IGP-HWFsuperior

Premium quality extremely weatherresistant powder coating for the highest weathering stability demands





IGP-HWFsuperior – FOR INCREASED COLOUR FASTNESS AND WEATHER RESISTANCE

Why "increased" weather resistance?

The rapidly advancing technologies in the coating industry and growing consumer quality consciousness demand new standards. The IGP-HWF superior coating system is the favourite in performance comparisons with conventional highly weather resistant powder coatings and creates additional security for all involved parties – particularly for buildings in extreme climatic zones or if long guarantee times are needed.

Extremely weather-resistant powder coatings

The combination of design and surface provide added value which has a long-term effect. Highly weather resistant powder coatings from IGP Pulvertechnik AG are among the technologies which provide long-term protection against environmental and climatic influences and which are demonstrably easier to clean. Calls for long-term gloss preservation and colour stability for all locations and areas have been met sustainably with the products IGP-HWFclassic and IGP-HWFsuperior.

Maximum weathering stability

According to the codes of the quality standard associations, one of the most relevant test requirements for highly weather resistant powder coatings for use in architecture is the three-year open air weather exposure of test samples in Florida (ISO 2810). IGP-HWFsuperior exceeds these requirements for the extremely weather-resistant classes by two years (UV solarisation energy ≥ 1,400 MJ/m² / 45 °S) and maintains an attractive overall appearance after years of exposure to extreme climatic conditions.

Metallic effect shades from the IGP-HWFsuperior line are premium quality and are produced with the "Premium Bond" production method. This ensures an even effect distribution. Effect shades produced using the innovative IGP-Effectives® technology are optionally available, and guarantee utmost effect consistency regardless of the coating parameters. IGP-Effectives® products are extremely efficient and can be recycled in multiple cycles without loss of effect.

Optimised aging behaviour

High bonding strength between the polymer chains protects the paint surface against chalking and premature aging. Extremely UV resistant pigments guarantee long-term shade preservation. Cleaning additives included in the entire paint structure prevent the accumulation of residual dirt particles and help preserve a consistently attractive surface.



MainTor area, Frankfurt



Andreaspark, Zurich



Shade change 2000h WOM, DIN EN ISO 16474-2, RAL 9007

HIGHEST DEMANDS ON SHADE AND GLOSS LEVEL STABILITY

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Exposed to sub-tropical sun

According to the provisions of the quality associations GSB and Qualicoat, weather-proof facade products must successfully withstand 1 year, and Super Durable Products (IGP-HWFclassic) 3 years exposure to Florida sun with at least 50% of the original gloss remaining. In comparison, IGP-HWFsuperior can withstand more than five years exposure to Florida sun with a gloss and colour stabilization; a new level of ultra-weather resistant coating qualities.

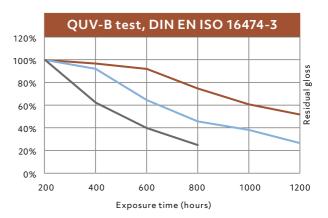
Fast weathering QUV-B (313 nm)

With accelerated paint aging in the QUV-B test device, the GSB Quality Association for extremely weather resistant powder coatings of the top category requires of a remaining gloss of at least 50 % of the original gloss after 600 h UV-B radiation. IGP-HWFsuperior clearly exceeds these requirements compared to conventional HWF products and reaches the requirements of the top GSB weathering class – premium.

Product assortment

IGP-HWF superior is available in an individually expandable HFW colour range in a variety of gloss levels in plain, as well as with pearl mica and metallic effects.

- RAL and NCS shades
- Effect shades (minimum production quantity 200 kg, initial production quantity 400 kg)
- Customised shades



- IGP-HWFsuperior, Product line 57
 - Conventional HWF, Product line 59
- Standard Polyester, Product line 58

IGP-HWFsuperior product range				
Qualities	Surface aspects	Licences		
IGP-HWFsuperior 5707	Silk gloss, smooth finish	GSB 173g; QC P-1171		
IGP-HWFsuperior 5703	Matte, smooth finish	GSB 173r; QC P-1172		
IGP-HWFsuperior 571T	Fine structure, deep-matt	QC P-1316		

All surfaces are available in a plain shade or with various effect pigments.

