# Natural Fiber-BioComposites

Water proof, compostable CAPROWAX P NF-BioComposites are fine-grained, free flowing, thermoplastic "Bio-Dry-Blends". The manufacturing is carried out with the binding agent CAPROWAX P6006-C65 as a powdery intermediate

CAPROWAX  $P^{\infty}$  6006-C65-NF41xx rosin free wood fibres (xx = 10 - 40%) CAPROWAX  $P^{\infty}$  6006-C65-NF5xxx microcristalline cellulose (xx = 10 - 40%) CAPROWAX  $P^{\infty}$  6006-C65-NF40xx cellulose fibres (xx = 10 - 40%)

## Coating, Bonding, Thermoforming, Sinter-/Core material

The powdery binding agent consists of aliphatic – biodegradable MARINE, home/industrial compostable – certified polyester and modified, readily biodegradable, renewable, GMO-free plant oil and is comparable with  $CAPROWAX P^{TM}$  6006-00-000

Tested by MFPA, University Weimar, in accordance with DIN EN 13432

Test material: CAPROWAX P<sup>®</sup>6006-00-000

Test certificate No.: P31/029-05

83,7 % organic carbon \*) of binding-agent are from biobased resources \*) calculated

Advantageous, fibre-friendly processing without extrusion at 100-160°C to the thermoplastic, compostable Bio-NFC or Bio-WPC.

The end products are created first by thermoplastic processing at 140-160°C with or without extrusion.

#### Optional processing without extrusion:

Dispersion, metering, powder coating, venting, drying at 70-80°C by IR or Micro-waves / sintering / fusing 140-160°C, grouting 100-130°C / cooling down to RT Further thermopressing at 100-130 °C. Thermoforming at 80-100°C

#### <u>Injection moulding / deep drawing:</u>

Predrying at  $50^{\circ}C/12h$  for thermally (100-120°C) compacted, low-dust NF-BioComposite-Pellets and after that injection moulding processing in a range of  $140^{\circ}-160^{\circ}C$ . Mould  $15^{\circ}C$  Colouration with CAPROWAX P<sup>TM</sup>-Masterbatches see under www.caprowax-p.eu

### Following products can be created with Bio-NFC and Bio-WPC:

Textil-/fiber composites, fibers coating, injection moulding, sandwich plates, trays, décor, sheets, composite boards, sintered compacts, core material and so on.

Test material available in form of a 300g / 1000g lab sample upon consulting

