

HEUCOSIN™, HEUCOSIN™ SPECIAL &  
HEUCO® FIT LR  
**COLOR AND PERFORMANCE SOLUTIONS**



BRIGHTER COLORS.  
BRIGHTER LIFE.

**TICO®  
DEVELOPS FULL COLOR SATURATION  
AND HIGH GLOSS, LOW DUSTING  
PROPERTIES AND ARE EASY TO  
DISPERSE**

**THE HEUCO® FIT CONCEPT**

HEUCO® FIT is a pigment preparation concept consolidating Heubach's extensive pigment and pigment preparation know-how into ultimate and comprehensive pigment preparation lines offering customized color and performance solutions.

**OUR HEUCO® FIT CONCEPT PRODUCT LINES**

HEUCOSIN™: Solutions for RAL- and customized colors. These additive-free preparations are used in paints, coatings and plastics.

HEUCOSIN™ Special: RAL- and customized color solutions which are recommended for high layer thickness systems such as floor coatings.

HEUCO® FIT LR: Direct replacements for chrome yellow and molybdate red pigments, suitable for coatings as well as for plastics applications.

**UNIQUE TECHNOLOGY**

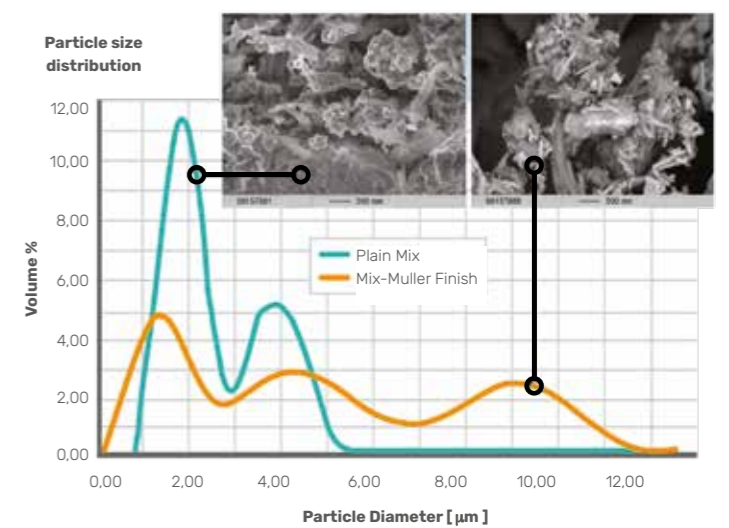
The very specific properties of HEUCOSIN™ preparations result from a unique finish technology. A combined co-finishing process including the mix mulling technology allows for intensive mixing and grinding. The resulting physical interlocking of the pigment surfaces minimizes the separation of the predispersed pigments as well as the floating and flooding phenomenon later during film formation.

In comparison to ordinary pigment blends the HEUCO® FIT preparations also exhibit outstanding batch-to-batch consistency.

This allows to achieve perfectly uniform colors with the existing milling equipment used by the industrial paint manufacturers.

It is worthwhile to mention that this ease of processing is based on the physical modification of the pigment.

Consequently, there is no negative influence on general film properties which is frequently observed when using ionic dispersing additives.



Mix Mulling Technology  
easy dispersion even at construction sites

## HEUCOSIN™

The HEUCOSIN™ products are ready-to-use and customized multi-pigment preparations which are predispersed and adjusted to the most frequently used shades.

All grades exhibit universal processing characteristics and can easily be dispersed in most common binder systems. To achieve an exceptionally homogeneous structure the different components of a color shade are powdery mixed and milled in a three step process resulting in interlocked pigments.



## EXCELLENT FASTNESS PROPERTIES

HEUCOSIN™ pigment preparations not only exhibit very good light and weather fastness but also excellent resistance to solvents, acids and alkalis. Additionally, they are adjusted to all kinds of required fastness and resistance properties.

## VALUE-IN-USE

Formulation costs with HEUCOSIN™ are lower when compared to the total costs of handling and testing of several monopigments or monopigmented pastes on a commercial scale.

## CUSTOMER DEMANDS

We are able to adjust HEUCOSIN™ pigment preparations to any color shade with all kind of required fastness and resistance properties on customer demands.