Weathering categories and IGP standard warranty period in accordance with certifications				
Product qualities	Flo	Florida exposure time		
IGP-DURA® face 58	1 y	ear		
IGP-HWFclassic 59	3 (9	5)¹ years		
IGP-HWFsuperior 57	5 (*	10)² years		>
Quality testing	Qu	Quality classification		
GSB	Sta	andard	Master	Premium
Qualicoat	Cla	ass 1	Class 2	Class 3
AAMA ³	AA	MA 2603	AAMA 2604	AAMA 2605

¹ Exposure 3 years after GSB / Qualicoat (50% residual gloss) 5 years in accordance with AAMA 2604 (30% residual gloss)

² Exposure 10 years after Qualicoat class 3 and AAMA 2605

³ Test reports in accordance with AAMA (American Architectural Manufacturers Association) specifications

IGP-HWFsuperior – AT A GLANCE

Application	Product series	Target values	
Stoving conditions	5703	20 – 30 min. 170 °C 15 – 25 min. 180 °C 10 – 20 min. 200 °C	
Stoving conditions	5707, 571T	20 – 30 min. 180 °C 15 – 25 min. 190 °C 10 – 20 min. 200 °C	
Coating thickness	5703, 5707, 571T	60 – 80 μm DIN EN ISO 2064	
Gloss level	5703 5707 571T	25 – 35, R'/60° DIN EN ISO 2813 65 – 85, R'/60° DIN EN ISO 2813 < 15, R'/60° DIN EN ISO 2813	
Substrate	Suitability for use on adequately cleaned and pre-treated metal surfaces such as aluminium, steel and galvanised steel.		
Test methods	Test norms	Target values (Qualicoat Class 2/GSB Premium)	
Mechanical values			
Cross-cut test, adhesion	DIN EN ISO 2409, Tape	GT 0	
Erichsen cupping	DIN EN ISO 1520, Tape	≥ 5 mm; no peeling	
Mandrel bending test	DIN EN 1519, Tape	= 5 mm; no peeling	
Hemispherical impact test	ASTM D 2794, Tape	2.5 Nm, no peeling	
Abrasion test	AAMA 2604-10, ASTM D 4060	Shade-dependent	
Mechanical processing	Qualicoat-test 2.18, GSB test 10	No cracks or spalling when sawing, milling, drilling with a sharpened tool	
Corrosive / chemical tests			
Cleaning agent test	ASTM D 2248	No visual change No blisters and no film peeling	
Acetic acid salt spray test	DIN EN ISO 9227 / AASS DIN EN ISO 4628-2	After 1000 h: Degree of blistering 0 (SO), Infiltration ≤ 1 mm	
Water condensate exposure test	DIN EN ISO 3231 DIN EN ISO 4628-2 DIN EN ISO 4628-8	$0.2\mathrm{ISO}_2$, 30 cycles, degree of blistering: 0 (SO), Infiltration ${}^{\mathrm{d}}$ max ≤ 1 mm, color and effect change with metallics: maximum of Level 2	
Moisture resistance	GSB test 16	Maximum of ΔL 3	
Mortar resistance	DIN EN ISO 4628-1	GSB 18, after 24 h, Single-colour shades: no color and effect changes, Metallic shades: max. Level 2	
Weather resistance			
Florida test	DIN EN ISO 2810 DIN EN ISO 2813/60° ISO 7724-3 with gloss	60 months, 45° south/max. 1.400 MJ/m², Residual gloss ≥ 50%, Color change ΔL*, ΔC*ab according to Tab. 19.2 GSB	
Fast weathering WOM	DIN EN ISO 16474-2 DIN EN ISO 2813 / 60° ISO 7724-3 with gloss	Radiation time 1000 h, Residual gloss ≥ 90%, Color change ΔE CIELAB ≤ 50%, according to Tab. A7 according to Qualicoat	
Fast weathering QUV-B	DIN EN ISO 16474-3 (313 nm, 0.75 W/m²/nm)	Radiation time 1000 h, Residual gloss ≥ 50%	

Testing on aluminium, AlMg1, sheet 0.8 mm; reqired pre-treatment as per DIN EN 12487 or suitable chromium-free pre-treatments.

EXTREMELY WEATHER-RESISTANT PLUS – FOR LONG-TERM AESTHETICS AND EFFECTIVE SURFACE PROTECTION

IGP-HWFsuperior is a premium quality coating system. It significantly extends the range of performance of customary extremely weather-resistant powder coatings typical to the industry (super durables) in terms of weathering capacity. After 5 years of exposure to the warm, humid Florida climate, the various shades of coating samples showed excellent colour stability as well as extremely stable gloss retention.

Tested quality and reliability

- Seamless quality chain from production through coating
- Monitoring by GSB and Qualicoat quality associations
- Guaranteed gloss and colour stability

Application

- Good chargeability
- High level of opacity, low material consumption
- Reliable and even coating results

Surface features

- Very good surface coverage
- Pearl and interference effects, metallic
- High abrasion resistance as per ASTM D 4060
- Cloud-free application through bonded effect powder coatings of IGP-Premium Bond or selected quality IGP-Effectives® procedure

IGP-DURA®clean-Effekt

- Easy cleaning and reduced dirt adhesion
- Low maintenance costs
- Long-lasting finish quality

Economical

- Low energy requirements thanks to low cross-linking temperatures and shorter stoving times
- High application efficiency, low overspray
- Recyclable







Cover image: School, Collombey-Muraz, IGP-HWFsuperior 5703E82861F3F / 5703E82889F3F

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