

### 1. Name of product and the company

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Name of product	OC-BioBinder™ Oak 33XX, i.e. 3300-3349
Intended use of product	Improve mechanical properties of fiber-based material. For industrial use.
Company	OrganoClick AB Linjalvägen 9 SE-187 66 Täby Sweden
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Email	support@organoclick.com
Internet	www.organoclick.com

### 2. Product description and uses

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The product's intended use is to improve mechanical properties of fiber-based materials such as dry and wet strength. The product is hydrophilic. Additional features are increased material stiffness.

### 3. Constituents

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The product is composed of an aqueous formulation of modified biopolymers and natural plant compounds.

### 4. Physical and chemical properties

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Form	Opaque water based liquid
Colour	yellow
Odor	Faint
pH-value	2.2 – 2.4
Viscosity	400 – 2500 mPa (at 6 rpm, LV4, 23 °C). The viscosity will decrease if stirred and/or heated.
Charge	Cationic
Solid content	14% (24h, 105°C)

## 5. Handling

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Avoid contact with eyes. Can be slippery if spilled on the floor, so avoid walking through it. Ensure adequate ventilation. Normal precautions taken when handling chemicals should be observed. See the Safety Data Sheet for further information.

## 6. Feasible fibres and material

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The OC-BioBinder™ Oak system can be used on any fiber-based materials. The system is compatible with all types of pulp.

OC-BioBinder™ Oak can be used on fibers, nonwoven material, airlaid paper and other fiber-based materials. OC-BioBinder™ Oak has a good retention to cellulosic fibers (e.g. cotton, paper pulp), but also works well with blends containing both cellulosic and synthetic fibers.

New fiber-based materials to be treated with the product should be tested in laboratory prior to large-scale production.

## 7. Usage instructions

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The following usage instructions standard of the OC-BioBinder™ Oak product is performed on cellulosic airlaid material.

- 1. Dilute the product with water to a solid concentration less than 7 %.**  
Initial solid concentration is 14.0 %  
Make it a habit to always stir before use. If dilution is needed, it is done with hot or cold water followed by stirring. During dilution the binder will go from colorless/slightly yellow to white turbid. The dilution should be used within one day.
- 2. Apply the diluted product to the material by impregnation, spraying, coating or foaming aiming at an add-on of 4-12 g /m<sup>2</sup> of the dry matter.**  
To find the optimal add-on for a specific material, apply different add-ons within the range above during separate test runs and then evaluate the material's performance. Foaming is gained with standard foaming procedures and foaming chemicals.
- 3. Dry the treated material at 100 - 180 °C until completely dry.**  
Dry strength is achieved at 100 °C and above.  
Wet strength is achieved at 140 °C and above.  
The treated material may turn yellow/brown if exposed to temperatures above 100 °C for too long time.

## 8. Cleaning of Equipment

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After using the product all equipment shall be properly cleaned by scrubbing them with water and dishwashing liquid. Equipment that is not possible to scrub (e.g. pipes and spraying nozzles) shall be flushed thoroughly with water.

## 9. Storage

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Store in tightly closed original container in a well-ventilated area. OC-BioBinder™ Oak is best stored at room temperature or (preferably) colder (above freezing, >1°C). If stored at higher than room temperature, the binder formulation might become brown. The brown color does not affect the performance of the binder but the color cannot go back to its original state. Colder storage will result in less color change. Make it a habit to always stir the formulation prior to use.

The information in this technical data sheet consists of guidelines from the OC-BioBinder™ Oak Safety Data Sheet, OrganoClick AB test results, accumulated knowledge and experience with the product. The information is not to be used as basic data or verification for other tests or systems. OrganoClick AB does not take responsibility for any other usage areas or any misuse of the OC-BioBinder™ Oak product. The latest edition of this technical data sheet can be requested from OrganoClick.