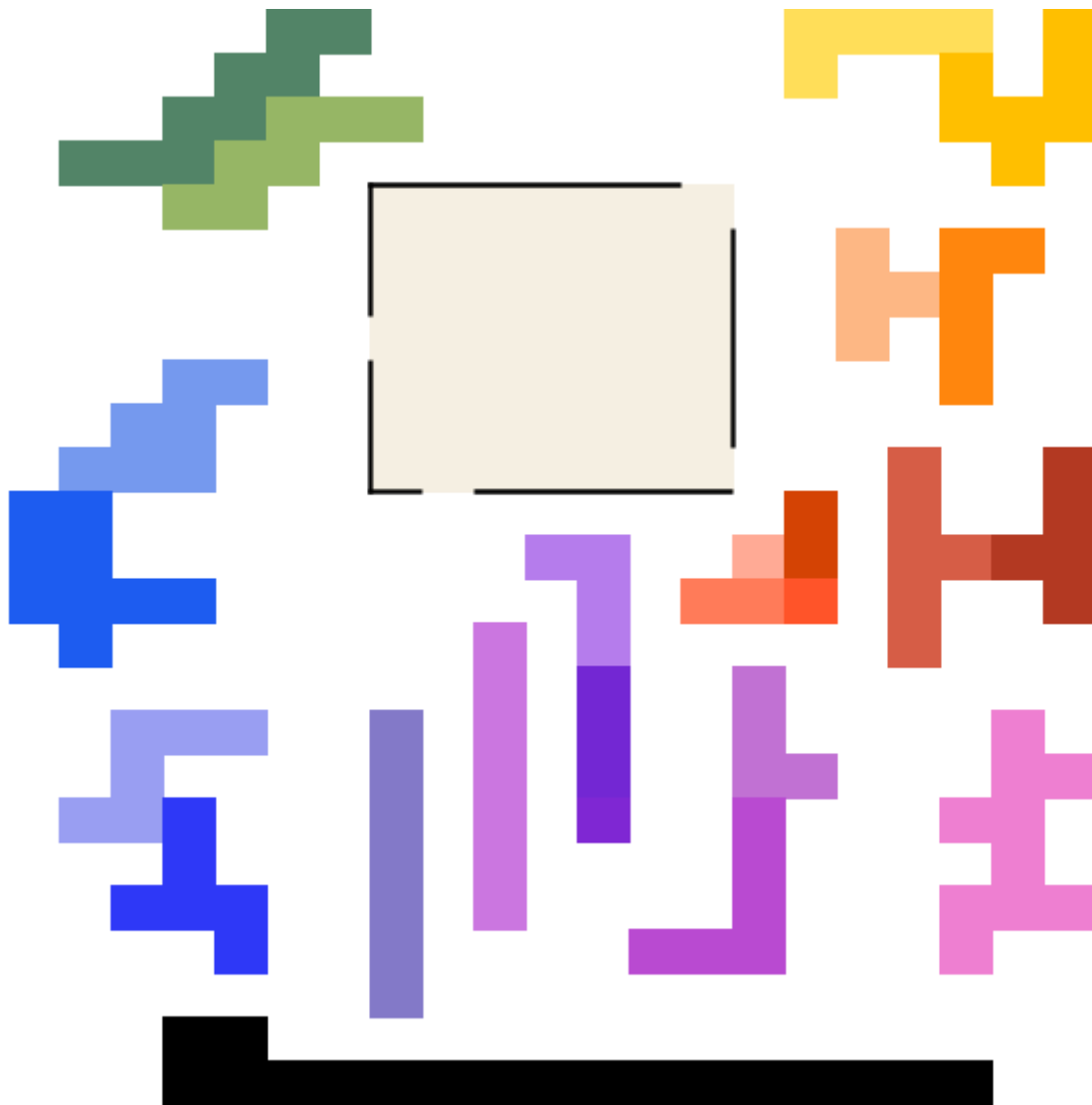


# CAPROWAX P™ BioMineralComposite direct compounds

Coloured, thermoplastic, waterproof, compostable materials for biodegradable, environment-friendly, soil-improving applications excluding the food sector: Extrusion/injection moulding/thermoforming/compression and moulded parts, stamping, roller printing, seals, 3D printing, natural fiber coating, films, hot-melt adhesives, cups, growing and soap dishes, vases, tins, signs.

