REPORT

1. **Subject of the report**

Testing of paint coating resistance to UV radiation in the wavelength range from 290 nm to 400 nm with the maximum emission at 313 nm.

2. **Name and address of the producer**

PAGED MEBLE S.A.
Ul. CIESZYŃSKA 99
43-385 JASIENICA

3. Test report:

3.1 Applied standard

The test was conducted according to the **ISO 11507:2007** standard.

3.2 Equipment

The test was conducted in a Q-UV/SPRAWY accelerated ageing chamber.

3.3 Type of lamps and water purity

Distilled water with a purity of 20 µS/cm and UVA-313 lamps emitting UV from a low-pressure mercury arc were used in the test.

3.4 Description of the tested product The test was conducted on 15 cm x 7.6 cm tiles made of beech plywood.

3.5 Preparation of the test sample

The samples were impregnated, stained, and then protected with a paint coating with a thickness of 2x120 g/m2.

3.6 Number of samples

The test involved 12 samples in a range of colours from natural to black.

3.7 Date of making the samples

7.05.2018

3.8 Parameters and time

The experiment was conducted in the form of a 300-hour cycle which consisted of two looped stages repeating one after the other.

Stage	Temperature	Time	Activity
1	50 °C	1h	condensation
2	60 °C	4h	UV radiation

The exposure cycle consisted of a long initial phase of condensation to induce a moist load in a wooden substrate, which is followed by UV radiation.

3.9 Date of the test

14.05.2018-21.05.2018
21.05.2018-28.05.2018

4. Test results

- the condition of the element surface after the test was rated as good:
- no wood damage, no visible chalking
- no flaking, no cracks
- the overall condition of the coating rated as good
- there was a slight change in colour in natural and near-natural samples resulting from the natural reaction of wood to UV radiation; darker samples virtually unchanged
- adhesion to the substrate – no change has been observed.

5. Summary and conclusions

The 300-hour cycle in the chamber allows us to determine the influence of UV radiation and moisture on paint coating. The test makes it possible to simulate the degradation of paint coating used in natural atmospheric conditions for a period of 20-30 months. However, complicated interactions occurring in the case of tests in natural conditions cannot be completely simulated with a simple exposure test in artificial conditions.