

|  | Test method                                      | Requirements   | Average test results from running production                          |                             |  |                                       |                             |
|--|--|--|---|-----------------------------|--|---------------------------------------|-----------------------------|
|  |  |  | norament®   |                             | noraplan®  |                                       |                             |
|  |  |  | 928 grano ed  | 927 grano ec                | senitica ed 2.0 mm<br>signa ed 2.0 mm<br>stone ed 2.0 mm | senitica ed 3.0 mm<br>signa ed 3.0 mm | astro ec                    |
| <b>CE conformity</b>                     | <b>EN 14041</b>                                  |  | ← Manufacturer: nora systems GmbH, D-69469 Weinheim →                 |                             |  |                                       |                             |
| DoP-No.                                  | EN 14041   |  | 0005a   | 0022                        | 0001   | 0001                                  | 0036                        |
| Thermal conductivity                     | EN 10456   | $\lambda = 0.17 \text{ W/(m·K)}$   | ← Fulfilled →   |                             |  |                                       |                             |
| Dynamic coefficient of friction          | EN 13893   | DS   | ← Fulfilled →   |                             |  |                                       |                             |
| Electrical behaviour                     | EN 1081  | ed ≤ 10 <sup>9</sup> Ohm   | Fulfilled   |                             | ← Fulfilled →  |                                       |                             |
|  |  | ec ≤ 10 <sup>6</sup> Ohm   |   | Fulfilled                   |  |                                       | Fulfilled                   |
| Reaction to fire                         | EN 13501-1                                       | Not bonded   | C <sub>ir</sub> -s1, bonded   | C <sub>ir</sub> -s2         | ← C <sub>ir</sub> -s1 →                                  |                                       |                             |
| Reaction to fire                         | EN 13501-1                                       | Bonded on mineral subfloor   | C <sub>ir</sub> -s1   | C <sub>ir</sub> -s1         | B <sub>ir</sub> -s1                                      | ← C <sub>ir</sub> -s1 →               |                             |
| <b>Properties acc. to EN 1817</b>        |  |  |   |                             |  |                                       |                             |
| Thickness                                | EN ISO 24346                                     | Mean value ± 0.15 mm according to EN 1817  | 3.5 mm  | 3.5 mm                      | 2.0 mm   | 3.0 mm                                | 2.0 mm                      |
| Dimensional stability                    | EN ISO 23999                                     | ± 0.4 %  | ← ± 0.2% →  |                             | ← ± 0.3% →   |                                       |                             |
| Cigarette-burn resistance                | EN 1399  | Procedure A (stuffed out) ≥ level 4<br>Procedure B (burning) ≥ level 3   | ← Fulfilled →   |                             |  |                                       |                             |
| Flexibility                              | EN ISO 24344, procedure A                        | Mandrel diameter 20 mm, no fissuring   | ← Fulfilled →   |                             |  | -                                     | Fulfilled                   |
| Hardness                                 | ISO 48-4   | ≥ 75 Shore A (EN 1817)   | 84 Shore A  | 86 Shore A                  | ← 95 Shore A →   |                                       |                             |
| Residual indentation                     | EN ISO 24343                                     | Mean value ≤ 0.15 mm at thickness < 2.5 mm<br>Mean value ≤ 0.20 mm at thickness ≥ 2.5 mm   | -   |                             | 0.03 mm  | -                                     | 0.01 mm                     |
|  |  | Mean value ≤ 0.25 mm at thickness ≥ 3.0 mm<br>Mean value ≤ 0.20 mm at thickness < 3.0 mm   | 0.05 mm   |                             | -  | 0.03 mm                               | -                           |
| Abrasion resistance at 5 N load          | ISO 4649, procedure A                            | ≤ 250 mm <sup>3</sup>  | 90 mm <sup>3</sup>  | 90 mm <sup>3</sup>          | 130 mm <sup>3</sup>                                      |                                       | 150 mm <sup>3</sup>         |
| Colour fastness to artificial light      | ISO 105-B02, procedure 3, test conditions 6.1 a) | At least level 6 on the blue scale;<br>≥ level 3 on the grey scale   | ← Grey scale ≥ level 3 acc. to ISO 105-A02 →                          |                             |  |                                       |                             |
