

# NorGeoSpec 2012 Product Certificate

## Quality Product Certification Separation and Filtration

This product has been found to be fit for use in accordance with NorGeoSpec 2012 System for the above given function.

|                         |                             |
|-------------------------|-----------------------------|
| <b>Certificate no.:</b> | NGS-50177                   |
| <b>Date:</b>            | 01.09.2019                  |
| <b>Valid until:</b>     | 31.08.2021                  |
| <b>Manufacturer:</b>    | Beaulieu Technical Textiles |
| <b>Product:</b>         | Terralys NGS3               |
| <b>Product Type:</b>    | GTX-W                       |
| <b>Raw material:</b>    | PP                          |
| <b>Function:</b>        | Separation and Filtration   |

Issued by



Christian Recker, SINTEF project manager

Approved by



Arnstein Watn, Head of the Technical committee



The products are regularly audited and tested to verify that the characteristics fulfil the NorGeoSpec 2012 Rev.: 01/14.12.2016 requirements.  
Approved by the NorGeoSpec Technical committee: 01.09.2019

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| Characteristic                                | Standard        | Unit             | Declared value              | Max. tolerance              | Certification value          |              |
|---|-----------------|------------------|-----------------------------|-----------------------------|------------------------------|--------------|
| Mass per unit area                            | EN ISO 9864     | g/m <sup>2</sup> | 150                         | ± 15                        | <b>135 - 165</b>             |              |
| <b>Mechanical tests</b>                       |                 |                  |                             |                             |                              |              |
| Tensile strength                              | MD              | EN ISO 10319     | kN/m                        | 23.00                       | - 2.30                       | <b>21.33</b> |
|   | CMD             | EN ISO 10319     | kN/m                        | 24.40                       | - 2.44                       |              |
| Tensile strain at tensile strength            | MD              | EN ISO 10319     | %                           | 31.5                        | - 6.30                       | <b>25.2</b>  |
|   | CMD             | EN ISO 10319     | %                           | 31.5                        | - 6.30                       |              |
| Static puncture test                          | EN ISO 12236    | KN               | 3.100                       | - 0.31                      | <b>2.790</b>                 |              |
| Dynamic perforation resistance                | EN ISO 13433    | mm               | 9                           | + 2.3                       | <b>11</b>                    |              |
| Energy index                                  | NorGeoSpec 2012 | kN/m             | 3.2                         |                             | <b>3.2</b>                   |              |
| <b>Hydraulic tests</b>                        |                 |                  |                             |                             |                              |              |
| Permeability normal to the plane without load | EN ISO 11058    | m/s              | 0.015                       | - 0.005                     | <b>0.011</b>                 |              |
| Characteristic opening size                   | EN ISO 12956    | µm               | 153                         | ± 46                        | <b>107 - 199</b>             |              |
| <b>Durability (Declared value)</b>            |                 |                  |                             |                             |                              |              |
| Service life                                  |                 | years            | <input type="checkbox"/> 25 | <input type="checkbox"/> 50 | <input type="checkbox"/> 100 |              |

Quality Product Certification: Separation and Filtration

Application profile: **3**