

## VIVID PIGMENT SOLUTIONS FOR POWDER COATINGS









#### **POWDER COATINGS CONTRIBUTE TO A SUSTAINABLE ENVIRONMENT**

Powder coatings offer numerous and convincing benefits compared to traditional paint. In addition to outstanding aestetic, durability and high protection, its environmental friendly properties are particularly noteworthy. They are more efficient, durable, energy-saving and beneficial when it comes to waste management. Powder Coatings are solvent-free. Thus they reduce risks concerning air and water pollution as well as health and safety.

#### Clean application process:

Powder coatings are free from Volatile Organic Compounds (VOCs).

#### No hazardous waste:

There is no hazardous waste generated during the powder application process.

#### Efficiency:

Powder coating finishes require much shorter curing, processing, and drying times vs. liquid coatings. This results in improved efficiency of manufacturing.

#### **Durability:**

Thanks to their very high durability, powder coatings outlast conventional finishes, potentially reducing maintenance cycles.

Time and energy savings: Minimal or simplified pretreatment of metal substrates is required, resulting in reduced waste, costs and energy consumption.

#### Waste management:

Additionally, the overspray from spray application can be re-used, leading to a powder coating material utilization rate approaching 100%.

Heubach is your partner of choice if you want to make your sustainable powder coating even more sustainable.

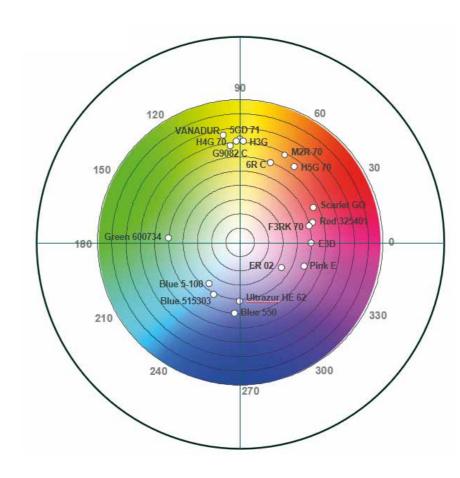
#### LONG LASTING, HARD WEARING COLOR FOR **DEMANDING POWDER COATING APPLICATIONS**

Heubach provides an extensive range of organic and inorganic pigments for powder coating applications. Colors engineered to meet the demands of modern processing, while complying with global regulatory standards. As a sustainable and economical option for the coatings industry, Heubach's ACOs and pigments for powder coatings offer exceptional corrosion resistance and vibrant color. Engineered for the most demanding applications where durability is essential, these organic and inorganic pigments provide lasting protection and performance.

Organic pigments: Complete portfolio from economic options to high performance solutions across the entire color spectrum.

Inorganic pigments: Broad portfolio of Complex Inorganic Colored Pigments and Bismuth Vanadate. Anticorrosives: To achieve highest levels of corrosion protection.

**Technical Support:** Highly competent technical service with dedicated powder coatings lab facilities on two continents.



#### Powder Coatings are used in a large variety of applications such as

- Agriculture, Construction and Earthmoving equipment
- Home Appliances
- General Industrial
- Architecture
- Automotive
- Furniture

#### Heubach's pigment portfolio covers the color circle and durability requirements from interior to exterior applications

- O PY 155, Novoperm® Yellow 5GD 71
- O PY 151, Hostaperm® Yellow H4G 70
- O PY 154, Hostaperm® Yellow H3G
- O PY 139, Novoperm® Yellow M2R 70
- O PO 062, Novoperm® Orange H5G 70
- O PR 168, Hostaperm® Scarlet GO
- O PR 254, Vynamon® Red 325401
- O PR 170, Novoperm® Red F3RK 70
- O PV 019, Hostaperm® Red E3B
- O PR 122, Hostaperm® Pink E
- O PV 019, Hostaperm® Red Violet ER 02
- O PB 15:3, Vynamon™ 515303 O PG 007, Vynamon™ 600734
- O PY 184. Vanadur® 1010 / 9010
- O PY 053, Heucodur® Yellow G9082 C
- PBr 024, Heucodur® Yellow 6R C
- O PB 029, Ultrazur™ HE 62
- O PB 028, Heucodur® Blue 550
- O PB 036, Heucodur® Blue 5-100

