



Your Solution for Paper  
Barrier Coating



# Technical Data Sheet

## Description and General information

CelluComp, a material sciences company, has developed and patented a process for extracting nano cellulose from root vegetable processing wastes. The patented process exposes microfibrils of the cellulose, which is bound in a platelet form. Micro fibrillated cellulose (MFC), a high research focus area of the paper industry, has been proven to enhance strength and barrier properties in materials. Using Curran® we have formulated a coating with excellent barrier properties, which is called REEF.

## Useful Information:

- Solids content is 33% +/- 1%
- pH 7-8
- Density is approx 1.02 (at 20°C)
- Anionic dispersion
- sensitive to frost: storage best > 5°C, < 40°C
- Mix well before use but avoid over-mixing to entrap air
- opened containers should be closed again after use to avoid skin formation and oxydation
- Complies with UK & EU food contact regulations
- use for water, grease (REEF 1&2)
- oxygen barrier (REEF-2)
- Heat-sealable (REEF-2)

## Application Hints & Tips

### **General**

- Apply 1<sup>st</sup> REEF layer onto substrate using multiple application methods
- If only one layer needed, dry REEF adequately (aprox 110°C). Air drying, infra red, ultrasonic drying are all options
- If 2<sup>nd</sup> layer of REEF needed (to reduce pinholes) apply second layer:
  - on top of the first layer but only if the first layer is touch-dried or almost immediately following the application of the first layer OR
  - should the first layer be fully dried, add the second layer of REEF with the addition of a wetting agent. Speak to CelluComp agent regarding best use of wetting agent.
- If paper substrate is filled with many other additives such as clays and or sizing agents (AKD, starch), speak to CelluComp agent

### **Flat Sheets or Paper**

- Reef can be used on any type of paper. However, best results the following guidelines can be adopted:
  - A paper with low porosity works best, glassine types of paper are ideal substrates
  - Reef works well as a barrier with 1 layer, however to 2 layers can be used to ensure the minimalization of pinholes
  - Recommended dry coat weights are anywhere between 3gm<sup>2</sup> to 20gm<sup>2</sup> (typically 8gm<sup>2</sup> is a good place to start)
  - Production using gravure, reverse gravure, rod and flexo possible.

### **Spray Coating 3D Molded Items**

- Reef can be sprayed onto 3D paper substrates
- It is highly recommended to prepare the substrate both in dry and wet molding using NEST (Curran + Fiber of choice).
- Depending on the spray system (air, airless, ultrasonic etc...) REEF can be diluted, if needed, to adjust viscosity.



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