The functional color company®

ARAPLAST-10 / -20 in short:

* Fluorescent melting pigments, free of formaldehyde
* Excellent balance between color strength and brightness / fluorescence
* Improved heat stability
* Very low plate out respectively 0 plate out
* Excellent low odor performance
* Decomposition T > 300 °C.
* Low dusting
* Heat stability: Depends on shade. See detailed table
* Average particle size: 7-20 µm

ARAPLAST-10 SERIES
ARAPLAST-20 SERIES

For Coloring Olefins
HDPE, LDPE, MDPE, PP, cPP
TPU
MASTER BATCHES
Injection Molding . Blow molding
Film blowing. Thin film blow molding
Some other plastics

Regulatory & Ecotox

- All non-polymeric components are registered in EINECS and TSCA (incl. polymers in TSCA).
- All non-polymeric components are registered respectively preregistered in REACH
- EN71 part 3 conformity (purity requirement). Still tests have to carried on final application.
- Heavy metals free (with exception of the natural values in the ppm range).

Technology & Applications

ARALON® ARAPLAST-10 / -20 are developed as an optimal choice for coloring olefins. While other Stir-In Fluorescent pigments keep their particle size and shape in the application, ARALON® Melting Fluorescent Pigments do melt in the final application without being dissolved; they form distinct Nano phases. This technology insures highest color strength with a high degree of heat stability.

In addition to infinitely low migration, efflorescence and plate out characteristics, ARALON® Melting Fluorescent Pigments have the crucial compatibility with Olefins (HDPE, MDPE, LDPE, PP, cPP) and TPU.

For making Master batches a processing temperature of 150 °C is recommended. For injection or blow molding, it is recommended to follow the instructions mentioned in the technical data sheet of the processed polymer.

Depending on the thickness of the final application, it is recommended to have 1-2 % of ARAPLAST in the final application for a final thickness of 1,5 mm or in thicker applications, while the pigment load need to go up continuously by reduced final application thickness to reach 10% for example in 0,1 mm thin applications.

Although it is possible to increase the load of ARAPLAST till 40% in the Master batch, it is recommended to have only 25 - 30% pigment load for optimal processing.

Avoid the introduction of additives, which contain metal ions (some stearates) as such components might lead to fluorescence quenching. For this, the content of metals and heavy metals is right important by changing the raw material source of any of the components used in final products colored with fluorescent melting pigments.

Light Fastness

ARAPLAST series can partially resist the multiple factors, generally known to influence light fastness and, depending on the shade, values up to 5 on the BWS can be achieved.

Heat Stability / °C

ARAPLAST- @ 1 % in the polymer

	190	110	193	113	104	115	206	216	207	217
LD / HDPE*	300	260	280	260	280	260	280	280	280	280
PP*	290	240	260	240	260	240	280	260	260	260

* Any addition of metal ions also in form of lubricants like Ca-stearate or Mg-stearate or residual metallocene catalysts reduces fluorescence and heat stability dramatically. For the same reason, total performance in recycled plastics is in general low. Heat stability of ARAPLAST-100 and ARAPLAST -103 is 240 °C in the given polymers.

Storage & Shelf life

ARAPLAST series products are stable, provided they are stored in dry places at ambient temperatures (below 40 °C) the predicted shelf life is 60 months. However depending on the quality of storage conditions, products might be used beyond this shelf life period.

Plate out, Migration & Efflorescence

ARAPLAST series products are developed for highest technical requirements regarding plate out, migration and efflorescence while high color strength, heat stability and reflection are maintained. The balance of all fluorescent pigment properties is as such unique and the result of our latest research and developments results. All performance parameters depend highly on the individual process parameters. Individual recommendations are gladly given if assistance is required.

Low Odor and low dusting

ARAPLAST melting pigments excel with extraordinary high performance regarding odor of the pigments and their Masterbatches. They have very low dusting respectively are non dusting powders.