RAL	Shade	Name	Fastness Properties					RAL	Shade	Name	Fastness Properties				
			Weather	Over-painting	Acid	Alkali	Heat [°C]				Weather	Over-painting	Acid	Alkali	Heat [°C]
1001		G 6191	4 - 5	5	5	5	180	6018		G 7671	4 - 5	5	5	3 - 4	200
1007		G 5891	4	5	5	4	180	7000		G 1802 N	4 - 5	5	5	5	180
1019		G 2186	4 - 5	5	5	5	180	7001		G 1882	4 - 5	5	5	5	180
1023		G 7632	4	5	5	3	200	7005		G 1927	4 - 5	5	5	5	180
1028		G 7604	4	5	5	5	200	7011		G 2033 N	4 - 5	5	5	5	180
2000		G 7626	4	4 - 5	5	5	180	7012		G 14329	4 - 5	5	5	5	200
2004		G 7627	4	5	5	5	200	7016		G 1978	4 - 5	5	5	5	180
3000		G 14676	4 - 5	5	5	5	200	7023		G 2216 N	4 - 5	5	5	5	180
3002		G 14677	4 - 5	5	5	5	200	7030		G 2229	4 - 5	5	5	5	180
3020		G 14697	4 - 5	5	5	5	200	7031		G 1792	4 - 5	5	5	5	180
5002		G 1737	4 - 5	5	5	5	160	7032		G 7748 N	4 - 5	5	5	5	180
5002		G 2171	4 - 5	5	5	5	160	7035		G 1803	4 - 5	5	5	5	180
5003		G 2017 N	4	5	5	5	160	8012		G 3489	4 - 5	5	5	5	180
5010		G 5303 N	4 - 5	5	5	5	180	8015		G 4489 N	5	5	5	5	180
5012		G 14555	4 - 5	5	5	5	180	8017		G 1700 N	4 - 5	5	5	5	180
5014		G 3276 N	4 - 5	5	5	5	180	Other HEUCOSIN™ - Preparations							
5015		G 1780 N	4 - 5	5	5	5	180	Red		G 7001	4 - 5	5	5	5	200
6001		G 6861	4 - 5	5	5	5	160	Blue		G 5000	4 - 5	5	5	5	200
6002		G 6862	4	5	5	5	200	Green		G 5005 N	4 - 5	5	5	5	200
6005		G 6865	4 - 5	5	5	5	180	Grey		G 14739	4 - 5	5	5	5	180
6010		G 6860	4 - 5	5	5	5	180	Black		G 5205	5	5	5	5	200
6011		G 1901	4 - 5	5	5	5	180	Black		G 5955	5	5	5	5	200

- 1) Weather fastness: Tested in water based automotive system. Rating with gray scale after 1000 h accelerated weathering: 1=poor, 5=excellent.
- 2) Acid/alkali resistance: Pigment was dipped into hydrochloric acid (10%) or soda solution (10%). Rating with gray scale: 1=poor, 5=excellent.
- 3) Heat resistance: Tested in alkyd/melamine system.

Suitability for food contact applications on request.

Due to limitation of printing process some slight variations between the color as illustrated may be observed.

\*Product contains diarylide pigments. These pigments should not be used at processing temperatures exceeding 200 °C due to potential cleavage to 3,3'-dichlorobenzidine (DCB) under these conditions.



## POLYMER FLOOR COATINGS

HEUCOSIN™ Special pigment preparations is our principal product line developed to meet the specific requirements of thickfilm systems especially for polymer floor coatings. In most cases the desired color shades can only be obtained by blending color pigments with significant differences regarding surface characteristics and specific weights.

As a consequence they tend to separate during the film forming process. This wellknown phenomenon is either called floating (horizontal separation) or flooding (vertical separation). The first causes undesirable surface texturing (Bénard cells) whereas the latter alters the color shade as a result of pigments being distributed unevenly in the direction perpendicular to the pigment surface (rub-out test). These effects are frequently observed in thickfilm formulations.



Tomato Red  
G 10345

Blend



Blue Grey  
G 6528 N

Blend



Leaf Green  
G 6557 N

Blend



Concrete Grey  
G 6556 N

Blend

## MULTI-PIGMENT PREPARATIONS

The HEUCOSIN™ Special products are ready- to-use pigment preparations which have been pre-dispersed and adjusted to the most commonly used RAL shades. All grades exhibit universal processing characteristics and can easily be dispersed in solvent-free EP, PU, PMMA systems and waterborne EP formulations..

Minimized floating & flooding due to interlocking of the pigment surfaces.

