

Technical data sheet

OC-BioBinder® Lily 1450S



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1. Name of product and the company

Name of product	OC-BioBinder® Lily 1450S
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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2. Product description and uses

The product's intended use is to improve mechanical properties of fiber-based materials such as dry and wet strength while maintaining a soft hand feel of the treated material. The product is hydrophilic.

3. Constituents

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

4. Physical and chemical properties

Form	Transparent water-based liquid
Colour	Yellow
Odor	Faint
pH-value	4-5
Viscosity	2000-2700 mPas (at 200 rpm, LV4, 23 °C). The viscosity will decrease if stirred and/or heated (see Figure 1).
Charge	Cationic
Solid content	26-28 % (24h, 105°C)

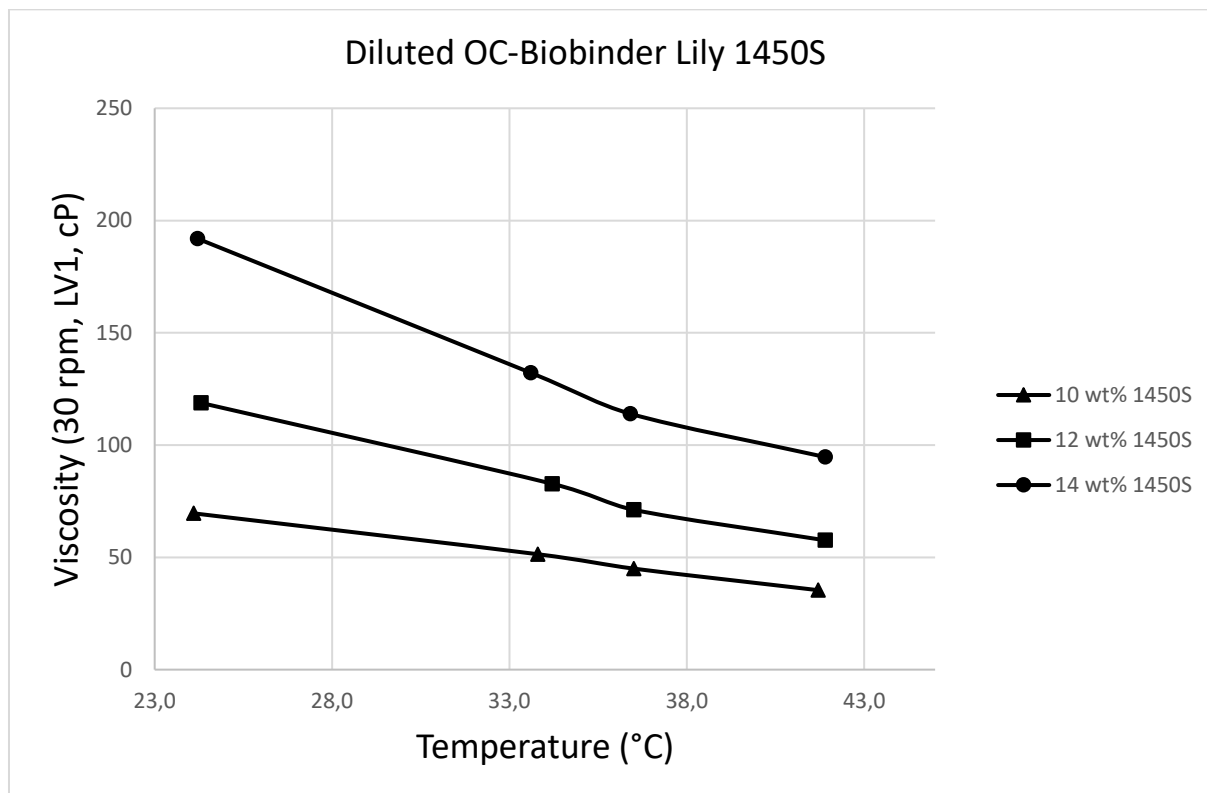


Figure 1. Viscosity dependency of temperature for diluted (10, 12, 14 %) binder at 30 rpm (spindle LV4, Brookfield LV).

5. Handling

Avoid breathing mist/vapors/spray. 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

OC-BioBinder® Lily is optimized for being used together with cellulosic fibers in nonwoven material, airlaid paper and other fiber-based materials.

7. Usage instructions

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

1. ***Dilute the product with water to a solid concentration of 10-14 %.***

It is recommended to use pre-heated dilution water (35-40 °C) as this will reduce the viscosity of the product and make it easier to apply and to absorb into the material. 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 /m2 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 and cure the treated material at 100 - 190 °C until completely dry.***

Dry strength is achieved at 100 °C and above.

Wet strength is achieved when curing the material at 140 °C and will improve up to 190 °C.

The treated material may turn yellow/brown if exposed to temperatures above 100 °C for too long time.

8. Cleaning of Equipment

Before using the product, it is important to clean all equipment thoroughly. Flushing with water and scrubbing is necessary to ensure binder performance. Clogging of equipment may occur if OC-Biobinder is mixed with other incompatible chemicals.

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.

If the binder produces foam during dilution the binder has been contaminated and equipment has not been cleaned properly.

9. Storage

Store in tightly closed original container in a well-ventilated area. The binder is best stored at room temperature or colder (above freezing). The cured binder may not be used in an acidic environment.

The information in this technical data sheet consists of guidelines from the OC-BioBinder® X4XXS 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® Lily product. The latest edition of this technical data sheet can be requested from OrganoClick.