Physical & Chemical properties

- Resin / Carrier: Modified polyester-amid resin
- Melting range: 90 - 150 °C
- Melting temperature: 95 - 130 °C
- Volatile organic compounds: 0%
- Phthalates plasticisers: 0%
- Particle size: 7-20 µm
- Spec. Gravity: 1.2
- Bulking value: 0.5 g/ml

Package = Minimal order
1 Carton BOX= 20 kg

Processing polymer	R = Recommended. NR = Not recommended. T = Need to be tested
Polyethylene (HDPE, MDPE, LDBE,)	R
Polypropylene (also cPP)	R
TPU	R
ABS, PS, PS, PMMA, PA, Rigid PVC, PU	T
Polyester, Woven PP, Woven Polyester	T

Available colors

ARAPLAST-10 Series		
ARAPLAST-100	LEMON	
ARAPLAST-190	LEMON	
ARAPLAST-110	STRONG LEMON	
ARAPLAST-103	ORANGE	
ARAPLAST-193	ORANGE	
ARAPLAST-113	STRONG ORANGE	
ARAPLAST-104	ORANGE-RED	
ARAPLAST-115	STRONG RED	
ARAPLAST-20 Series		
ARAPLAST-206	PINK	
ARAPLAST-216	STRONG PINK	
ARAPLAST-207	MAGENTA	
ARAPLAST-217	STRONG MAGENTA	

The above shades are only indicative; computer screens and conventional printers cannot reproduce true fluorescent shades.

Mixing recommendations

25% MB / ARAPLAST-190 LEMON 4 parts 20 MB % PIGMENT GREEN 7 0,1-0,3 parts	Fluorescent GREEN	
25% MB / ARAPLAST-190 LEMON 4 parts 25% MB / ARAPLAST-193 ORANGE 0,04 - 0,1 parts	Fluorescent YELLOW	
Due to the melting character of the ARAPLAST-10 series and their existence as final nano dispersed phases in the colored Olefins and the unlimited compatibility of the different shades with each other, all colors of the ARAPLAST-10 series might be mixed without limitation to obtain intermediate shades in Olefins and TPU. The same is valid for the ARAPLAST-20 series colors. It is **not** recommended to mix both series ARAPLAST-10 and ARAPLAST-20 for obtaining in-between color shades at higher concentrations than 5% from the total ARAPLAST content. Such intermediate colors are optimally obtained by mixing together products from the same series.		
For more hiding power and pastel shades use ZnS pigment dispersions instead of TiO_2 pigment dispersions to preserve optimal brightness, especially under UV light. Anyway this works only at low temperatures (<190 °C) as many ZnS pigments causes decomposition of fluorescent melting pigments at higher temperatures. For temperatures > 190 °C it is recommended to use TiO_2 Anatase and to avoid TiO_2 Rutile.		
2 - 5 % of the pigment part of conventional Master batches of similar shades to ARAPLAST-10 / -20 colors	Higher color strength without noticeable loss of brightness	Stronger shades

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About ARALON:

Today, ARALON – The NEW supplier of daylight fluorescent and functional pigments. Development, manufacturing and marketing of pigments for the paints & coatings (ARACO products), plastics (ARAPLAST), aerosols (ARASOL), and printing inks (ARAPRINT) industries only commenced in 2013 at its greenfield construction in 56412 Heiligenroth, Germany, half-way between Cologne and Frankfurt. ARALON's strengths are apparent in three key areas:

- State-of-the-art encapsulation technology coupled with modern and efficient manufacturing assets and lean operations capable of delivering best-in-class fluorescent pigments at competitive cost.
- Unique fluorescent ARAPLAST-melting pigments permitting coloration of thin olefin based films in single and multilayer packaging.
- Next generation ARAGEN-chemistry enabling unprecedented light stability of formaldehyde-free fluorescent pigments without compromising other performance attributes.

ARALON wants to surprise with best-in-class products, innovations that matter and prices hard to ignore – TRY US!

ARALON, What is behind the name and the logo?

ARALON was created as a name for our company based on the ARA, which is kind of colorful parrot. The wonderful and bright colors of the parrot's feathers are the result of light refraction through nano-sized holes in the natural polymer structure of the parrot feathers. Depending on the hole size and the number of feather layers results in an unlimited number of bright and colorful shades of light, seen by our eyes as being the color of the feathers themselves.

This has, for our company, a relevance of many kinds. Initially the brightness and purity of the parrot's colors is similar, but often less when compared to the brightness and purity of our fluorescent colors. Further, the colors of the feathers were created in completely natural way, which is for our R&D development, an orientation for the future horizons of the company.

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