

TECHNICAL DATA SHEET

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Crysto™ Cellulose

Crysto Cellulose is a high-performance micro-nano hybrid crystalline cellulose that delivers profound interfacial modification properties – liquid/liquid (Pickering emulsification), and liquid/solid (composites) - and rheological properties.

This Plantrose® Product is manufactured by water-based technology, as a sustainable new plant-derived performance material.

Remarks:

- Crysto Cellulose is derived from deconstructing biomass using Supercritical Hydrolysis
- A colloidal gel consisting of a homogenous dispersion of irregular spherical particles of cellulose
- Residual lignin contributes color, and some resistance to oxidation
- Size ranges in the boundary between traditional micro- and nano- scaled products
- Cellulose & lignin are REACH and TSCA exempt

Item	Measure	Unit
Appearance	Hydrogel (brown)	
Solids content	15 to 30	%
Crystallinity	>80	%
Mean Particle Size	1.0	µm
pH	3.5 - 4.0	

Key Benefits:

- Homogenous dispersion of micro-scale particulates in the 0.5 to 1.5µm range
- Forms stable Pickering emulsion readily, and at room temperature
- Promotes viscosity, and can synergize with other rheological agents*
- Aids in particle suspension
- Humectancy (water binding)
- No chemicals added**

Applications:

- Oil-in-water (O/W) and water-in-oil (W/O) emulsions
- Coatings, adhesives, sealants and elastomers (CASE)
- Demanding water based oil & gas fluids
- Industrial fluids
- Advanced composites

Formulation Guidelines:

- Crysto Cellulose contains residual lignin that is soluble in pH above 9.0
- Typical usage levels: 0.5 to 5% (solids basis)

Stability: Stable between pH 4 - pH 9

Country of Origin: USA

Shelf Life: 12 months for unopened containers under normal storage conditions, customers are advised to evaluate the conformity of the product to specifications and suitability for the intended use beyond 12 months

** contact us for detailed information about this characteristic*

*** only water used in the process of isolating Crysto Cellulose*

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