AF-Complex® – Individual Masterbatch-Performance

AF-COLOR

AF-COLOR
Branch of AKRO-PLASTIC GmbH

AF-Complex® – Your Product Ideas A

Being an integrated solutions provider, we are satisfied only when your end product actually demonstrates the desired functionality. Not only optical characteristics such as color and surface quality, but also characteristics such as UV radiation or thermal resistance are therefore the focus of our attention. The chemical bonds in polymer chains are able to withstand these influences only for limited periods of time.

With our product solutions, we offer you the option of increasing the lifetime of your product beyond its usual period. From our product range of AF-Complex® additive masterbatches, you can select a variety of chemical substances for achieving the optimal result for your application. It is also possible here to combine multiple effects into one masterbatch. In this way, the effect of the individual components can be heightened or can be protected during the production process. Moreover, you save cost or improve performance at no cost in this way.

Our wide expertise is the basis for the development of suitable recipes. Each material must meet different requirements, which is why it is necessary to verify the expected results with the help of specific tests. Thus, we are able to deliver meaningful results even before the start of large-scale production, e.g. through the execution of weathering tests using our extensive equipment.

Shrinkage & warpage after recrystallisation can be balanced with our PE-HD nucleating agents.

Optimised Products for Your Processing Method

The processing methods injection moulding and extrusion have different requirement profiles with regard to the complexity of an additive masterbatch. Whereas the focus in injection moulding is generally on UV and thermal stabilisation as well as slip agents, the focus in the area of packaging (cast/blow film, injection blow moulding) is primarily on anti-block or matting agents, clarifiers and additives for anti-static properties.

We provide expert advice in that we estimate the influence of interactions resulting from the combination of the individual components (polymer – additive – color) in your application. Furthermore, we also point out the advantages as well as risks resulting from the interaction of the components. We draw on our long-standing experience to also provide you with reliable information about pertinent regulations and ordinances in various fields of application.

UV filter concentrates protect sensitive packaging goods against damaging UV radiation effects.

Are Our Benchmark

Products	Application/Effect	Polymers
Antiblock	Reduction of "blocks" = adhesion of film and plate surfaces • Acceleration of the packaging of jumbo rolls • Acceleration of cast film and thermoforming processes	PE, PP, PA, PET
Antifog	Optimised wetting of polymer surfaces • Reduced drop condensation on packaging films • Increase in suction power of non-woven material	PE, PP, PA, PET, PS
Antioxidants / thermal stabilisers	Protection against polymer damage and ageing • Automotive, technical parts, valves and accessories, pipes, exhaust systems • High shear rates under demanding processing conditions • Recycling of runners and edge trimmings • Assisting in UV protection	PE, PP, PA, PBT, POM, PET, ABS, Styrenics
Antistatic agents	Lowering of electrical resistance • Avoidance of electrostatic discharge and flying sparks • Reduced attraction of dirt and contamination • Permanent antistatic equipment	PE, PP, PA, PET, ABS, Styrenics
Bacteriostatic agents	Protection of plastic surfaces • Reduced growth of micro-organisms • Hygienic equipment of household goods and sanitary products • Bacterio- and fungistatic equipment	PE, PP, PA, PBT, POM, PET, ABS
Clarifier	Optimisation of transparency and gloss	PP, (PE-HD)
Cling	Increased adhesive strength • Increased adhesiveness for household, stretch and silage film	PE-LLD, PE-LD
Fillers (matting)	Dust-free, clean handling of solid, powdery additives: • Additives, talcum, chalk • Special drying agents • Radio-opaque substances	PE, PP, PA, PBT, POM, PET, Styrenics, ABS
Flame retardants	Improved fire-resistant properties	PP, PA, TPE, TPU
Slip agents	• Optimisation / controlling of friction and opening force coefficients • Improvement of flow properties • Minimisation of squealing (automotive) • Permanent lubrication with Graphite or MoS_2	PE, PP, PA, PBT, POM, PET, Styrenics, ABS
Nucleating agents	Controlling the crystallinity of plastics • Process acceleration, reduced cooling time • Reduced warpage, isotropic shrinkage properties • Improved mechanical properties • Balancing, equalisation of pigment influences • Reduced shrink marks • Improved chemical stability	PE, PP, PET, PA, (POM)
Blowing agents	Foaming of plastics in the process flow • Structural foam: cost optimisation, weight reduction • Avoidance of shrink marks, reduced warpage • Decorative surface structures (wood, stone, animal skin) • Controlling of mechanisms and acoustic properties	PE, PP, PA, PBT, POM, PET, Styrenics, ABS
Protection against UV-irradiation and light	Protection against UV-irradiation, light and sunlight • Protection against influences of the weather and environment • Stabilisation after gamma sterilisation • Assisting in long-term thermal stabilisation	PE, PP, PA, PBT, POM, PET, Styrenics, ABS
UV-or IR-absorbers	Protection against UV rays and light • Packaging of sensitive goods (food items, beverages) • Absorption of IR / thermal radiation	PE, PP, PET, PA
Processing aids	• Increased productivity during film production • Reduced "shark skin", improved transparency • Minimisation of dye build-up	PE, PP, (PA)
Special solutions	"Tailormade" solutions required by the customer • E.g. odour absorber for neutralising odours • Combinations with color masterbatches • Bio-degradable carrier systems	