| Classification                           | EN ISO 10874                                     | Commercial/Industrial  | 34/43   |                             | 34/42  | 34/43                                 | 34/42                       |
| <b>Additional technical properties</b>   |  |  |   |                             |  |                                       |                             |
| Toxicity of fire gases                   | DIN 53436  |  | Carbonisation gases are non-toxic                                     | -                           | Carbonisation gases are non-toxic                        |                                       |                             |
| Anti-slip properties                     | DIN EN 16165                                     | According to DGUV 108-003  | R 10  |                             | stone ed: R 10<br>Others: R 9                            |                                       | R 9                         |
| Improvement in footfall sound absorption | ISO 10140-3                                      |  | 10 dB   | 10 dB                       | 6 dB   | 8 dB                                  | 6 dB                        |
| Effect of chemicals                      | EN ISO 26987                                     |  | ← Resistant depending on concentration and time of exposure* →        |                             |  |                                       |                             |
| Effect of a castor chair                 | EN ISO 4918                                      |  | ← Suitable if castor wheels, type W, according to EN 12529 are used → |                             |  |                                       |                             |
| Underfloor heating                       | EN 1264-2  |  | ← Suitable, max. 35° C →  |                             |  |                                       |                             |
| <b>Electrical behaviour**</b>            |  |  |   |                             |  |                                       |                             |
| Resistance to EPA ground                 | ESD STM 7.1/<br>IEC 61340-4-1                    | Measuring the installed floor at 23 °C (± 2 °C) and ≥ 25 % r.h.  | 10 <sup>6</sup> – 9 x 10 <sup>7</sup> Ohm                             | < 10 <sup>6</sup> Ohm       | 10 <sup>6</sup> – 9 x 10 <sup>7</sup> Ohm                | < 10 <sup>6</sup> Ohm                 |                             |
|  |  | Measuring the installed floor at 23 °C (± 2 °C) and < 25 % r.h., installed on an appropriate subfloor build up                         | 10 <sup>6</sup> – 10 <sup>9</sup> Ohm***                              | < 10 <sup>6</sup> Ohm       | 10 <sup>6</sup> – 10 <sup>9</sup> Ohm***                 | < 10 <sup>6</sup> Ohm                 |                             |
| Operator system – Resistance to ground   | ESD STM 97.1/<br>IEC 61340-4-5                   | For the system floor/conductive footwear (R < 5 x 10 <sup>6</sup> Ohm) measuring the installed floor at 23 °C (± 2 °C) and ≥ 25 % r.h. | ≤ 3.5 x 10 <sup>7</sup> Ohm   | ≤ 3.5 x 10 <sup>7</sup> Ohm | ≤ 3.5 x 10 <sup>7</sup> Ohm                              |                                       | ≤ 3.5 x 10 <sup>7</sup> Ohm |
| Body voltage generation                  | ESD STM 97.2<br>IEC 61340-4-5                    | Tested with defined conductive footwear at 23 °C and 12 % r.h.   | ← < 10 V →  |                             |  |                                       | < 100 V                     |
| Resistance to earth                      | EN 1081  |  | 10 <sup>6</sup> – 9 x 10 <sup>7</sup> Ohm                             | < 10 <sup>6</sup> Ohm       | 10 <sup>6</sup> – 9 x 10 <sup>7</sup> Ohm                | < 10 <sup>6</sup> Ohm                 |                             |
| Insulation resistance                    | VDE 0100-600                                     |  | ≥ 1 x 10 <sup>5</sup> Ohm   | -                           | ≥ 5 x 10 <sup>4</sup> Ohm                                | ≥ 1 x 10 <sup>5</sup> Ohm             | -                           |

\* In case of increased impact of oils, greases, acids, alkalis and other aggressive chemicals please contact us.

\*\* If installed electrically dissipative and conductive in conformity with our installation instruction and according to the recommendations of the adhesive manufacturer. The used adhesive has to have a permanent resistance of R < 3 x 10<sup>5</sup> Ohm according to EN ISO 22637.

\*\*\* If extremely low humidity values (< 25 % relative air humidity (= r.h.)) are expected for a longer period, please contact nora systems GmbH, Technical Service, for advice.

EN 1817: Specification for homogeneous and heterogeneous smooth elastomer floor coverings

Colour variations due to different production batches as well as technical alterations to improve the product have to be accepted.