Additive Masterbatches

Global Colors

Additives that make a difference

Kritilen® additive masterbatches are used as an easy and economic way to incorporate to plastic products special additives that facilitate processing or impart to the product's various useful properties. They contain additives or combinations of additives of proven value, at concentration levels that suite each formulation, additive properties and final product or process requirements, perfectly dispersed in an appropriate carrier resin.

1) Slip masterbatches
Slip masterbatches are used to modify the coefficient of friction (COF) in plastic films, facilitating smoother processing and handling. The addition level of slip masterbatches depends on film type, thickness and the required slip effect. Erucamide is preferred for processing temperatures above 220°C (e.g., HDPE, PP, metallocenes) and for films requiring extended storage in hot climates. Its migration to the film surface occurs more slowly, providing a longer-lasting slip effect.

Oleamide offers a faster migration to the surface, providing an immediate action. However, it may not be suitable for high-temperature processing or long-term storage. Effectiveness of slip agents is enhanced when in combination with anti-blocking additives. In addition to products based on erucamide and oleamide, Global Colors offers a diverse range of slip masterbatches tailored to various applications:

SL PS7720 – Specifically formulated for PS (polystyrene) film applications.

SL PT6102 – Designed for use in PET (polyethylene terephthalate) applications.

WEPP9120 – A silicone-based masterbatch that effectively reduces the coefficient of friction (COF) in PET films and straps.

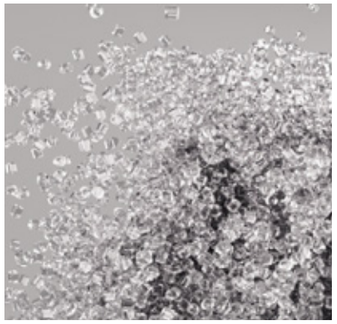
SL 751 – Contains a specially selected ultra-high molecular weight (UHMW) siloxane that enhances resin processing and flow. At higher addition levels (up to 10%), it significantly improves surface properties as well.

Global Colors

Product Range

KRITILEN® CODE	Carrier	% Additive	Additive S Type	Recommended Dossage
SLIP 60	PE	6	Combination of erucamide and oleamide slip agents	0.5-2
SLIP 66	PE	5	Oleamide slip agent	0.5-2
SLIP 67	PE	5	Erucamide slip agent	0.5-2
SLIP 751	PE	58	UHMW siloxane	1-2
SLIP PP960	PPH	6	Combination of erucamide and oleamide slip agents	0.5-2
SLIP PP967	PPH	5	Erucamide slip agent	0.5-2
SLIP PS7720	PS-GP	20	Slip agent	2-2.5
WE PP9120	PPH	5	Organomodified Siloxane	1-3
SL PT 6102	PET	5	Slip and antiscratch additive	4-6
SLIP/AB 69	PE	20	Combination of synthetic silica and erucamide slip agent	1-2
SLIP/AB 73	PE	15	Combination of silica and erucamide slip agent	1-2
SLIP/AB 674	PE	45	Combination of inorganic antiblocking agent and erucamide	1-3
SLIP/AB 673UC	PE	20	Combination of ultra clear antiblock agent and erucamide	1-2
AB 40	PE	40	Inorganic antiblocking agent	1-2
AB 62	PE	15	Synthetic silica	1-2
AB 72	PE	20	Natural silica	2-3
AB 65	PE	65	Natural silica	1-1.5
AB 656	PE	15	Ultra clear antiblock agent	1-2
AB 7502	PE	70	Inorganic antiblocking agent	0.5-1
PT AB610	PE	10	Special silica type	2-3
AO 10	PE	10	Combination of heat and processing stabilizers	1-5
AO 203	PE	5	Combination of heat and processing stabilizers	2-4
AO 256	PE	6	Combination of heat and processing stabilizers	1-5
AO 12	PE	10	Metal deactivator	1-3
AO 1463	PE	10	Combination of advanced performance antioxidants	1-3
AO 1311	PE	15	Combination of multifuctional additives	1-2
AO PP9205	PE	20	Combination of heat and processing stabilizers	1-2
PA 90	PE	2	Polymer processing aid	1-2
PA 92	PE	2	Polymer processing aid	1-2

Detailed regulatory statements, including food approval status, SML's, limitation of use of the above mentioned products are available upon request.



2) Anti-block masterbatches

They are used to prevent blocking of plastic films.

- AB 62 offers excellent anti-blocking effect without affecting film clarity.
- AB 72 and AB 65 also offer good anti-block properties without affecting transparency.
- AB 40 is an economic solution for relatively thick films when superior clarity is not critical.
- AB 656 contains an advanced additive that delivers exceptional optical clarity and significantly reduced haze compared to conventional inorganic antiblocking masterbatches, while preserving its distinctive high-performance characteristics.
- AB 7502 is a techno-economical solution containing a high-quality antiblocking agent that maintains satisfactory film transparency.
- PT AB610 provides anti-blocking properties to PET articles, combined with better mold release performance.

