Fraunhofer Wilhelm-Klauditz-Institut Holzforschung

Quality Assessment

WKI · FRAUNHOFER-INSTITUT · Bienroder Weg 54 E · D-38108 Braunschweig

EGGER Kunststoffe GmbH & Co. KG
Im Weilandmoor 2

38518 Gifhorn

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Braunschweig, 2006-09-20

Test report No. B-2261/06

Customer: EGGER Kunststoffe GmbH & Co. KG
Im Weilandmoor 2
38518 Gifhorn

Material: EUROFORM® Worktop
Decor ST2 F125, nominal thickness 0,6 mm

Object of the test: Determination of some characteristics of a worktop according to DIN EN 438-2

Content of the report:

EC Notified 0765	Testing, Supervising and Certifying Body authorized by the Principal Authority for Supervision of Construction
Deutscher Akkreditierungs Rat DAR DAP-PL-2071.00	Testing laboratory authorised by DAP Deutsches Akkreditierungssystem Prüfwesen GmbH according to DIN EN ISO/IEC 17025. The authorisation covers the test methods listed in the certificate.

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1. Task

The EGGER Kunststoffe GmbH & Co. KG, Gifhorn, authorised the Fraunhofer Institute for Wood Research, Wilhelm-Klauditz-Institut (WKI), with the testing of a worktop. The following tests should be performed:

- Resistance to surface wear (DIN EN 438-2, 10)
- Resistance to water vapour (DIN EN 438-2, 14)
- Resistance to dry heat (DIN EN 438-2, 16)
- Resistance to impact by small-diameter ball (DIN EN 438-2, 20)
- Resistance to scratching (DIN EN 438-2, 25)
- Resistance to staining (DIN EN 438-2, 26)
- Lightfastness (Xenon arc) (DIN EN 438-2, 27)
- Resistance to cigarette burns (DIN EN 438-2, 30)
- Resistance to wet heat (100 °C) (DIN EN 12721)

2. Material to be tested and parameters

By the letter of the 2006-04-20 ten samples (230 mm x 230 mm x 19,5 mm) of a worktop were sent to the WKI. The material to be tested was selected by the customer and arrived at the WKI on 2006-06-21.

Name of the specimen: EUROFORM® Worktop
(according to the customer) Decor ST2 F125, nominal thickness 0,6 mm

The material that has not been used up will be disposed by the WKI three months after the completion of the tests.

3. Execution of the test

3.1 Resistance to surface wear

The test was performed according to DIN EN 438-2 „High-pressure decorative laminates (HPL) - Sheets based on thermosetting resins - Part 2: Determination of properties“ (April 2005), paragraph 10 using abrasive wheels with a hardness of approx. 68 shore A (wheels conforming to the standard are not available).

3.2 Resistance to water vapour

The test was performed according to DIN EN 438-2 „High-pressure decorative laminates (HPL) - Sheets based on thermosetting resins - Part 2: Determination of properties“ (April 2005), paragraph 14.

3.3 Resistance to dry heat

The test was performed according to DIN EN 438-2 „High-pressure decorative laminates (HPL) - Sheets based on thermosetting resins - Part 2: Determination of properties“ (April 2005), paragraph 16.

3.4 Resistance to impact by small-diameter ball

The test was performed according to DIN EN 438-2 „High-pressure decorative laminates (HPL) - Sheets based on thermosetting resins - Part 2: Determination of properties“ (April 2005), paragraph 20.

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3.5 Resistance to scratching

The test was performed according to DIN EN 438-2 „High-pressure decorative laminates (HPL) - Sheets based on thermosetting resins - Part 2: Determination of properties" (April 2005), paragraph 25.

3.6 Resistance to staining

The test was performed according to DIN EN 438-2 „High-pressure decorative laminates (HPL) - Sheets based on thermosetting resins - Part 2: Determination of properties" (April 2005), paragraph 26.

3.7 Lightfastness (xenon arc)

The test was performed following DIN EN 438-2 „High-pressure decorative laminates (HPL) - Sheets based on thermosetting resins - Part 2: Determination of properties" (April 2005), paragraph 27. An adjustment of temperature and rel. humidity as claimed in the standard is not possible at the used exposure unit (Heraeus Suntest CPS).

3.8 Resistance to cigarette burns

The test was performed according to DIN EN 438-2 „High-pressure decorative laminates (HPL) - Sheets based on thermosetting resins - Part 2: Determination of properties" (April 2005), paragraph 30.

3.9 Behaviour on subjection to wet heat

The test was performed according to DIN EN 12721 „Furniture – Assessment of surface resistance to wet heat" (October 1997) at a temperature of 100 °C.

4. Results

EUROFORM® Worktop Decor ST2 F125, nominal thickness 0,6 mm	Results
Resistance to surface wear	IP: 433 revolutions (IP + FP) ÷ 2: 600 revolutions Meets the requirements according to DIN EN 438-3 for index number 3
Resistance to water vapour	Rating 5 (No visible change) Meets the requirements according to DIN EN 438-3
Resistance to dry heat	Rating 4 (Slight change of gloss and/or colour, only visible at certain viewing angles) Meets the requirements according to DIN EN 438-3

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EUROFORM® Worktop Decor ST2 F125, nominal thickness 0,6 mm	Results
Resistance to impact by small-diameter ball	22 N Meets the requirements according to DIN EN 438-3 for index number 3
Resistance to scratching	Rating 4 (Discontinuous or not visible scratches at 4 N and ≥ 90 % clearly visible scratches at 6 N) Meets the requirements according to DIN EN 438-3 for index number 4
Resistance to staining	Group 1 - 3: Rating 5 (No visible change) Meets the requirements according to DIN EN 438-3
Lightfastness (xenon arc)	≥ Grey scale 4 - 5 Meets the requirements according to DIN EN 438-3
Resistance to cigarette burns	Rating 5 (No visible change) Meets the requirements according to DIN EN 438-3
Resistance to wet heat (100 °C)	Rating 4 (Slight change in gloss or colour, visible only when the light source is mirrored in the test area and is reflected towards the observer's eye, or a few isolated marks just visible) Meets the requirements according to DIN EN 438-3

5. Evaluation of the results

The examined samples meet the requirements according to DIN EN 438-3 „High-pressure decorative laminates (HPL) - sheets based on thermosetting resins - Part 3: Classifications and specifications for laminates less than 2 mm thick intended for bonding to supporting substrates" at the performed tests.

The test results exclusively relate to the objects tested.

Andreas Ritter

Official in Charge

Dipl.-Ing. Harald Schwab

Head of the Testing, Supervision and Certifying Body