

# Test report

**REPORT NUMBER:**  
**977686-2**



**DANISH  
TECHNOLOGICAL  
INSTITUTE**

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No. of encl.: 1  
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**Customer:** HOWE PL Sp. z. o. o., ul.  
Wypianskiego 26B/5  
PL 60-751 Poznan  
Poland

**Sample:** One lacquered furniture surface named "Chipboard with laminate-black, HOWE  
Article code: L210" (see page 2)

**Sampling:** The sample has been received here on 26 May 2021.

**Period:** The testing has been carried out from 1 to 3 June 2021.

**Procedure:** Determination of surface resistance of furniture according to "Möbelfakta"  
dated 01-04-2021, requirement category 5

**Test performed by:** Deepa Chakkamadathil Ramachandran, Technical Consultant, M.Tech.

**Result:** Lacquered furniture surface marked "Chipboard with laminate-black, HOWE Article  
code: L210" fulfil the requirement category 5

**Storage:** According to the general terms and conditions of The Danish Technological Institute

**Remarks:** None

**Conditions:** Accredited testing was carried out in compliance with international requirements (ISO/IEC  
17025:2017) and in compliance with Danish Technological Institute's General Terms and  
Conditions regarding Commissioned Work accepted by Danish Technological Institute. The test  
results apply to the tested products only. This report may be quoted in extract only if the  
laboratory has granted its written consent.

**Place:** Danish Technological Institute, Taastrup, Plastics and Packaging Technology

**Signature:**

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Test Reg. no. 300

## Test

Determination of surface resistance according to requirement category 5

## Test methods

Möbelfakta: 2021	Surface resistance, requirement category 5
DS/EN 12720+A1: 2013	Furniture - Assessment of surface resistance to cold liquids
DS/EN 12722+A1, 2013	Furniture - Assessment of surface resistance to dry heat
SS 83 91 22: 2017	Furniture and fittings - Assessment of resistance to fat on surfaces with scratches

## Sample

Surface: One furniture surface marked: "Chipboard with laminate-black, HOWE Article code: L210  
Size: furniture surface in the size of 500 x 500 mm

The sample was conditioned at 23 °C and 50 % RH from 25 May 2021 to 1 June 2021

## Instrument

Scratch testing instrument 32T70.71

## Test results

Exposure	Exposure time Conditions	Rating <sup>1</sup> One furniture surface marked: ""Chipboard with laminate-black, HOWE Article code: L210.""
Water	24 hours	5
Paraffin oil	24 hours	5
Coffee, 40 g/l	1 hour	5
Alcohol, 48%	1 hour	5
Scratch	5N	Ok. No penetration Width $\leq 0.5$ mm
Scratch + paraffin oil	5N/24 hours	5
Dry heat	70 °C/20 min	5

Rating, see encl. 1

## 1. Rating Scale

### Resistance to cold liquids and dry heat

Rating	Description
5	No change Test area indistinguishable from adjacent surrounding area
4	Minor change Test area distinguishable from adjacent surrounding area, only when the light source is mirrored on the test surface and is reflected towards the observer's eye, e.g., discoloration, change in gloss and colour No change in the surface structure, e.g., swelling, fibre raising, cracking, blistering
3	Moderate change Test area distinguishable from adjacent surrounding area, visible in several viewing directions, e.g., discoloration, change in gloss and colour No change in the surface structure, e.g., swelling, fibre raising, cracking, blistering
2	Significant change Test area clearly distinguishable from adjacent surrounding area, visible in all viewing directions, e.g., discoloration, change in gloss and colour, and/or structure of the surface slightly changed, e.g., swelling, fibre raising, cracking, blistering
1	Strong change The structure of the surface being distinctly changed and/or discoloration, change in gloss and colour, and/or the surface material being totally or partially removed, and/or the filter paper adhering to the surface

### Resistance to fat on surfaces with scratches

Rating	Description
5	No fat spreading, max. 2 mm colour change in the scratch itself
4	Fat spreading up to overall width of maximum 4 mm
3	Fat spreading up to overall width of maximum 15 mm or structure changes outside the scratch
2	Fat spreading up to overall width of maximum 40 mm
1	Fat spreading up to overall width above 40 mm