3) Antioxidant masterbatches

They are added to improve the heat and processing stability of plastic products.

- AO 10 & AO 203 are used at addition levels of 1–2% and 2–4% respectively, to enhance the heat and processing stability of polyolefin products.
- AO 12 contains a highly effective metal deactivator based on a PE carrier, ideal for long-term heat stabilization in plastic articles in contact with copper or copper alloys (e.g., wire insulation).
- AO 256 is a synergistic blend of antioxidant agents designed to provide effective thermal protection during extrusion processes. The product offers very low color contribution and excellent resistance to gas fading.
- AO 1463 is a high-performance antioxidant masterbatch especially recommended for end applications, where processing temperature is higher than 215deg C.
- AO 1311 contains a mixture of additives (combination of antioxidants, lubricants, multifactional additives) in LLDPE of low MFI. It is designed to improve the recycling process of plastics.
- AO PP9205 provides heat and processing stability to PP films and tapes.

4) PA masterbatches

PA masterbatches are used to eliminate surface defects and enhance processing efficiency.

- PA 90 & PA 95 used at an addition rate of 1-2%, eliminate surface defects (e.g., fish-eyes, shark skin, orange peel), reduce power consumption and increase output while minimizing plate-out on the die surface.
- PA 91 & PA 96 are based on a new generation fluoro elastomer. These masterbatches offer higher efficiency and can be used at lower concentrations in LLDPE or HDPE films.

Global Colors

Product Range

KRITILEN® CODE	Carrier	% Additive	Additive S Type	Recommended Dossage
PA 91	PE	2	New generation polymer processing aid	1-2
PA 96	PE	5	New generation polymer processing aid	0.5-1
PA 95	PE	5	Polymer processing aid	0.5-1
PA 9812	PE	10	PFAS free Polymer processing aid	1-2
PA 9852	PE	10	PFAS free Polymer processing aid	1-2
CL 530	PE	55	Combination of inorganic and organic purging agents	10-15
DC 500	PE	50	Inorganic desiccant	0.5-2
DC 700	PE	70	Inorganic desiccant	0.5-2
DC 451	PE	70	Inorganic desiccant	0.5-3
DEO 588	PE	15	Odor absorbents	2-5
AT 5	PE	5	Slow migrating antistatic agent	2-4
AT 11	PE	10	Fast migrating antistatic agent	1-2
AT 12	PE	10	Combination of fast/slow action antistatic agents	1-2
AT 1214	PE	30	Combination of fast/slow action antistatic agents with inorganic antiblocking additive	1-2
AT 1215	PE	10	Amine free antistatic agents	1-2
AT 445	PE	5	Selected antistatic agent	2-6
AT PS726	PSGP	20	Selected antistatic agent	3-5
PP AT 912	PP	3.5	Slow migrating antistatic agent	2-4
NC 13	PP	-	Nucleator	1-2
NC 15	PP	-	Nucleator	1-2
NC 116	PP	10	Clarifier	2-10
NC 16	PE	10	Lubricant	0.5-2
FR 210	PE	20	Selected Halogen free flame retardant	2-5
FR 2102	PE	10	Selected Halogen free flame retardant	4-10
FR PE5045HF	PE	50	Selected Halogen free flame retardant	5-10
OB 10	PE	10	Optical brightener	1-3
OB PS712	PE	10	Optical brightener	1-3
OB PP3	PE	3	Optical brightener	1-3
OB PET603	PET	3	Optical brightener	1-2
ANTISLIP 570	PE	70	Coarse particle size inorganic additive	5-10
AF 16	PE	18	Selected anti-dripping agent for food packaging	4-8

Detailed regulatory statements, including food approval status, SML's, limitation of use of the above mentioned products are available upon request.

- PA 92 contains a fast acting ,heat stable additive (up to 300C) providing outstanding performance through the full range of polyolefin processing conditions.
- PA 9812 & 9852 are specifically developed to meet the demand for PFAS-free additives, in line with the latest regulatory amendments and environmental standards.

5) Purging masterbatches
Purging masterbatches facilitate the easy cleaning of plastics processing equipment.

- CL 530 is recommended for efficient cleaning of processing equipment without creating corrosion problems.

6) Desiccant masterbatches
These products are employed to absorb humidity present in plastic materials.

