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 ≤ 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