Sustainable Cellulose Microfibers for Greener & Differentiated Products
FineCell’s CELLULOSE HYDROGEL

- A suspension, not a solution of Cellulose Microfibers in water
- pH≈7, usually delivered with a solid content of 1-2.5%
- Thick and shear thinning
- Stable and homogeneous
- Translucent and odorless
- Neither greasy nor sticky
Features of our Cellulose Micro-/Nanofiber

Dimension
Tunable length 100-900 nm
Width 3-4 nm

Tunable surface charge
Ranging from 0.1 to 1.1 mmol/g, corresponding to a nearly uncharged and an anionic surface (the surface of our Cellulose Micro-/Nanofiber is functionalized with carboxyl groups)
### RHEOLOGY VS SOLID CONTENT

<table>
<thead>
<tr>
<th>Shear rate (1/s)</th>
<th>Viscosity at 1.8% solid content (Pa·s)</th>
<th>Viscosity at 1% solid content (Pa·s)</th>
<th>Viscosity at 0.5% solid content (Pa·s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.1</td>
<td>141.8</td>
<td>5.2</td>
<td>0.5</td>
</tr>
<tr>
<td>1</td>
<td>22.0</td>
<td>1.4</td>
<td>0.05</td>
</tr>
<tr>
<td>10</td>
<td>3.8</td>
<td>0.3</td>
<td>0.02</td>
</tr>
</tbody>
</table>

**TEST CONDITION**

Kinexus Rotational Rheometer (Malvern) at room temperature and in cone-plate geometry. Approximately 1 ml of sample was utilized per run. The viscosity of the samples was measured across the shear rate range of 0.1 s\(^{-1}\) to 100 s\(^{-1}\). The samples were equilibrated for 3 min prior to each run.

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![Viscosity vs Shear Rate Chart](chart.png)

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