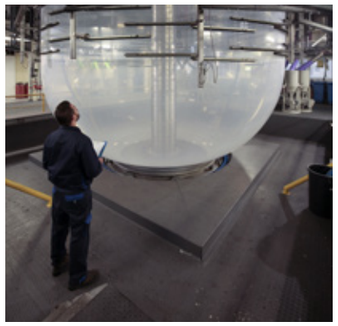
Kritilen® DC 500, DC 700 and DC 451 are masterbatches with various proportion of desiccant particularly useful when processing recycled materials.

7) Deodorant masterbatch
Kritilen® DEO 588 effectively neutralizes chemically complex odors—such as those from amines, ammonia, and hydrogen sulfide—resulting in improved odor quality of recycled materials, reduced odors during processing, and minimized odors in the final application.

8) Antistatic masterbatches
Antistatic masterbatches dissipate static electricity from the surface of plastic products, facilitating production and conversion processes and reducing dust accumulation.

- AT 5 is recommended for long-term antistatic performance, suitable for HDPE films and PE or PP injection and blow-molding.
- AT 11 provides a fast antistatic effect during processing with short-term performance (typically 1-2 months) for polyolefin extruded and molded articles.
- AT 12 combines both fast and long-term antistatic performance, enhanced by a synergistic action of the additives contained.
- AT 1214 offers fast and long-term antistatic effects combined with an anti-blocking agent.
- AT 445 contains a specially selected antistatic agent ideal for use in electronic packaging applications due to the fact that lower relative humidity levels are required.
- AT 1215 contains amine free antistatic grades, resulting in both long term and short term antistatic properties.
- AT PS726 is preferred for polystyrene and styrenic copolymers. Due to its effect on transparency at required addition levels, it is mostly recommended for opaque articles.
- AT PP912 is recommended for long-term antistatic performance in PP films and tapes.

Global Colors



9) Clarifying and Nucleating masterbatches
These masterbatches enhance the transparency and mechanical properties of polypropylene (PP) products.

- NC 116 is a new clarifier offering revolutionary transparency and an optimal balance between stiffness and impact strength in PP products at processing temperatures of 190–260°C.
- NC 13 & NC 15 contain highly effective, new technology nucleating agents for PP, providing increased transparency, resin throughput, and enhanced mechanical properties. Normal processing temperatures of 220–240°C can be used.

10) Anti sticking masterbatches
Kritilen® AD 16 can be used in shrink films in order to provide antitackle properties and reduce dust accumulation. Also its use in HDPE tapes at addition 1-3% facilitates weaving.

11) Flame retardant masterbatches
These masterbatches impart flame retardant properties to various plastic products.

- FR 210/FR 2102 are mainly intended for polyolefin fibers, containing a special halogen-free flame retardant that combines flame retardancy with UV and thermal stabilization.
- FR PE5045HF is based on a halogen free organic additive and is proposed for film as well as injection moulding applications.

Addition rates of flame retardant masterbatches depend on required flammability performance type and MFI of polymer used, presence of other additives and colorants.

12) Optical Brightener masterbatches
Optical brighteners absorb light in the UV-A range and re-emit it as blue light, improving the appearance of plastic products by masking the inherent "yellowish" colour and giving them a "clean" bluish shade. KRITILEN OB 10, OB PP3, PS PS712 and OB PET 603 can be used at addition rate 1-3% in PE, PP, PS and PET products respectively.

13) Antislip masterbatch
ANTISLIP 570 provides a "rough" surface when used in polyolefin films/sacks, resulting in anti-slip properties.

14) AF for food packaging
Kritilen® AF 16 is used to eliminate water droplets from the internal surface of food packaging. Recommended addition rate for trials starts from 4%.

Kritilen® additive masterbatches for Agricultural films

1) Disease control masterbatch
Disease control masterbatch UV 23 strongly absorbs UV-radiation up to 390 nm. It can be used to help reducing the population of insects, the sporulation of certain fungi, the development of viruses as well as the blackening of rose petals. Recommended addition is 2-3 %. Under certain conditions it has been observed that complete blocking

Kritilen® additive masterbatches for Agricultural films Product range

Exact addition rates depend on area of use, film type, structure, thickness and required specifications.

Other additive masterbatches for agricultural films can be offered upon request, containing different types, amounts or combinations of additives and colors.

* For20-30 microns films

KRITILEN® CODE	CARRIER	ADDITIVE %	ADDITIVE S TYPE	RECOMMENDED DOSAGE
UV 23	PE	15	Special UV absorber	2-3
IP 550	PE	50	Inorganic Infra Red absorber	5-15
HT 555	PE	50	Special Infra Red absorber	2-4
AF 61	PE	25	Anti-dripping agent	6-12
AF 62	PE	25	Anti-dripping agent	6-12
AS 30	EVA	30	Antisticking & antidust agent	1-4
DIFFUSER 557	PE	50	Special inorganic diffuser	5-10
Brown 70869	PE		Pigments	20 (*)
Brown 70964	PE		Pigments and Infra red absorber	20 (*)
Silver 80100	PE		Pigments	2-3 (*)
Green 51670	PE		Pigments	15 (*)
Green 51311	PE		Pigments	1-1.5

of UV-radiation may result to unwanted side-effects (discoloration of egg-plants and some kinds of flowers/fruits, disturbance of bumble-bee activity). Please consult our R&D Dept for more information.