People. Think. Plastics.

Our know-how lies in process technology, as we can rely on the tried and tested plant technology of our sister company FEDDEM GmbH & Co. KG – tailor-made for our requirements.

Within the Feddersen Group, we have access to the bundled expertise of our specialists in basic polymers:

- Compounding
- Processing in the end application
- Mechanical engineering
- Chemical agents and their use

Furthermore, we offer you extensive analyses as well as documentation, confirmations and assistance in obtaining regulatory approvals.

Fields of Application

Films
- Fibres
- Tapes
- Fabrics
- Bags, agrofoils
- Packaging films
- Monofilms
- Multi-layer films
- Coextruded films
- Lamination sheets
- Construction foil
- Thermoforming film
- Coatings

Fleeces / Non-wovens
- Agro non-wovens
- Hygiene non-wovens
- Medical non-wovens
- Geo non-wovens
- Filters
- Roofing membranes

Mono- and Multi-filaments
- Knit fabrics
- Nets
- Ropes
- Textiles
- Yarns
- Belts

Pipes and Composite Tubing
- Protective conduits
- Corrugated pipes
- Drain pipes

Polymers
- Polyolefins: PE, PP, TPE
- Styrol & copolymers: PS, HIPS, ABS, SAN, ASA, ...
- PA, PBT, PET, POM, PK, PEEK and various other technical specialties

Plates and Injection Moulding
- Profiles
- Plates

Transparent and non-fogging packaging solutions made possible by the use of clarifiers and anti-fogging concentrates.

Individual Product Solutions

Maximum transparency in PP made possible by the use of clarifier concentrates that are optimised for extrusion or injection moulding processes.

Additives are indispensable chemical adjuvants that are added to plastics to ease their processing and use. It is only through their addition that plastics are able to withstand high processing temperatures or the influences of light and weather, are anti-static or become transparent.

Standard polymers are available in a limited number of choices and with different additives. These are usually optimised in a way that they are able to cover the largest possible number of applications. At the same time, the share of the additives is reduced to the minimum, barely enough to fulfil the requirements of the job. If the standards are no longer up to the mark, it is important to have a competent partner by your side: AF-COLOR brings to you AF-Complex®, an individual product solution – delivered right up to your specification window!

AF-COLOR stands for the production of high-value, technical masterbatches. As the branch of AKRO-PLASTIC GmbH located at Niederzissen, we offer you the synergy effects released by our combined expertise in compounding, research, development and production technologies, which enable us to competently implement the requirements of our customers. Since 2004 AF-COLOR has been operating under it's own name within the international Feddersen Group.

In recent years, the company has continued to invest in the development and expansion of environmentally friendly production facilities and in important areas such as R&D, logistics and sales. Today, with state-of-the art production facilities, we rank amongst the renowned suppliers of high-end masterbatches, carbon black and additive concentrates for the global market and for a host of customer requirements. Our DQS-certified processes allow us to provide corresponding standards (ISO 9001, TS 16949 and ISO 14001).

The effect of our UV stabilisers can be checked directly in the application with our modern weathering options.

We Will Be Pleased to Meet You!

AF-COLOR
Branch of AKRO-PLASTIC GmbH

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Here you can find the latest version of our brochure:

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