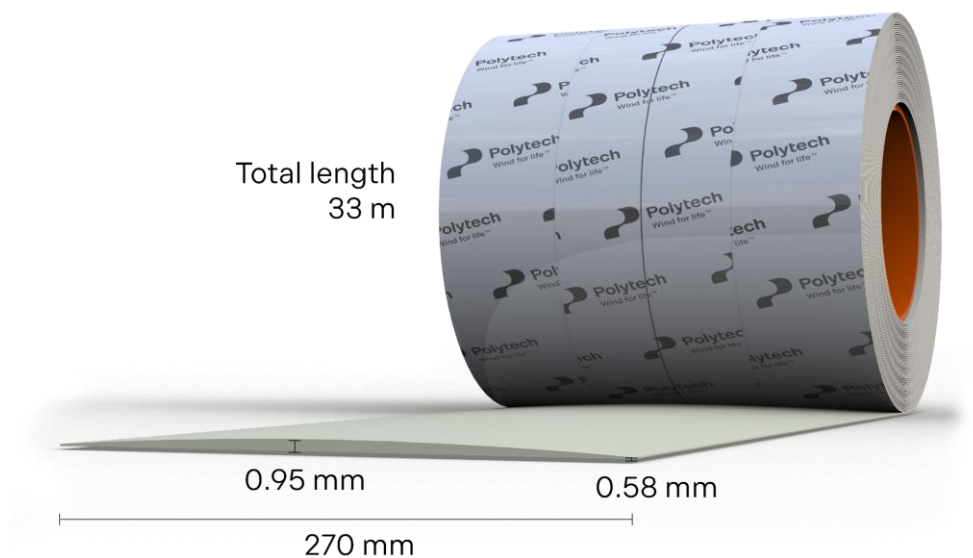


ELLE® Onshore

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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 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.



Note: All thickness measures are typical values without the liner.

Component Properties

Material	Polyurethane
Characteristics	Rubbery
Color	Light grey
Geometry	Typical thickness center part 0.95 mm * Typical thickness edge: 0.58 mm * Typical width: 270 mm Typical length: 33000 mm <i>*) Measures are without the liner</i>
Adhesive	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 (Tg)	ISO 11357-2	≤ -60	°C
Density	ISO 1183-1 method A	1.04 ± 0.04	g/cm ³
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"> ■ ISO 12944-9 Annex B ■ DNV-RP-0171: ALT-RET & HALT-RET 	VN curve*

Property	Test Method	Value
Sand Erosion Resistance	■ 0.125 mm particles	67 h sand erosion, 168 kg particles
	■ Flowrate 2.5 kg/h	
	■ Wind speed 90 m/s	
	■ 30° angle of attack	

* Site specific calculation available at 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	%