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## EKKO 3006 - DATASHEET

### Introduction

EKKO 3006 is a 100% solid (solvent free) bio-based epoxy resin system designed to meet surfboard requirements.

EKKO 3006 is a low viscosity system for hand-lay up or low infusion.

This 40% plant-based resin is the solution:

- To produce a green material available in industrial quantities,
- To limit the use of petroleum-based resin,
- To minimize foot print on the environment.

EKKO 3006 ensures good wetting of fibers such as glass or natural fibers (Cellulose, Flax or Hemp).

Green composites could be obtained by combining this bio-based resin and Natural fibers. Performances resulting from the combination of EKKO 3006 with Porcher Greenlite cellulose based fabric are given below.

### Features

- × Surfboard,
- × Kitesurf,
- × Kayak,
- × .....



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### Typical properties for EKKO 3006

Property	Test method	Unit	Value
Mix Viscosity @ 25°C	ASTM D445	cP	500 cP
Color (cured parts)			White
Density @ 25°C		g/mL	1,08
Physical form			Liquid
Gel time (100g sample)		min	35
Exotherm (100g sample- 35 min)		°C (°F)	140 (284)
Gel time on thin thickness (3-5 mm)		min	180 min

### Mechanical properties for EKKO 3006

Property*	Test method	Unit	Value
Tensile modulus	ASTM D3039	MPa	2000
Tensile strength	ASTM D3039	MPa	40
Tensile elongation at break	ASTM D3039	%	6
Flexural modulus	ASTM D790	MPa	1950
Flexural elongation at break	ASTM D790	%	3

\* Average values obtained on specimen cured during 3 hours at 70°C (158°F)

### Mechanical properties for EKKO 3006 and Porcher Greenlite cellulose based fabric (Porcher Industries)

Property*	Test method	Unit	Value
ILSS	ISO 14130	MPa	155
Flexural modulus	ISO 14125	MPa	9 100
Flexural strength	ISO 14125	MPa	170

\* Resin content (volume/mass) = 55%/36%. Cured under vacuum for 3 hours at 70°C (158°F).

### Formulating Techniques

EKKO 3006 resin and EKKO 3006 hardener have to be mixed in a 100:16.7 ratio. To achieve the full mechanical properties of the resin, composite materials will be post-cured according to the curing cycle described below.



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### Handling precautions

Attention must be paid when handling large quantities, exothermal reaction may occur. Please refer to “typical properties for EKKO 3006” section for information.

It is advised to dispose unused mixture in suitable temperature resistant packaging and in adequate environment.

### Curing cycle

Various curing cycles can be applied depending on the targeted properties. EKKO 3006 can cure at room temperature (around 25°C or 77°F) during 2 weeks. The full potential of structures will be reached by curing the material at 70°C (158°F) during 3 hours.

### Formulation and application information

For additional performance characteristics information, consult Nanoledge.

### Packaging and Storage

EKKO 3006 system is available as a ready-to-use kit. EKKO 3006 resin is available in various volume closed head drums that come with the corresponding drum of EKKO 3006 hardener.

<b>EKKO 3006 resin drum (kg)</b>	<b>EKKO 3006 hardener drum (kg)</b>
<b>5</b>	0.84
<b>20</b>	3.34
<b>50</b>	8.4
<b>200</b>	33.4

EKKO 3006 system must be stored at room temperature in a dry place.

EKKO 3006 system shelf-life: 12 months.

For more information on storage, consult Nanoledge.



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## SAFETY & HANDLING

These products are capable of producing adverse health effects ranging from minor skin irritation to serious systemic effects. Exposure to these materials should be minimized and avoided. **None of these materials should be used, stored, or transported until the handling precautions and recommendations as stated in the Material Safety Data Sheet (MSDS) for these and all other products being used are understood by all persons who will work with them.** Questions and requests for information on Nanoledge Specialty products should be directed to NANOLEDGE.

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