COLOUR PALETTE with LP-Laboratory prototypes of CAPROWAX PTM - Masterbatches without addition of TiO2

LP-Colour prototypes see pages 2-5: CAPROWAX P^{TM} + shade + LP-Code Sampling with 50g LP-Masterbatch-Recipes in form of flakes. After customer selection a technical sample will be produced. Colour buttons on request

Further projects with CAPROWAX P™- basic material

Monofilaments, hotmelt: CAPROWAX PTM 6006-00-000
Plasticine, modelling bloc CAPROWAX PTM 6070-T215

CAPROWAX PTM 6070-C65-T215

Hydrophobising: CAPROWAX PTM 6077-1004

Bio-Dry-Blend-NF-Composites: CAPROWAX P 6006-65-NFxxxx with

10 - 40 % content of nature fibres

Scale of projects: According to agreement

Samples on request: 300g in fragmented or powdered form

Material for projects batchwise on request

Miscellaneous: Product information and SDS

Project request at info@polyfea2.de

Albrecht Dinkelaker

Polymer- and Product Development

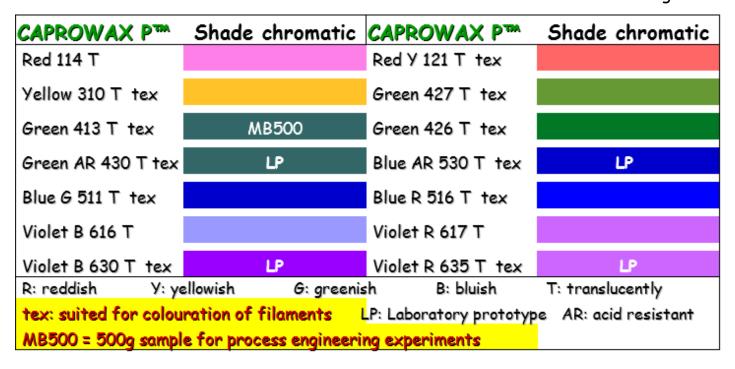
Talstrasse 83, D 60437 Frankfurt am Main

Fon ++49 60 76 89 39 10 Mobil ++49 176 55 28 46 04

Bankverbindung und Finanzamt: Auf Anfrage Umsatzsteuer-ID.-Nr.: DE 165 604 009

Project LP-Masterbatches for translucent colouration

Page 2 of 5



Addition of Masterbatches to different bioplastics: 0,5-4% Injection- /Vacuum- /Blow- and Compression-Moulding, Filaments, Foils/Sheets, Hotmelts, Thermoplastic Plasticine, Foams and Coating. All shades of colour are comparable or similar to the product colours.

Pearlescent Masterbatches *LP without addition of Titanium Dioxide

Matte Gold light 9307		Pearlescent neutral 9002	u	
Matte Gold medium 9317	#	Pearlescent white 9011	u	
Matte Gold dark 9314		Matte Silver classic V 9012	#	
Red 9101		Matte Silver silky V 9016	#	
Bronze 9701		Matte Silver grey V 9014	#	
# = also for opaque or filled BioPolymers / u = matte pearlescent for all colours				
V = vegetable carbon black, biobased / *LP = Laboratory prototype				

Pigment mixtures are low-dusty incorporated in compostable carrier material and masterbatch pellets are added to different bioplastics: 2-4%.

Colourations of bioplastics comply the specifications of DIN EN 13432.



Project LP-Masterbatches for chromatic, covering colouration

Page 3 of 5

CAPROWAX PTM	Shade chromatic	CAPROWAX PTM	Shade chromatic	
Red FK 133 tex	LP/AR	Red FK 112	LP	
Lava-Red 134 QX	LP	Red 135 BM QX	LP	
Red FK 117	LP/AR	Red FK 130	LP/AR	
Red FK 115	LP/AR	Red 116 lw tex	MB 500/AR	
Orange FK 205	LP/AR	Orange 206 BM QX	LP	
Orange FK 203	LP/AR	Orange FK 204	LP/AR	
Yellow FK 312	LP/AR	Orange 204 lw tex	AR	
Yellow FK 306	LP/AR	Yellow 314 BM QX	LP	
Yellow FK 320	LP/AR	Yellow 307 lw tex	AR	
Green 444 BM QX	LP			
Green 416 tex		Green 417 tex		
Green 418 tex		Green 448 tex		
Green AR 433 tex	LP/AR	Green AR 435 tex	LP/AR	
BM: Biomineral, natural Calcium Calcite FK: Kaolin, calcined				
AR = Acid resistant LP: Laboratory prototype lw = ≤ 0,1% TiO2 in coloured polymer				
QX = soil improving / acid binding / Water retention capacity				
MB500 = 500g sample for process engineering experiments after consultation				
tex = suited for colour			ation next page >>>>>>	

Products for soil improvement QX:

QX = biobased vegetable carbon, Lava rock flour, water retention capacity

BM = BioMineral, natural calcite, acid-binding QX and soil similar

FK = calcined Kaolin, compost friendly

Addition of CAPROWAX P - Masterbatches to different bioplastics: 0,5 to 4 % The palette of masterbatches is changed to the eco-friendly, soil similar, calcined, pigmentlike Kaolin (FK) as a white pigment for moderate brightening.

