

## ARADIS-P50 SERIES

### ARADIS-P50 in short:

- \* Formaldehyde-free
- \* Phthalate free
- \* Pigment concentration:  
49 — 51 %

Utilized pigments have the following properties:

- \* Decomposition  
T > 250 °C.
- \* Very high solvent resistance
- \* NON-Melting /  
Thermoset
- \* Heat stability: 180 °C /  
3 minutes

**PAINTS & SPRAY CANS**  
**SPECIALITY INKS & COATINGS**  
**PVC PLASTISOLS & ORAGANISOLS**  
**PU & CALENDERED PVC**

## Technology & Applications

ARALON® ARADIS-P-50 is developed as an optimal choice for solvent and water resistance demanding applications. Fluorescent dyes are dissolved & bonded, encapsulated respectively embedded in a hybrid carrier. The chemical respectively physical bond ensure highest possible resistance against migration and staining. The solid solution is milled to optimal particle size. The gained particles are dispersed in a phthalate free plasticizer.

The chemical nature of the utilized pigments in ARALON® ARADIS-P50 series as modified hybrid cured resin and its pigment engineering deliver beside the **high water and solvent resistance** an optimum **balance between color strength and fluorescence / brightness**. The dispersion form ensures best NON DUSTING and STIR-IN quality, just mixing and homogenizing are sufficient to obtain final application products. Further advantages of the chosen pigment engineering are very **good staining performance**, suited formulations of ARADIS-P50 series are easily washed out from hands and fibers. The pigment engineering ensure too highest quality performance in **heat resistance** demanding applications like calendered PVC. Low migration and best Hegman grind cut OFF ensure best performance in PU Inks and spray cans.

Special care has been taken to choose a safe plasticizer. It is not irritant neither to the skin nor to the eyes.

## Regulatory & Ecotox

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

## Light Fastness & Heat Stability

### Light Fastness

ARADIS-P-50 series can partially resist the multiple factors, generally known to influence light fastness and, depending on the shade, values up to 4 on the BWS can be achieved.

### Heat Stability

ARADIS-P-50 series can withstand temperatures of above 240 °C for up to 3 minutes without affecting the perceived shades. Resistance to even higher temperatures is possible but for shorter exposure time.

## Storage & Shelf life

ARADIS-P-50 series products are stable. Provided they are stored in dry places at ambient temperatures (below 40 °C) the predicted shelf life is 6 months with the necessity to stir before use. However depending on the quality of storage conditions, products might be used beyond this shelf life period.

## Available colors

ARADIS-P500	LEMON	
ARADIS-P501	GREEN	
ARADIS-P503	ORANGE	
ARADIS-P504	ORANGE-RED	
ARADIS-P505	RED	
ARADIS-P506	PINK	
ARADIS-P507	MAGENTA	

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

## solvent resistance

**The resistance results are only applicable for the utilized pigment particles. Compatibility with the utilized plasticizer should be tested separately.**

The results of the following method are given on the next page: Mix 1 g pigment thoroughly for 10 seconds in 10 ml of solvent to get the complete pigment wetted. Store the mixture for 37 minutes into a water bath at 37°C. The solvent resistance of the pigment is determined by inverting and shaking the glass tube and observing how quick the pigment particles start to flow in the solvent or not. Freely moving not attacked particles is the best (5). Totally attacked gel forming particles is worst (1). Bleeding is determined by diluting the filtrate 50 times and measuring the absorption. The worst bleeding is 1. Minor to non-bleeding is the best (5).

## Physical & Chemical properties

- phthalate plasticizer: 0%
- Volatile organic compounds: 0%
- Mineral oils: 0%
- Particle size (D50): ca. 7,5 µm
- Grind: > 4,5 Hegman gauge
- Bulking value: 0.95 g/ml
- Moisture: ≤ 0.5%

## Packaging

### Package = Minimal

1 coated\* metal can =  
20 kg

\* coating is colorless inside the can and white outside the can

Information given for purely informative basis purposes.

ARALON cannot give any warranty for a particular use.

