37.1 Principle**
 - 37.2 Apparatus**
 - 37.3 Test specimens**
 - 37.4 Procedure**
 - 37.4.1 General**
 - 37.4.2 Calibration of test apparatus**
 - 37.4.3 Test procedure**
 - 37.5 Test report**

- 38 Formability (Method B)**
 - 38.1 Principle**
 - 38.2 Apparatus**
 - 38.3 Test specimens**
 - 38.4 Procedure**
 - 38.4.1 Calibration of test apparatus**
 - 38.4.2 Test procedure**
 - 38.5 Test report**
- 39 Resistance to blistering (Method A)**
 - 39.1 Principle**
 - 39.2 Apparatus**
 - 39.3 Test specimens**
 - 39.4 Procedure**
 - 39.4.1 Calibration of test apparatus**
 - 39.4.2 Test procedure**
 - 39.5 Test report**
- 40 Resistance to blistering (Method B)**
 - 40.1 Principle**
 - 40.2 Apparatus**
 - 40.3 Test specimens**
 - 40.4 Procedure**
 - 40.5 Test procedure**
 - 40.6 Test report**
- 41 Resistance to wet heat (100 °C)**
 - 41.1 Principle**
 - 41.2 Apparatus**
 - 41.3 Test specimen**
 - 41.4 Procedure**
 - 41.5 Expression of results**
 - 41.6 Test report**
- 42 Determination of microscratch resistance**
 - 42.1 Principle**
 - 42.2 Apparatus**
 - 42.3 Materials**
 - 42.4 Calibration**
 - 42.4.1 Assembly and maintenance of the Martindale tester**
 - 42.4.2 Method for checking the Lissajous figure**
 - 42.5 Test specimens**
 - 42.5.1 Preparation**
 - 42.5.2 Test surface**
 - 42.6 Procedure**
 - 42.6.1 General**
 - 42.6.2 Method**
 - 42.6.2.1 Procedure A**
 - 42.6.2.2 Procedure B**
 - 42.7 Classification of the image after testing to procedure B**
 - 42.8 Test report**

Page count: 100