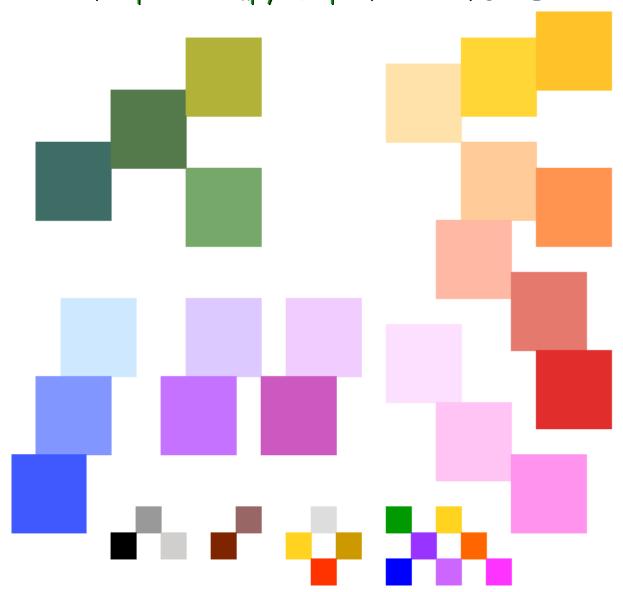
Masterbatches delivery list 06-25 CAPROWAX PTM

Master Datches for Bioplastics/Biocomposites/Blends: PLA, PBS, PHA, PCL, CAPROWAX PTM/Blends/BioMineralComposite, Bio-NFC/WPC, Casein, PVOH, Polysaccharides/Derivates, PVAc/Blends, Bio-TPE/UPR, NIPU.

As colourants are used biobased, biomineral and harmless inorganic pigments with moderate, lightfast brightening without addition of Titanium Dioxide.

The carrier material is waterproof and consist of aliphatic - biodegradable MARINE, home/industrial compostable - certified polyester and modified, readily biodegradable, renewable, GMO-free, without food/fodder plant oil. Colourations of bioplastics comply the specifications of DIN EN 13432.



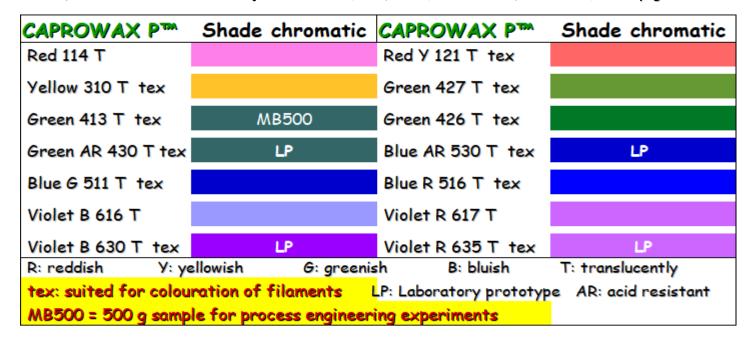
Albrecht Dinkelaker Polymer- and Product Development info(at)polyfea2.de www.caprowax-p.eu



>COLOURATION<

Masterbatches for translucent colouration

page 2 of 4



The compostability of carrier material is examined by MFPA, University Weimar:

Test material: CAPROWAX P® 6006

Test certificate No.: P31029-05 according to DIN EN 13432

Thermoplastic application for translucent to transparent, full covering and pearlescent colouration: Processing at 90-200 °C, short time up 220 °C.

Pigments are biobased, bio-mineral, mineral, harmless inorganic from synthetic production.

Moderate, lightfast brightening with calcined Kaolin without addition of TiO2.

They are harmless, lightfast, non-migratory, temperature stable, majority insoluble in water, chemically comparable with natural mineral pigments, already mineralised and partially soil improving: QX see page 3

They are low-dusty incorporated in compostable carrier material and masterbatch pellets are added to different bioplastics in a range of 0,5-4 %.

Pearlescent Masterbatches mpc LP without addition of Titanium Dioxide

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

Colourations of bioplastics comply the specifications of DIN EN 13432.



CAPROWAX PTA		Shades	CAPROWAX PTM	1	Shades
Red <u>F</u> K 133		LP/AR	Red FK 112		LP
Lava-Red 134	QΧ	LP	Red FK 117		LP/AR
Orange FK 204		LP/AR	Orange FK 203		LP/AR
Orange 206 BM	X	LP	Orange FK 205		LP/AR
Yellow FK 320		LP/AR	Yellow FK 306		LP/AR
Yellow 314 BM	X	LP	Yellow FK 312		LP/AR
White C 004 BM	X	MB500	White FK 005		MB500/AR
Green 416			Green 417		
Green FK 446		LP	Green FK 440		LP
Green AR 460 BM	QΧ	LP	Green FK 443		LP
Blue FK G 510		LP	Blue AR 555 BM	QX	LP
Blue FK G 512			Blue FK <i>G</i> 509		LP
Violet FK B 605		LP	Blue FK R 542		LP
Violett FK B 643		LP	Violet FK R 608		LP
Brown V 713 BM	X	LP	Violet FK R 644		LP
Brown FK V 709	X	LP/AR	Brown V 724 BM	QX	LP
Lava-Brown 717 Q	X	LP	Brown FK V 711	QΧ	LP/AR
Grey 821 BM	įχ		Lava-Brown 715	XÇ	LP
Lava-Grey FK 833 Q	X	LP	Grey FK 824 5		LP/AR
Black 801		AR	Black V 804	QΧ	AR
Black V 8121	įχ	LP/AR	Lava-Black 806	χÇ	LP
BioMineralComposite				XÇ	AR
AR = acid-/alkali stable S: heat stable up to 220 °C LP: Laboratory Prototype R: reddish G: greenish B: bluish MB500 = 500 g sample for process engineering experiments					

Products QX for soil improvement and fertility:

QX = Soil improvement, water retention capacity, fertility

V = Biobased: Vegetable carbon from coconut shells/Activated carbon from wood

BM = BioMineral, natural Calcite, acid-binding

Lava = Lava rock flour from the volcanic eifel

FK = Moderate brightening with the eco-friendly, pigmentlike, Kaolin (calcined)
Addition of CAPROWAX P - Masterbatches to different bioplastics: 0,5-4/6 %.

CO2 long-term fixation by vegetable carbon/lava rock flour



Your order of CAPROWAX PTM - Masterbatches

See colour palettes page 2-3: Shades of colours + code

All shades of colour are comparable or similar to the product colours. Masterbatches are produced batchwise together with compostable carrier material and pigments by contract manufacturing.

Technical samples: For you first tests: 4 samples a 50 g pellets or LP-flakes

For additional process engineering experiments you can get 500 g MB500 samples see page 2-3.

After consultation 20-25 kg testmaterial for scaling up

New MB-Recipes: Coloured CAPROWAX PTM- Buttons on request.

Supply quantities: 100 kg, 200 kg, 500 kg

+/- 25 kg: After your selection you will get an

offer about location-based, direct delivery

25 kg PE-Bags in For a better raw material procurement a

carton or on palett yearly forecast is required

*) Since supply chain crisis the delivery of raw

material is temporarily delayed

Market area: European Union

Prices: According to offer Payment conditions: According to offer

Delivery date *): after completely delivery of raw material to

the toll manufacturer plus up to 6 - 7 weeks

Miscellaneous: Product infos and SDS

Informations, quote requests and orders at

Albrecht Dinkelaker

Polymer and Product Development

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Banking details/Finance office: On request VAT-No.: DE165 604 009