

# ELLE™ Onshore

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## The Product

ELLE™ Onshore is a 33-meter roll made of polyurethane to fit the leading edge of an onshore wind turbine blade to protect the blade against rain erosion. The roll can be cut into the desired length and geometry to fit specific blade designs. The resilient polymer will stick to the blades with the pressure-sensitive adhesive; no edge sealer or wet paint needed.



## Component Properties

<b>Material</b>	Polyurethane
<b>Characteristics</b>	Rubbery
<b>Color</b>	Light grey
<b>Geometry</b>	Typically 270 mm wide, 0.8 mm thick (center part)
<b>Adhesive</b>	Pressure-sensitive

## Mechanical Data

### Material Properties

Property	Test Method	Typical Value	Unit
Tensile Strength	ISO 37/1A	≥ 17	MPa
Elongation at break	ISO 37/1A	≥ 750	%
Glass transition temperature (T <sub>g</sub> )	ISO 11357-2	≤ -60	°C
Density	ISO 1183-1 method A	1.04 ± 0.04	g/cm <sup>3</sup>
Hardness Shore A	ISO 868	75	-
Peel Force at 23 degrees C on PU filler	ASTM D3330-C (modified)	> 8	N/cm

### Erosion Properties

Property	Test Method	Value
Erosion resistance	DNV-RP-0171: ALT-RET & HALT-RET	VN curve*
Erosion resistance after UV, salt mist and cold climate	<ul style="list-style-type: none"> <li>ISO 12944-9 Annex B</li> <li>DNV-RP-0171: ALT-RET &amp; HALT-RET</li> </ul>	VN curve*
Sand Erosion Resistance	<ul style="list-style-type: none"> <li>0.125 mm particles</li> <li>Flowrate 2.5 kg/h</li> <li>Wind speed 90 m/s</li> <li>30° angle of attack</li> </ul>	67 h sand erosion, 168 kg particles

\* Site specific calculation available at [polytech.com](https://polytech.com).

## Environmental Conditions

Property	Value	Unit
Permitted temperature (storage)	10 ... 30	°C
Permitted relative humidity (storage, non-condensing)	0 ... 100	%
Shelf life (when kept in original packaging)	Up to 18	months
Permitted temperature (installation)	10 ... 35	°C
Permitted temperature (operation)	-40 ... +55	°C
Permitted relative humidity (installation)	0 ... 100	%