2) Infra-Red masterbatches
Infra-Red masterbatches contain additives that absorb heat emitted from the greenhouse or low tunnel during the night, thus helping to maintain higher night temperatures, reduce fuel consumption for heating, prevent frost and temperature inversion.

- IR 550 is an effective inorganic Infra-Red absorber. Recommended addition in LDPE films is 5-15 % depending on film thickness and required "thermic effect". For LDPE/EVA co-extruded films, recommended addition is 2-10 % depending on film thickness, VA content of the film and required "thermic effect".
- HT 555 is a special IR-absorber that does not affect film clarity. For better results, it is recommended to combine it with EVA, at an addition of 2-4%.

3) Anti-dripping masterbatches
Anti-dripping masterbatches prevent droplet formation in the internal surface of greenhouse films.

- AF 61 is a highly concentrated anti-dripping masterbatch suitable for LDPE and EVA with low VA content. Recommended addition is 6-12 % for an anti-fogging effect of 1-2 years.
- AF 62 is an anti-dripping masterbatch with fast and strong action, mainly recommended (at 6-12 % addition) for short-term exposure (4-8 months) on relatively flat structures or on the soil (e.g. asparagus mulch films).

Notes: a) due to the complex nature of anti-dripping effect and to the numerous parameters that affect its performance, PLASTIKA KRITIS does not provide any guarantee whatsoever on the effectiveness or duration of the anti-dripping effect b) on greenhouses covered with anti-dripping films there

Global Colors

LIMIT OF LIABILITY The information and suggestions contained herein are the result of our experience, knowledge and research. They are believed to be reliable and are given in good faith. However no guarantee is provided, as the conditions under which our products are used are beyond our control.

Global Colors warrants that this product conforms to Global Colors specifications for this product. THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES OR CONDITIONS, EXPRESS OR IMPLIED, STATUTORY OR OTHERWISE, INCLUDING BUT NOT LIMITED TO MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE. Buyer assumes all risks and responsibility for results or injury in use or handling of the product or its suitability for any particular end use.

The amount of any claim against Global Colors and Global Colors's liability shall in no event exceed the purchase price of this product. In no event shall Global Colors be liable to Buyer for loss of profits or special, indirect or consequential damages.

is often appearance of fog. It is recommended to eliminate this fog by ventilating and/or heating the greenhouse. For more information on this phenomenon and on solutions available, please consult our R&D Dept.

4) Anti-dust masterbatch
AS 30 can be used for reducing dust accumulation on the surface of greenhouse films. Recommended addition is 1 %. In multi-layer films, it is advisable to use AS 30 only in the layer of the film that faces outside, at 3% addition.

5) Anti-sticking masterbatch
AS 30 is used to reduce sticking of EVA blown-films during extrusion and storage. Recommended addition level is 2-4% depending on the VA content of the material, film thickness and production conditions.

6) Diffuser masterbatch
Kritilen® DIFFUSER 557 provides an opacifying effect combined with increased haze/diffusion when used in polyolefin films, without affecting the product's color.

7) Photoselective masterbatches for mulching films
i. BROWN 70869 is used at an addition of 20 % (*). It permits the heat to pass and warm-up the soil during daytime, while providing adequate opacity to prevent growth of weeds.

ii. BROWN 70964 is offering the same advantages as BROWN 70869, and in addition it contains an IR-absorber that reduces heat losses from the soil during night-time.

iii. GREEN 51670 is used at an addition of 8 % (*) and permits heating-up of the soil while limiting considerably the growth of weeds.

iv. SILVER 80100 is used at an addition of 2-3 % (*) to reflect sun-rays and repel insects. It has a noticeable effect in reducing viruses and protecting plants.

v. GREEN 51311 is used to produce films with the greenish shade of Ni-quencher. The usual addition rate is 1-1.5%.

(*) Addition rates are indications for trials only, based on our experience, and refer to 20-30 mic.films. They have to be adjusted taking in account the required opacity and the exact thickness and structure of the film.

For extending the lifetime of the films beyond 2-4 months (depending on area) it is necessary to add UV-stabilizers (please consult our R&D Department for an advice). It should be noticed that certain pigments contained in the above masterbatches have a negative effect on UV-resistance, therefore an increased level of UV-stabilization is necessary relative to transparent films.

Global Colors

GLOBALCOLORS.COM

Member of
Plastika Kritis