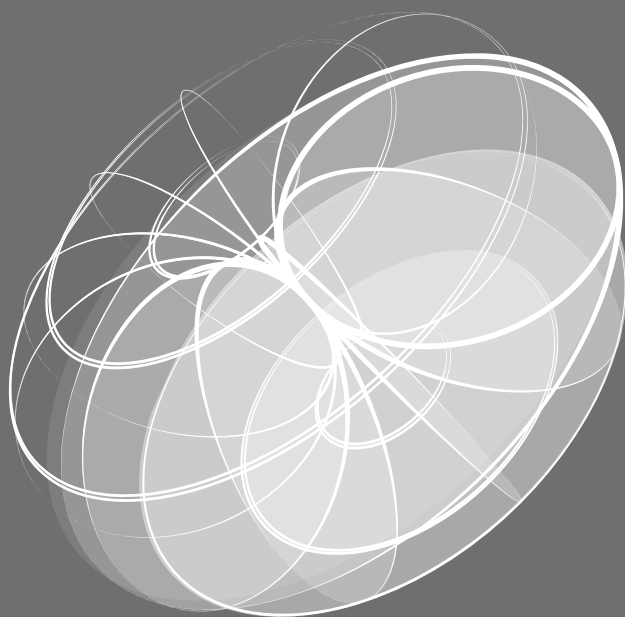




GRAFE

FUTURE IN PLASTICS



3D-PRINT

FILAMENT MASTERBATCH



TAILORMADE FILAMENT

A Masterbatch for all 3D printer-
and filament producers who prefer
a custom-tailored material.

III INNOVATION

GRAFE has outstanding development capabilities. This is illustrated by the fact that one third of our staff is working in our laboratories and technical application center

In cooperation with globally operating research institutes, our focus lies on the development of innovative products. Over the past years, we have led the way in important research projects whose results have revolutionized the market.

III CUSTOMER PROXIMITY

Thanks to our experience and flexibility in various production methods, our products are quickly and easily available. Meeting the individualized needs of our customers is a welcome challenge for our research division and drives the development of new and innovative products. Customer proximity is at the core of our business philosophy.

III QUALITY

All divisions in our group are certified and work in strict accordance with the standards DIN EN ISO 9001, IATF 16949 and ISO EN 50001. Before our products are sent out for delivery, they are inspected by our expert quality team at our in-house lab using state-of-the-art testing equipment.

III COMPETENCE

Since the founding of our company in the year 1991, we have been active in the most innovative area of the dynamic plastics market. Plastic products have become increasingly sophisticated in their replacement of traditional materials. The demands placed on raw materials have been rising in equal measure. Our many years of experience and comprehensive know-how enable us to provide our customers with products that command an outstanding position on the market.

MASTERBATCH FOR 3D PRINTING / COLOR / EFFECTS / ADDITIVES

FUTURE IN PLASTICS

FILAMENT COLOR SETTING

III STANDARD / CUSTOMER REQUIREMENT

Whether according to individual color templates or international color standards such as Pantone, RAL, HKS and NCS, we produce our high-quality color masterbatches according to your specifications and your desired carrier material. All with the quality promise of GRAFE color perfection.

- All masterbatches are tested for color fidelity and material quality in the filament extruder during development and before shipping.
- Sample material with dosing recommendation
- Standard material according to RAL K7: PLA, PE, PET, PETG, PP, PC, PS crystal clear, PA, ABS
- Masterbatch and compounds possible

FILAMENT EFFECTS

By adding substances, it is possible to give plastics a new optical quality. The combination of plastic with flakes, cellulose fibers, particles and a suitable texture creates a visually interesting and haptically high-quality surface.

- High degree of individualization of the effects possible
- Application: Automotive, interior or exterior elements, Cosmetics packaging, special edition toys, stationery

III TERRAZZO EFFECTS

- Stone or textile look with fibers or contrasting flakes

III GLITTER EFFECTS

- Glitter and mica, depending on the dosage, elegant or fashionably eye-catching

III GLOW IN THE DARK

- Storing and emitting light energy in the dark afterglow

III NEON COLORS

- All neon colors can be developed as 3D printing filament

III SILK EFFECT HIGH-GLOSS FILAMENT BLENDS

GRAFE has developed a sample collection of existing and mixable color variants with which the silk gloss can be reproduced very well. Customers can also get inspiration for their own developments from 17 mixing examples.



SCAN QR CODE

Mixing table of the basic colors with associated dosing recommendation

- White polymer blend as carrier material
- Color selection guarantees a high gloss level
- Quick customization thanks to the ability to mix the basic shades according to the table
- Applications: Cosmetic packaging, seasonal articles

BASIC COLORS PATTERNS		
Color	Name	Color.-Nr.
	PEARLESCENT WHITE	BASE COLOR FOR ALL BLENDS 22-03043-A
	LEMON YELLOW	22-03040-A
	SUN YELLOW	22-03042-A
	ORANGE	22-03045-A
	RED	22-03046-A
	VIOLET	22-03047-A
	LILAC	22-03050-A
	BLUE	22-03048-A
	GREEN	22-03049-A
	BLACK	22-03051-A

FILAMENT ADDITIVES

III MATTING AGENT

The matting agent from GRAFE creates elegant-looking 3D printed components that impress with their high-quality appearance, as the light reflections on the material - especially at the edges of the process-related layer structure - are greatly reduced. The diffuse light scattering creates a matt, velvety surface..

- Recommended dosage: from 7.5 percent
- UV-resistant
- Can be used for any color batch or compound
- Gloss level can be reduced by 80-90 percent
- Application: Interior, visible switches, prototypes

III FLAME RETARDANT

Masterbatch for filaments with flame retardant finish according to fire protection standard UL 94-0:

- Dosage: 20 percent
- Temperature resistance: 280 °C
- Applications: Electronics, medical technology, vehicle construction, model making

III LASER MARKING

The addition of additives significantly increases the contrast of laser markings. A light marking is just as feasible as a black background as a dark marking on light-colored or natural-colored plastics. This enables sharp-edged, individual and permanent marking of products

- marking of products without prior surface treatment.
- The marking is adapted to the customer's individual desired color
In-house testing is carried out using Near InfraRed Laser (NIR) with a wavelength of 1064 nm
- Optimum process parameters are passed on to the customer

III FLOW ENHANCEMENT

- Plastics: PLA, PETG, TPU, PC, PA, others on request
- More even cooling of the components

III UV STABILIZATION

- For all plastics and customer developments
- Low addition dosage
- Application: Components that are exposed to daylight and sunlight

III ANTIVIRAL PROPERTIES

- 2.5 percent dosage
- Effective throughout the entire component
- Certified according to ISO 22196

III FURTHER ADDITIVES

We are happy to develop customized solutions according to your requirements on request

FILAMENT IDENTIFICATION

III ORIGINALITY CHECK IN PLASTIC

A marker incorporated into the filament is used to determine the originality/origin of the filament or printed component with the aid of a reader. The originality of the material is particularly important for components that have to realize a guaranteed service life, for example, for regulatory requirements or licensed products.

- GRAFE is the exclusive development partner together with Tailorlux
- Plastics: PLA, PETG, PA, PC, other plastics are possible
- Reliable determination of origin from the filament to the finished component
- Measurement possible on the handheld device or in the certification laboratory
- Application for system-relevant components, medical technology, automotive.



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3D – PRINT

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