Lava rock flour is able to remove athmospheric CO2 by weathering

All shades of colour are comparable or similar to the product colours.



Project LP-Masterbatches for chromatic, covering colouration

Page 4 of 5

CAPROWAX PTA	Shade chromatic	CAPROWAX PTM	Shade chromatic	
Green FK 441	LP	Green FK 446 tex	LP	
Green FK 440	LP	Blue FK <i>G</i> 543	LP	
Blue <i>G</i> 545 BM QX	LP	Blue FK G 509	LP	
Blue FKG 510 tex		Blue FK G 512		
Blue G 510 lw tex	MB500	Blue FK R 541	LP	
Blue R 547 BM QX	LP	Blue FK R 542	LP	
Violet B 636 BM QX	LP	Violet R 637 BM QX	LP	
Violett FK B 605	LP/AR	Violet FK R 608	LP/AR	
Violet B 607 lw tex	AR	Violet R 610 lw tex	AR	
Violet B 606 lw tex	AR	Violet R 609 lw tex	AR	
Brown FK V 712 bb QX	LP/AR	Brown FK 705 S wcb tex	LP/AR	
Brown FK V 709 bb QX	LP/AR	Brown FK V 711 bb QX	LP/AR	
Lava Brown 715 QX	LP	Lava Brown 717 QX	LP	
V: vegetable Carbon bb: biobased FK: Kaolin, calcined				
BM: Biomineral, natural Calcite AR = acid resistant lw = ≤ 0,1% TiO2 in coloured polymer R: reddish G: greenish B: bluish wcb = without carbon black LP: Laboratory Prototype				
tex: suited for colouration of filaments S: heat stabel up to 220°C				
QX = soil improving / acid binding / Water retention capacity				
MB500 = 500g sample for process engineering experiments				

Products for soil improvement QX:

QX = biobased vegetable carbon, Lava rock flour, water retention capacity

BM = BioMineral, natural calcite, acid-binding QX and soil similar

FK = calcined Kaolin, compost friendly

Addition of CAPROWAX P - Masterbatches to different bioplastics: 0,5 to 4 % The palette of masterbatches is changed to the eco-friendly, soil similar, calcined, pigmentlike Kaolin (FK) as a white pigment for moderate brightening.

Lava rock flour is able to remove athmospheric CO2 by weathering

All shades of colour are comparable or similar to the product colours.



Project LP-Masterbatches for achromatic, covering colouration

Page 5 of 5

CAPROWAX PTA	Shade achromatic	Description	
White FK 005 tex	AR	Kaolin, calcined	
White C 004 BM QX	MB500	natural Calcite	
Grey 821 BM QX ab		natural Calcite/Iron Oxide Black	
Grey FK 822 wcb	LP/AR	Kaolin, calcined / Iron Oxide Black	
Grey FK 824 S wcb tex	LP/AR	Kaolin, calcined / Iron Oxide Black (5)	
Grey FK V 827 bb QX	LP/AR	Kaolin, calcined / vegetable carbon black	
Lava-Grey 833 QX	LP	Lava rock flour volcanic eifel, Iron Oxide, Kaolin	
Black 801 wcb	AR	Iron Oxide Black	
Black 803 S wcb tex	LP/AR	Iron Oxide Black (5)	
Black V 804 bb QX	AR	vegetable Carbon Black	
Lava Black 806 QX	LP	Lava rock flour Vulkaneifel, Eisenoxid	
V: vegetable carbon black	bb = biobased	BM: Biomineral, natural Calcite	
FK: Kaolin, calcined	AR = acid resistant	tex = suited for colouration of filaments	
LP: Laboratory sample	wcb = with out carbon black S: heatstable up to 220°C		
QX = soil improving / acid binding / Water retention capacity			
MB500 = 500g sample for process engineering experiments			

Products for soil improvement QX:

QX = biobased vegetable carbon, Lava rock flour, water retention capacity

BM = BioMineral, natural calcite, acid-binding QX and soil similar

FK = calcined Kaolin, compost friendly

Addition of CAPROWAX P - Masterbatches to different bioplastics: 0,5 to 4 % The palette of masterbatches is changed to the eco-friendly, soil similar, calcined, pigmentlike Kaolin (FK) as a white pigment for moderate brightening.

Lava rock flour is able to remove athmospheric CO2 by weathering

All shades of colour are comparable or similar to the product colours.