## OUR MAIN RECOMMENDATIONS FOR **POWDER COATINGS**

ORGANIC PIGMENTS	COLOR INDEX	PRODUCT NAME	HEAT STABILITY Tested in EP/PE and TGIC 150 vs. 200°C	WEATHER FASTNESS Tested 12 months in Germany at 45° angle in EP/PE system	
			-	Deep shade	SD (1/3)
	PY 155	NOVOPERM® YELLOW 5GD 71	dE*ab=3.4 / 2.9	4-5	4
	PY 151	HOSTAPERM® YELLOW H4G 70	dE*ab=2.2 / 2.3	4	3-4
	PY 154	HOSTAPERM® YELLOW H3G	dE*ab=1.8 / 1.7	5	4-5
	PY 139	NOVOPERM® YELLOW M2R 70	dE*ab=0.6 / 0.9	4-5d	4
	P0 62	NOVOPERM® ORANGE H5G 70	dE*ab=5.8 / 5.1	4	3-4
	PR 168	HOSTAPERM® SCARLET GO	dE*ab=2.1 / 2.3	5	5
	PR 254	VYNAMON™ RED 325401	dE*ab=3.7 / 2.8	4	4
	PR 170	NOVOPERM® RED F3RK 70	dE*ab=2.7 / 3.1	3-4	2-3
	PV 19	HOSTAPERM® RED E3B	dE*ab=1.0 / 0.8	4-5d	4
	PR 122	HOSTAPERM® PINK E	dE*ab=2.2 / 2.3	4d	4d
	PV 19	HOSTAPERM® RED VIOLET ER 02	dE*ab=0.3 / 0.4	4d	4
	PB 15:3	VYNAMON™ BLUE 515303	dE*ab=1.0 / 1.3	5	4-5
	PG 7	VYNAMON™ GREEN 600734	dE*ab=0.5 / 0.7	5	4-5

INORGANIC PIGMENTS	COLOR INDEX	PRODUCT NAME	HEAT STABILITY Tested in heat resistant coating (evaluated acc. ISO 787-21)	WEATHER FASTNESS  2.000h in water-borne automotive coating (evaluated acc. DIN EN-ISO 16474-2 / DIN EN-ISO 20105-A02	
				Full shade	SD (1/9)
	PY 184	VANADUR® 1010	200°C (tested in alkyd melamine)	4-5	-
	PY 184	VANADUR® 9010 C	200°C (tested in alkyd melamine)	4-5	-
	PY 53	HEUCODUR® YELLOW G 9082 C	600°C	5	5
	PBR 24	HEUCODUR® YELLOW 6R C	600°C	5	5
	PB 29	ULTRAZUR™ HE 62	300°C (evel. ISO 12877-2)	5	5
	PB 28	HEUCODUR® BLUE 550	600°C	5	5
	PB 36	HEUCODUR® BLUE 5-100	600°C	5	5
	PBK 28	HEUCODUR® BLACK 9-100	600°C	5	5

#### **ANTICORROSIVES**

Heubach offers a wide range of sustainable and environmentally friendly solutions to significantly extend the life of steel and reduce costs over the long term.

We have multiple offerings for powder coating applications with recommendations based on the level of protection you want your product to achieve.

From orthophosphates like Heucophos® CMP, ZAM-Plus and ZCP-Plus to high performance polyphosphates such as Heucophos® SAPP and ZAPP. We also offer a silica-based anticorrosive pigment, Heucosil™ CTF.

Backed global R&D capabilities and proven track record in innovative anticorrosive pigments, Heubach is dedicated to extending the working life of steel. Don't give rust a chance!