Product	Full Shade	RAL	Application Fields			Fastness Properties			
			EP Coatings	PU	PMMA	Light	Weather	Acid	Alkali
HEUCOSIN™ Special Beige G 10121 (Beige RAL 1001)		1001	●●	●●	●●	8	5	5	5
HEUCOSIN™ Special Yellow G 6514 N (Sand yellow RAL 1002)		1002	●●	●●	●●	8	5	5	5
HEUCOSIN™ Special Beige G 6515 N (Brown beige RAL 1011)		1011	●●	●●	●●	8	5	5	5
HEUCOSIN™ Special Yellow G 6530 N (Olive yellow RAL 1020)		1020	●●	●●	●●	8	5	5	5
HEUCOSIN™ Special Red G 10345 (Tomato red RAL 3013)		3013	●●	●●	●●	7 - 8	4 - 5	5	5
HEUCOSIN™ Special Blue G 10248 (Azure blue RAL 5009)		5009	●●	●●	●●	7 - 8	4	5	5
HEUCOSIN™ Special Green G 6557 N (Leaf green RAL 6002)		6002	●●	●●	●●	7 - 8	4 - 5	5	5
HEUCOSIN™ Special Green G 6516 N (Pale green RAL 6021)		6021	●●	●●	●●	8	5	5	5
HEUCOSIN™ Special Grey G 6555 N (Silver grey RAL 7001)		7001	●●	●●	●●	8	5	5	5
HEUCOSIN™ Special Grey G 10256 (Basalt grey RAL 7012)		7012	●●	●●	●●	7 - 8	4	5	5
HEUCOSIN™ Special Grey G 10120 (Anthracite grey RAL 7016)		7016	●●	●●	●●	8	5	5	5
HEUCOSIN™ Special Grey G 6556 N (Concrete grey RAL 7023)		7023	●●	●●	●●	8	5	5	5
HEUCOSIN™ Special Grey G 6517 N (Stone grey RAL 7030)		7030	●●	●●	●●	8	5	5	5
HEUCOSIN™ Special Grey G 6528 N (Blue grey RAL 7031)		7031	●●	●●	●●	7 - 8	4 - 5	5	5
HEUCOSIN™ Special Grey G 6518 N (Pebble grey RAL 7032)		7032	●●	●●	●●	8	5	5	5
HEUCOSIN™ Special Grey G 6531 N (Cement grey RAL 7033)		7033	●●	●●	●●	8	5	5	5
HEUCOSIN™ Special Grey G 10139 (Light grey RAL 7035)		7035	●●	●●	●●	8	5	5	5
HEUCOSIN™ Special Grey G 10140 (Dust grey RAL 7037)		7037	●●	●●	●●	8	5	5	5
HEUCOSIN™ Special Grey G 10135 (Agate grey RAL 7038)		7038	●●	●●	●●	8	5	5	5

●● Recommended ● Potential Use > Special shades available on request

Due to limitation of printing process some slight variations between the color as illustrated may be observed.

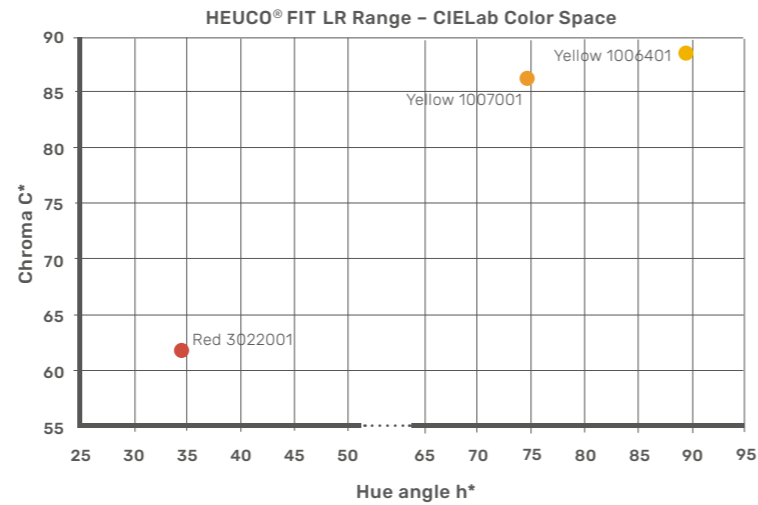
## HEUCO® FIT LR

The „HEUCO® FIT Lead Replacement“ dry pigment preparations have been developed for direct 1:1 replacement of chrome yellow and molybdate red pigments. In selecting the pigments, the focus was on a good balance of the colorimetric properties and the hiding power in the near-full shade color range.

