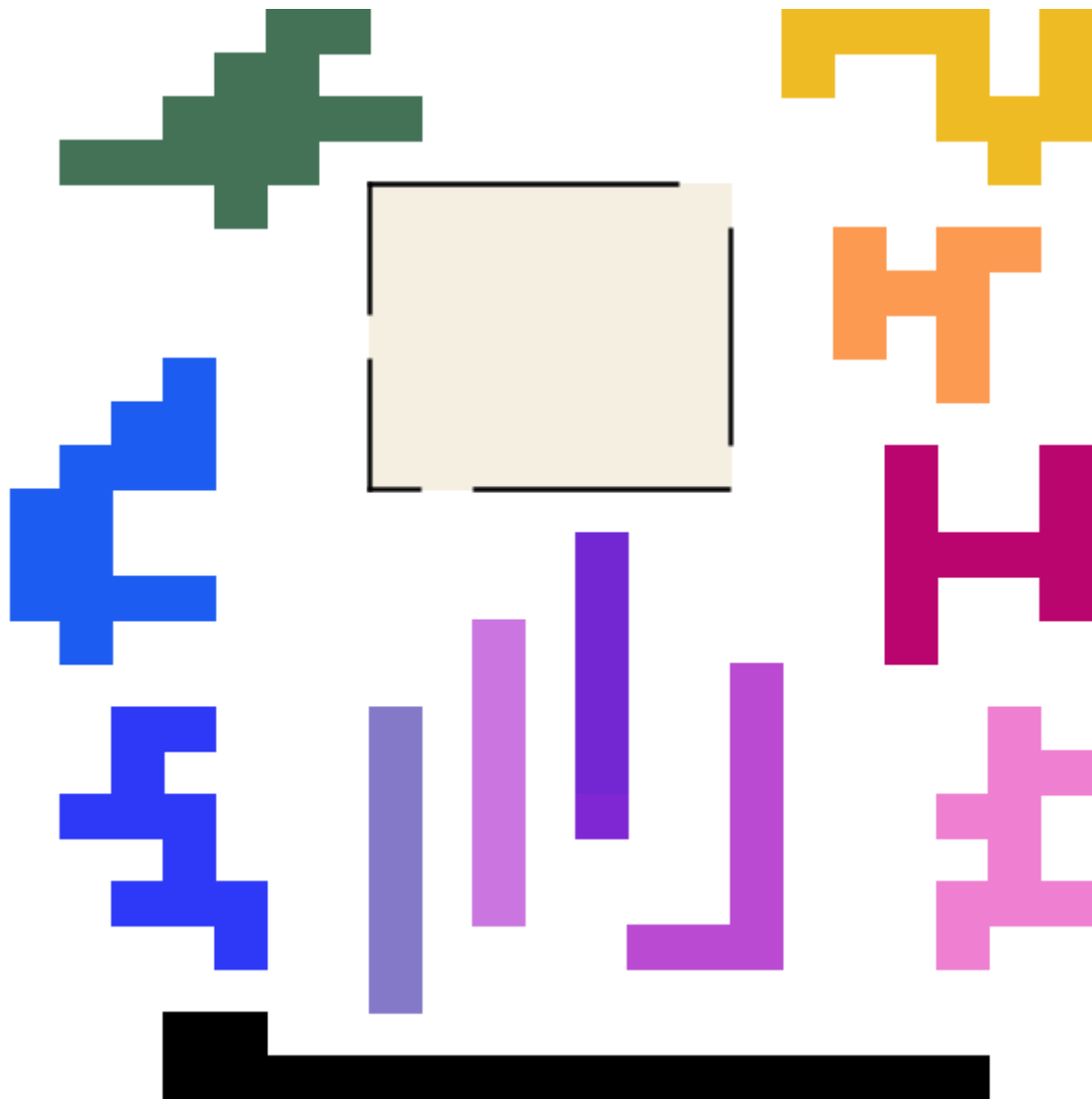


CAPROWAX P™ BioMineralComposite direct compounds

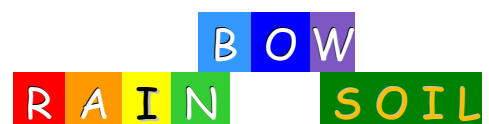
Coloured, thermoplastic, waterproof, compostable materials for biodegradable, environment-friendly, soil-improving applications excluding the food sector: Extrusion/injection moulding/thermoforming/compression and moulded parts, stamping, roller printing, seals, 3D printing, natural fiber coating, films, 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 TiO₂ 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 4).

The coloured BioMineralComposites comply the requirements of DIN EN 13432



CAPROWAX P™ compostable of course



Applications with CAPROWAX P™ Materials

Injection moulding



Masterbatches
with compostable carrier material

Thermoforming Foil / Sheets



Buttons



Blow moulding



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 9102 mpc	LP	Direct compound Calcite, Mica/Iron Oxide Red nm
BM42030 Orange 2209	LP	Direct compound Calcite, Iron Oxide red nm
BM42030 Yellow 3363	LP	Direct compound Calcite, Iron Oxide Yellow nm
BM42030		Basic material BioMineralComposite Calcite
BM42030 White 9003	LP	Direct compound Calcite, Natural Mica, mpc
BM42010 Green 4452	LP	Direct compound Calcite, Pigment mix Green nm
BM42030 Blue G 5548	LP	Direct compound Calcite, Ultramarine Blue
BM42030 Blue R 5549	LP	Direct compound Calcite, Ultramarine Blue
BM42030 Violet B 6642	LP	Direktcompound Calcit, Ultramarin Violett
BM42030 Violet R 6640	LP	Direktcompound Calcit, Ultramarin Violett
BM42030 Violet B 6639	LP	Direktcompound Calcit, Manganviolett
BM42030 Violet R 6641	LP	Direktcompound Calcit, Manganviolett
BM42030 Black V 8117		Directcompound Calcite, Activated Carbon bb

LP: Laboratory prototype R: reddish G: greenish B: bluish mpc = matt perlescent
 BM = BioMineralComposite, natural Calcite, acid binding V: biobased, bb nm = non 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

CAPROWAX P™ compostable of course

B O W
 R A I N S O I L

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



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