

## Product Data Sheet: MatLine



Matline non-woven polyester laminate bulker material features outstanding properties at an amazingly competitive price.

### Ease of use:

Constant Thickness  
Deformability  
Anti-Shrinkage  
Low Resin Consumption  
Permanent Bulk  
Print-Through Blocking  
Excellent Fatigue Resistance  
Cost and Labor Effectiveness

### Available in thickness:

Matline 101 (1.4mm)  
Matline 201 (2mm)  
Matline 301 (3mm)  
Matline 401 (4mm)  
Matline 501 (5mm)

		Matline 101	Matline 201	Matline 301	Matline 401	Matline 501
<b>Dry Weight</b>	<b>g/m2 oz/ sqy</b>	<b>55 1.61</b>	<b>70 2.06</b>	<b>110 3.24</b>	<b>140 4.13</b>	<b>185 5.44</b>
<b>Dry Thickness</b>	<b>mm mils</b>	<b>1.4 55</b>	<b>2 79</b>	<b>3 118</b>	<b>4 158</b>	<b>5 197</b>
<b>Resin Impregnated Thickness</b>	<b>mm mils</b>	<b>1.3 55</b>	<b>1.9 75</b>	<b>2.9 114</b>	<b>3.9 154</b>	<b>4.9 193</b>
<b>Roll length</b>	<b>m ft</b>	<b>100 328.08</b>	<b>80 262.47</b>	<b>50 164.04</b>	<b>40 131.23</b>	<b>30 98.43</b>
<b>Roll Width</b>	<b>cm inch</b>	<b>100 39.4</b>	<b>100 39.4</b>	<b>100 39.4</b>	<b>100 39.4</b>	<b>100 39.4</b>
<b>Impregnated Specific Weight (Density)</b>	<b>g/cm3 lb/in3</b>	<b>0.81 0.029</b>	<b>0.67 0.024</b>	<b>0.66 0.024</b>	<b>0.65 0.024</b>	<b>0.65 0.023</b>
<b>Resin Consumption</b>	<b>kg/m2 ilb/sgy</b>	<b>1 1.83</b>	<b>1.2 2.2</b>	<b>1.8 3.3</b>	<b>2.4 4.5</b>	<b>3.0 5.5</b>

Compression		
<b>Matline 301</b>	436, 450	422, 095
<b>Coremat P2430</b>	379,030	355,250
<b>U-Pica Mat I3000</b>	344,665	372,940
<b>Compression</b>	<b>Modulus MD</b>	<b>Modulus XD</b>

Impact Strength		
<b>Matline 301</b>	9,802	9,729.5
<b>Coremat P2430</b>	7,264.5	6,452.5
<b>U-Pica Mat I3000</b>	6,902	6,786
<b>Impact</b>	<b>MD</b>	<b>XD</b>

**Shear Strength**

<b>MatLine 301</b>	1058.5
<b>Coremat P2430</b>	696
<b>U-Pica MatI3000</b>	971.5

**Water Absorption**

<b>MatLine 301</b>	0.37
<b>Coremat P2430</b>	0.39
<b>U-Pica Mat I3000</b>	0.39

(UP Resin)	Unit	CSM450 Matline101 CSM450 MD XD	CSM450 Matline201 CSM450 MD XD	CSM450 Matline301 CSM450 MD XD	CSM450 Matline401 CSM450 MD MD	CSM450 Matline501 CSM450 MD MD	Test Method
<b>Tensile Strength</b>							
<b>Modulus</b>	Mpa	5998	5213	4861	4240	3556	
<b>At Break</b>	Mpa	67.5	51.2	49.4	39.6	36.6	
<b>Elongation</b>	%	1.49	1.49	1.35	1.46	1.36	<b>ISO 527</b>
<b>Flexural Modulus</b>	Mpa	7313	6800	6558	5500	5187	
<b>At Break</b>	Mpa	195.2	150.4	141.2	81.5	89.4	
<b>Elongation</b>	mm	4	4.7	5.5	5.3	5.6	<b>ISO 178</b>
<b>Compression Modulus</b>	Mpa	3801	3511	3157	2650	2192	<b>ISO 604</b>
<b>Shear Strength</b>	Mpa	12.6	8.2	7.3	6.1	5.2	<b>ISO 14130</b>
<b>Impact Strength</b>	kJ/m2	45.1	28.3	28.5	25	27.8	<b>ISO 180</b>
<b>Water Absorption</b>	0%	<0.51	<0.56	<0.37	<0.50 0.37	<0.25	<b>ISO 62</b>

Superior Impact and Shear Strength's as compared to main competitors results from stronger links between the different layers within the mat as well as excellent resin distribution throughout the product. The excellent impact values illustrate the ability of the laminate to bear external mechanical aggression. The performance of Matline is well above competition with 35-50% higher shock resistance. This is another reason products using Matline obtain longer useful life cycles. Even cross-laid fiber distribution of the product brings additional reinforcement characteristics versus competitive products. Water absorption is equivalent to competition.

**MatLine Performance Characteristics Include:**

- Print blocking: Thin-grade is a very effective print-through barrier when placed behind a skin coat.
  - Screw retention: Matline adds excellent screw retention capability to a laminate, and can be placed, for example, around the perimeter of swim platforms for rub rail installation.
  - Microcracking prevention: Matline reduces demolding cracks and stress cracks in gel coated parts.
- Most laminate bulkers available in the marketplace today are made of polyester fiber and glass microspheres. Only Nida-Core Matline has MULTI-DIRECTIONAL fiber orientation. Unlike the unidirectional fiber orientation used in bulker products manufactured by most of our competitors, our multi-directional fiber orientation provides equal strength characteristics in both length and width directions. It also helps in wetting out the laminate equally in both directions, as opposed to easier wet out in one direction in linear fiber products. The results of tests performed by certified labs in Europe and North America on products made by our principal competitors demonstrate that Matline exhibits superior impact and shear strength, thanks to stronger links between the different layers within the mat as well as excellent resin distribution throughout the product. Matline's excellent impact values underscore the ability of the Matline-reinforced laminate to meet toughness requirements and withstand severe-duty fatigue.

All tests carried out by independent laboratory. This information is provided in good faith and is subject to modifications without prior notification. It does not constitute a commitment, neither a contractual document. Nida-Core Corp will not assume any liability form use or misuse of data presented herein. Assessment of suitability is the responsibility of end user only.