This is particularly interesting in the area of industrial coatings, since good substrate hiding by a one-coat application of the paint with low layer thickness is necessary.

The visual assessment of the full shade coat confirms the good conformity found colorimetrically.

These cost-designed pigment preparations meet most of the requirements of general industrial and plastics applications including agricultural, construction and earth-moving equipment (ACE). Thus HEUCO® FIT LR permits smart – i.e. rapid and cost-effective formulation.



Products for Coatings	Full Shade	Fastness Properties			Application	
		Weather <sup>1)</sup>	Overpainting <sup>2)</sup>	Heat Resistance [°C] <sup>3)</sup>	General Industrial	Plastics
HEUCO® FIT LR Yellow 1006401 <sup>4)</sup>		4	5	150	● ●	
HEUCO® FIT LR Yellow 1006402 <sup>4)</sup>		3 - 4	4	150	● ●	
HEUCO® FIT LR Yellow 1007001 <sup>4)</sup>		4	5	150	● ●	
HEUCO® FIT LR Yellow 1007002 <sup>4)</sup>		4	4	150	● ●	
HEUCO® FIT LR Red 3022001		4 - 5	5	170	● ●	●
HEUCO® FIT LR Red 3022002		4 - 5	5	170	● ●	●

Products for Plastics	Full Shade	Fastness Properties			Application	
		Weather <sup>5)</sup>	Migration <sup>6)</sup>	Heat Resistance [°C] <sup>7)</sup>	General Industrial	Plastics
HEUCO® FIT LR Yellow 1006401P		3 - 4	5	280		● ●
HEUCO® FIT LR Yellow 1007001P		3 - 4	5	280		● ●

Due to the limitation of printing process, some slight variations between the color as illustrated may be observed. ● ● Our Recommendation ● Potential Use

<sup>1)</sup> Weather Fastness: Data on resistance to artificial xeno weathering (DIN EN ISO 16474-2, procedure A, cycle 1) is determined in a 2-comp. polyurethane test system after 2000 hours weathering time. Rating of change in color in accordance with DIN EN ISO 105-A02.

<sup>2)</sup> Overpainting: Bleeding was rated, of a white alkyd-melamine topcoat on a pigmented 2-comp. acrylate base coat in accordance with DIN EN ISO 105-A02.

<sup>3)</sup> Heat Resistance: Pigment was exposed at different temperatures up to 250°C in a 2-comp. acrylate base coat for 30 minutes. Temperature, above which, a noticeable shade change can be observed.

<sup>4)</sup> Pigments partially contain P.Y. 83 and should not be used at processing temperatures exceeding 200°C due to potential cleavage to 3,3' - dichlorobenzidine (DCB) under these conditions.

<sup>5)</sup> Weather Fastness: Data on resistance to artificial xeno weathering (DIN EN ISO 4892-2, cycle 1, climate M) is determined in a rigid PVC test system after 2000 hours weathering time. Rating of change in color in accordance with DIN EN ISO 105-A02.

<sup>6)</sup> Migration: Migration was tested in a plasticized PVC system and rated in accordance with DIN EN ISO 105-A02.

<sup>7)</sup> Heat Resistance: Pigment was exposed in an injection moulding process at different temperatures up to 300°C in a HDPE testing system according to DIN EN 12877-2, procedure B.



## OUR SERVICE

At Heubach, customer satisfaction comes first. As a supplier of high-quality pigment and pigment preparation solutions we support our customers anywhere where pigments are in use.

With active service centers both globally and regionally we provide our customers with the technical support essential for the implementation of customer-specific requirements and solutions.

Fully equipped technical laboratories and centers enable us to carry out tests for all relevant applications, such as printing inks, paints and coatings, including corrosion protection, coil and powder coatings and plastics.

Custom color adjustments play a significant role both in coatings and plastics applications.

We have extensive expertise in the development of colors for a variety of plastics, paint and coating systems. Depending on fastness properties, application or processing requirements, we can deliver the right color for your application, plastic compounds or even a specific paint system.



## **HEUBACH COLORANTS SOUTHERN AFRICA (PTY) LTD**

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COA EN | 08.2023