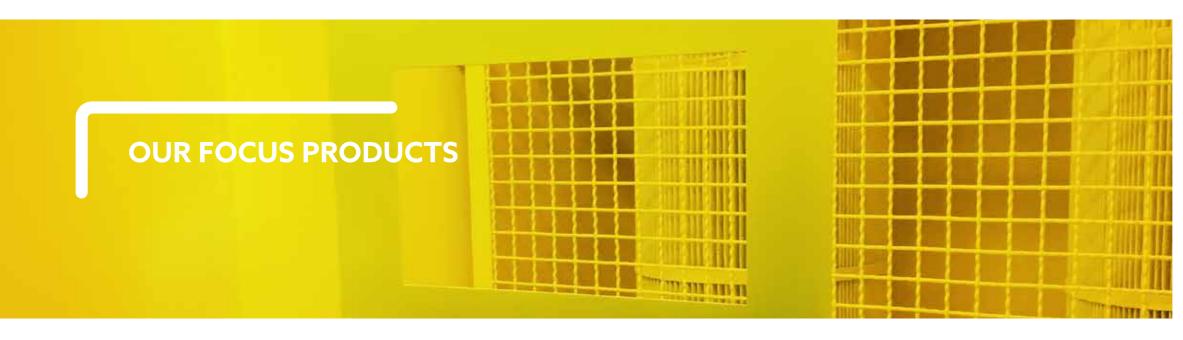


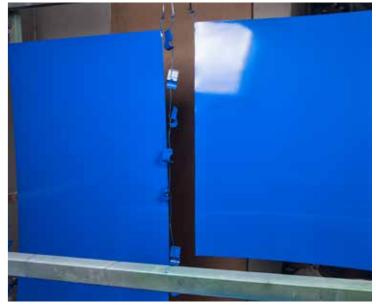
Control mod. Ortho Phosphate



• 2520 h salt spray test acc. to DIN EN ISO 9227/ ASTM B 117-19

- · Substrate: Cold rolled steel
- Coating System: Carboxylate Polyester





#### **NOVOPERM® YELLOW M2R 70 PIGMENT YELLOW 139**

#### The no. 1 choice for reddish yellow shades

Novoperm® Yellow M2R 70 is a brilliant reddish yellow pigment with very good light and weathering fastness as well as good flow properties, high opacity and good heat

The latter property and the fact that this is not a diaryl pigment marks it out from coloristically similar Pigment Yellow 83 grades.

#### **NOVOPERM® ORANGE H5G 70 PIGMENT ORANGE 62**

#### Yellowish and very brilliant orange

Novoperm® Orange H5G 70 is a very opaque, pure yellowish benzimidazolone pigment with a bright clean shade.

Very good light and weathering fastness in deep shades.

Suitable in almost all powder coatings and compatible with Epoxy/Polyester matting hardeners.

It has good synergy with other pigments, like blends with PR 188 (Novoperm® Red HF3S 70) to produce bright orange shades without any loss of chroma, gloss and improved opacity. ACE shades are easily formulated with this combination, achieving necessary gloss and weather fastness in both powder and liquid coatings.

#### **HOSTAPERM® RED E3B PIGMENT VIOLET 19**

#### Very bluish and high durability

Hostaperm® Red E3B is bluish quinacridone pigment with the familiar high fastness level of this pigment class. A substantial number of intensive, high fastness red RAL shades can be formulated using this product.

It is also an ideal combination pigment for tinting red shades based on PR 254 to the very bluish side.

**Recommended for** 

· RAL 3000, flame red

· RAL 3001, signal red

· RAL 3013, tomato red

 RAL 3017, rosé RAL 3020, traffic red

RAL 3003, rubine red

formulating RAL shades

#### **ULTRAZUR™ HE62 PIGMENT BLUE 29**

#### Deep blue color

Ultrazur™ HE62 is an inorganic blue pigment suitable for powder coatings, as it provides excellent heat stability (up to 300°C) and fastness properties and very good stability against weather.

#### **Recommended for** formulating RAL shades

- RAL 2003, pastel orange
- RAL 2004, pure orange
- RAL 2008, bright red orange
- RAL 2009, traffic orange
- · RAL 2010, signal orange

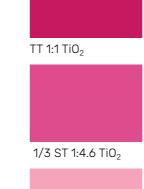
1/3 ST 1:3.4 TiO<sub>2</sub>

1/25 ST 1:55.9 TiO<sub>2</sub>

TT 1:1 TiO<sub>2</sub>

#### Recommended for formulating RAL shades

- RAL 2003, pastel orange
- RAL 2004, pure orange
- RAL 2008, bright red orange
- · RAL 2009, traffic orange
- RAL 2010, signal orange



# 1/25 ST 1:56.0 TiO<sub>2</sub>

### · RAL 3031, orient red RAL 4004, claret violet • RAL 4010, tele magenta Coca Cola red

Full Shade





Reduced Shade

#### **Recommended for** formulating RAL shades

• Proposal for RAL 5000 shades in development

1/25 ST 1:92.7 TiO<sub>2</sub>

1/3 ST 1:7.8 TiO<sub>2</sub>

TT 1:1 TiO<sub>2</sub>



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