The direct compounds consist of compostable binder and natural calcite Harmless colourants made from bio-based plant/activated carbon, ultramarine, non-magnetic iron oxides, manganese violet, mica, kaolin without addition of TiO<sub>2</sub> The binder is waterproof, consists of aliphatic - biodegradable MARINE, home/industrially compostable - certified polyesters and modified, easily biodegradable, renewable, GMO-free vegetable oil (see page 5).

The coloured BioMineralComposites comply the requirements of DIN EN 13432



CAPROWAX P™ compostable of course

RAIN BOW SOIL

## CAPROWAX P™ BioMineralComposite direct compounds

Compounds contain  $\leq 1\%$  coloured, inorganic pigments according to DIN EN 13432

Thermoplastic processing in the range of 90-200°C, briefly up to 220°C

The colour shades are comparable or similar to the real product colours.

CAPROWAX P™	Colour shade	Description
BM42030 Red 1142	LP	Direct compound Calcite, Ultramarine Red
BM42030 Red 9106 mpc	LP	Direct compound Calcite, Mica/Iron oxide Red nm
BM42030 Red 9105 mpc	LP	Direct compound Calcite, Mica/Iron oxide Red nm
BM42030 Red FK 1144	LP	Direct compound Calcite, Iron oxide Red nm, Kaolin
BM42030 Red FK 1145	LP	Direct compound Calcite, Iron oxide Red nm, Kaolin
BM42030 Rot FK 1147	LP	Direct compound Calcite, Iron oxide Red nm, Kaolin
BM42030 Red FK 1146	LP	Direct compound Calcite, Iron oxide Red nm, Kaolin
BM42030 Orange FK 2211	LP	Direct compound Calcite, Iron oxide Red nm, Kaolin
BM42030 Orange FK 2210	LP	Direct compound Calcite, Iron oxide Red nm, Kaolin
BM42030 Orange FK 2212	LP	Direct compound Calcite, Iron oxide Red nm, Kaolin
BM42030 Yellow FK 3365	LP	Direct compound Calcite, Eisenoxid Yellow nm, Kaolin
BM42030 Yellow FK 3364	LP	Direct compound Calcite, Eisenoxid Yellow nm, Kaolin
BM42030 Yellow FK 3366	LP	Direct compound Calcite, Eisenoxid Yellow nm, Kaolin
BM42030 White 9004	LP	Direct compound Calcit, natural mica, mpc
BM42030 White		Basic material direct compound with Calcit

LP: Laboratory prototype    R: reddish    G: greenish    B: bluish    mpc = matt perlescent  
 BM = BioMineralComposite Calcite, acid binding    FK = Kaolin calcined    nm = not magnetic

For your first visual assessment you will receive up to 4 examples in form of buttons



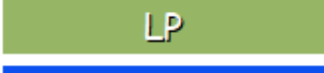

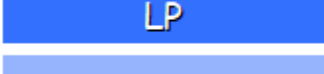
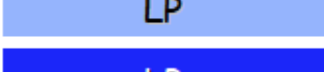
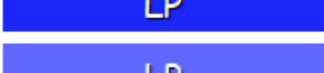
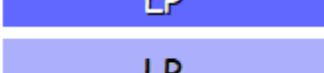
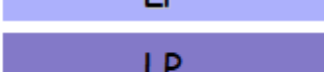






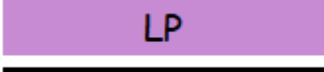


For further tests: Scale-up and order quantities on request

[www.caprowax-p.eu](http://www.caprowax-p.eu)