Action and observation	S: Solvent resistance scale	B: Bleeding Scale
Pigment moves after 1 to 15 shakes. All pigment parts are not attacked	5: Very good	5: Minor to NON-bleeding
The first action above is not sufficient, 1 to 10 extra hard shakes are needed to let all pigment particles move	4: Good	4: Slight bleeding
After the 1 to 10 hard shakes, only a portion of the pigment moves, more than 10%	3: Moderate	3: Moderate bleeding
After the 1 to 10 hard shakes, only a portion of the pigment moves, more than 10% leaving a cone of attacked part	2: Poor	2: High bleeding
After the 1 to 10 hard shakes, the attacked part of the pigment is forming a gummy or sticky mass or the complete pigment is dissolved	1: Very poor	1: Heavy bleeding

		ARADIS-P-50	
		S	B
<b>ALIPHATIC HYDRO CARBONS</b>	Mixed hexanes	5	5
	Destillates 35-260°C	5	5
<b>HYDRO CARBONS</b>	Toluene	5	4
	Xylene	5	4
	Destillates 150-250°C	5	4-5
<b>ALCOHOLS &amp; Water</b>	Methyl alcohol	5	3
	Ethyl alcohol	5	3
	Isopropyl alcohol	5	3
	Water or Water / Ethanol	5	3
<b>KETONES</b>	Acetone	5	2
	Methyl ethyl ketone (= MEK)	5	3
	Cyclohexanone	5	3
<b>ESTERS</b>	Ethyl acetate	5	3
	Iso/n-Propyl acetate	5	3
	n-Buthyl acetate	5	3
<b>GLYCOLS &amp; ETHERS</b>	Glycerine	5	4
	Ethylene glycol	5	3
	Diethylene glycol	5	3
<b>CHLORINATED SOLVENTS &amp; PLASTICIZERS</b>	Carbon tetrachloride	5	4-5
	Trichloroethylene	5	3
	Perchloroethylene	5	3
	Di-isononyl-cyclohexan-1,2-dicarboxylate	5	4
	Diisodecyl phthalate	5	4
	Diocetyl adipate	5	4
	Diocetyl sebacate	5	5
	Castor oil	5	5
	Epoxidezed soya oil	5	5

## Mixing recommendations

ARADIS-P-509 UV BLUE (soon) parts 20 % Pigment Blue 15 dispersion	15 1-2 parts	Fluorescent BLUE	PANTONE 801
ARADIS-P-500 LEMON parts 20 % PIGMENT GREEN 7 dispersion	15 1-2 parts	Fluorescent GREEN	PANTONE 802 / RAL6038
96-98% ARADIS-P-500 + 4-2% ARADIS-P-503		Fluorescent YELLOW	PANTONE 803 / RAL1026
ARADIS-P-503 (depending on the application 5 to 20 % ARADIS-P-500)		Fluorescent ORANGE-YELLOW	RAL 2007
ARADIS-P-503 / ARADIS-P-504 , ratio depends on the application		Fluorescent ORANGE	RAL 2005
ARADIS-P-503 / ARADIS-P-504 (mainly), ratio depends on the application		Fluorescent ORANGE-RED	RAL 3026
ARADIS-P-504 / ARADIS-P-505 (mainly), ratio depends on the application		Fluorescent RED	RAL 3024
ARADIS-P-506 (mainly) / ARADIS-P-507, ratio depends on the application		Fluorescent PINK	PANTONE 806
ARADIS-P-506 / ARADIS-P-507 (mainly), ratio depends on the application		Fluorescent MAGENTA	PANTONE 807
ARADIS-P-509 UV BLUE (soon) with all other ARADIS-P-50 shades		Less color strength without brightness loss	Conserved brightness
Neighboring ARADIS-P-50 shades		Optimal fluorescent intermediate colors	Inter-mediate shades
For more hiding power use ZnS pigment dispersions instead of TiO <sub>2</sub> pigment dispersions to preserve optimal brightness, especially under UV light.			
ARADIS-P-50 at 10-30% of the pigment part in conventional formulations of similar shade		Increase freshness of conventional colors	Fresh shades
1 - 3 % of the pigment part of conventional formulations of similar shades to ARADIS-P-50 colors		Higher color strength without noticeable loss of brightness	Stronger shades



**The functional color company®**

## 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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