continuation see page 3

# CAPROWAX P™ BioMineralComposite direct compounds

continued from page 2

CAPROWAX P™	Colour shade	Description
BM42010 Green FK 4451 nm	 LP	Direct compound Calcite, Pigment mix Green, Kaolin
BM42010 Green FK 4454 nm	 LP	Direct compound Calcite, Pigment mix Green, Kaolin
BM42010 Green FK 4453 nm	 LP	Direct compound Calcite, Pigment mix Green, Kaolin
BM42030 Blue G 5548	 LP	Direct compound Calcite, Ultramarine Blue
BM42030 Blue FK G 5550	 LP	Direct compound Calcite, Ultramarine Blue, Kaolin
BM42030 Blue FK G 5551	 LP	Direct compound Calcite, Ultramarine Blue, Kaolin
BM42030 Blue R 5549	 LP	Direct compound Calcite, Ultramarine Blue
BM42030 Blue FK R 5552	 LP	Direct compound Calcite, Ultramarine Blue, Kaolin
BM42030 Blue FK R 5553	 LP	Direct compound Calcite, Ultramarine Blue, Kaolin
BM42030 Violet B 6642	 LP	Direct compound Calcite, Ultramarine Violet
BM42030 Violet R 6640	 LP	Direct compound Calcite, Ultramarine Violet
BM42030 Violet B 6648	 LP	Direct compound Calcite, Violet manganese
BM42030 Violet FK B 6647	 LP	Direct compound Calcite, Violet manganese, Kaolin
BM42030 Violet FK B 6645	 LP	Direct compound Calcite, Violet manganese, Kaolin
BM42030 Violet R 6641	 LP	Direct compound Calcite, Violet manganese
BM42030 Violet FK R 6649	 LP	Direct compound Calcite, Violet manganese, Kaolin
BM42030 Violet FK R 6650	 LP	Direct compound Calcite, Violet manganese, Kaolin
BM42030 Black V 8117	 LP	Direct compound Calcite, Activated Carbon bb
LP: Laboratory prototype    R: reddish    G: greenish    B: bluish    FK = Kaolin, calcined <b>BM = BioMineralComposite, natural Calcite, acid binding</b> V: biobased, bb    nm = non magnetic		

# Applications with CAPROWAX P™ Materials

## Injection moulding



**Masterbatches**  
with compostable carrier material

## Thermoforming Foil / Sheets



## Buttons



## Blow moulding



MATERIALFORSCHUNGS- UND -PRÜFANSTALT AN DER BAUHAUS-UNIVERSITÄT WEIMAR

Department: Department of Environment  
 Head of Department: Prof. Dr.-Ing. J. Londong  
 Department Manager: Dipl.-Ing. J. Müller



AMTLICHE PRÜFSTELLE  
 Akkreditiertes Prüflaboratorium

MFA Weimar  
 Amalienstraße 13  
 99423 Weimar  
 Germany  
 Phone. 03643 / 564 353  
 Fax. 03643 / 564 201

## Test certificate No. P 31/029-05

**Order:** Test of a biodegradable polymer / wax-compound  
 CAPROWAX P® 6006-00-000 to German Institute for Standardization  
 DIN EN 13432 with the proof of the disintegration in a bench-scale test  
 (A.3), proof of the quality of the composts (8.), including the ecotoxicological  
 harmless state (A.4)

**Customer:** POLYFEA Polymer- und Produktentwicklung Albrecht Dinkelaker  
 Ernst-Wiss-Str. 18  
 65933 Frankfurt / Main

**Order date:** 04.11.2004

**Test object:** CAPROWAX P® 6006-00-000  
 foil 500 µm / KW 42 / 2004 (foil 1), MFA-No. BAW 4869  
 CAPROWAX P® 6006-00-000  
 powder < 750 µm / 06.11.03 MFA-No. BAW 4869

**Test condition:** Test duration 12 weeks, 1 week at temperature of approximately 65 °C,  
 11 weeks at temperature of approximately 45 °C

**Test criterion:** Degradation of the BAW > 90%, ecotoxicological harmless state compared  
 to compost material, compost quality

**Test period:** 23.11.04 – 16.02.05

**Test results:** The examined material samples fulfil the criteria of the disintegration for the  
 aerobic process of composting. The examined material CAPROWAX P® 6006-  
 00-000 with a foil strength of 500 µm was degraded with several routine tests in  
 each case to more than 90% within 12 weeks.  
 After ending of the test period the measuring results of the compost  
 corresponded to the usual averages of the RAL quality tests. Significant  
 differences as a result of BAW addition were not found. The comparison with  
 the authoritative control samples revealed no higher heavy metal content. At the  
 end the compost was rotted sufficiently.  
 A detailed test report to the investigations was given at MFA Weimar  
 (No. B 31/188-05).

Weimar,  
 2005-06-02

  
 Prof. Dr.-Ing. J. Bergmann  
 Scientific Director



  
 Dipl.-Ing. J. Müller  
 Project Manager