

# POWDER COATINGS FOR FAÇADES

Four quality levels for high-quality surfaces





THE BASIS

# **QUALITY LEVELS FOR**SURFACE COATINGS

#### PRODUCT QUALITY AND UP-KEEP COSTS

When you select the quality level, you determine more than just the gloss and color stability. You also define the resistance to humidity and UV radiation, the scratch resistance, plus the cleaning intensity and frequency for your object.

By investing in a highly weather-resistant surface coating, you can ensure your component retains full gloss for years. Simply get in touch to find out more in a one-on-one talk with one of our architecture consultants. Feel free to contact us.

#### Good to know

A higher-quality coating saves upkeep costs. The surface maintains its color and gloss for longer, is easier to clean, and thus preserves the value of the façade.

## **CALCULATION BASIS**

Two façade types – each with an axial spacing of 1.25 m, a story height of 3.40 m, and façade costs of CHF 900/ m² (100%) – were coated as the basis for the cost comparison.

Both were coated inside and out with a weather-proof, standard polyester powder coating, RAL 9006, IGP-DU-RA®one 56.

Façade type 1: Mullion-transom façade with a glazed proportion of >70%, transom depth 160 mm, covering shells  $50 \times 25$  mm, and surface facing of the ceiling fronts.

Façade type 2: Ribbon-window façade with a glazed proportion of around 40%, parapet cladding inside and out, drip plates and a coated installation channel on the inside.

The inside surfaces (profile half-shells and interior surfaces) are not included in the cost comparison because all façade types are coated with the same weather-proof standard polyester system (Qualicoat Class 1 / GSB, Florida 1). IGP-DURA® one 56. Therefore, the higher costs in the table result from the choice of higher-quality coatings for the exterior.

Note: As in the comparison example, separate coating of the half-shells is only possible with thermally separated profile sections. A distinction is made between upkeep and intensive cleaning. Metal façades with a higher proportion of glazing generally cost less to clean than surfaces with a large coated proportion. The cleaning costs were calculated without scaffolding and may vary slightly according to wage levels. Costs and performance parameters depend on the color shade and article, and may vary. You can find binding details in the technical data sheets.



#### SYSTEM COSTS

In the table, we consider the examples of four IGP powder coating products, each representing significantly different performance categories.

As a rule, the differences between the material costs are balanced out by the wage, transport, packaging, and overhead costs of the coating services. For both façade types (with a low and high proportion of glazing respectively), we detail how the different coating costs affect the final costs of coated metal façades per m² compared to a weather-proof standard coating (series 56).

We show the added façade costs that result from choosing a higher-quality product in the bottom section of the table. These are stated as a percentage with reference to the costs of a façade with a standard coating (100%). Within the quality chart, possible extra costs for higher resistance to weathering and other factors are considered in connection with longer cleaning intervals and therefore lower upkeep costs, which offset the additional expense incurred for high-quality façade coatings within just a few years.

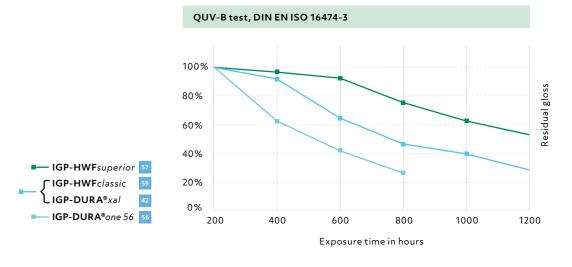
# The IGP promise

#### WARRANTIES

On request, we can provide your coating company with long-term, project-specific warranties that guarantee our tested IGP quality for objects and façades. Extended warranties are dependent on the selected product quality, planned cleaning intervals, and location.

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# THE QUALITY MATRIX FOR ARCHITECTURE



IGP product ranges		IGP-DURA®one	56	IGP-HWFclassic	59	IGP-DURA®xal	42	IGP-HWFsuper	ior 57
Area of application		Standard façade quality Weather-proof powder coating		Standard/object quality Highly weather-resistant powder coating		Object and design quality Highly weather-resistant powder coating		High object quality Highly weather-resistant PLUS	
Performance	Tests								
Chemical resistance	Mortar resistance according to GSB and Qualicoat	Slight visual changes possible for metallic coatings		Slight visual changes possible for metallic coatings		Slight visual changes possible for metallic coatings		Slight visual changes possible for metallic coatings	
	Acids, alkalis, neutral cleaning agent	To be checked on a case-by-case basis		To be checked on a case-by-case basis		To be checked on a case-by-case basis		To be checked on a case-by-case basis	
Minimum corrosion resistance requirement	Condensation constant climate test	1000 h, DIN EN ISO 6270-2		1000 h, DIN EN ISO 6270-2		1000 h, DIN EN ISO 6270-2		1000 h, DIN EN ISO 6270-2	
	Acetic acid salt spray test (ISO 9227-ASS)	1000 h / GSB; 1000 h / QC Blisters ≤ 2 (S2) acc. to ISO 4628-2		1000 h / GSB; 1000 h / QC Blisters ≤ 2 (S2) acc. to ISO 4628-2		1000 h / GSB; 1000 h / QC Blisters ≤ 2 (S2) acc. to ISO 4628-2		1000 h / GSB; 1000 h / QC Blisters ≤ 2 (S2) acc. to ISO 4628-2	
Weathering	Florida weathering / certification bodies Residual gloss value in %	1 year of exposure / GSB & QC 1 yr: ≥ 50%		3 years of exposure / GSB & QC 1 yr: ≥ 75%, 2 yr: ≥ 60%, 3 yr: ≥ 50%		3 years of exposure / GSB & QC 1 yr: ≥ 75 %, 2 yr: ≥ 60%, 3 yr: ≥ 50%		5 years of exposure / GSB 5 yr: ≥ 50%	
	Color stability depending on color shade in accordance with	GSB Florida 1, AL 631-4, 22, Sect. 2; No. 2.4 Qualicoat Specifications 22; Appendix A12		GSB Florida 3, AL 631-4, 22, Sect. 2, No. 2.4 Qualicoat Specifications 22; Appendix A12		Qualicoat Specifications 22; Appendix A12		GSB Florida 5, AL 631-4, 22, Sect. 2, No. 2.4 Qualicoat Specifications 22; Appendix A12	
	WOM, accelerated weathering test (ISO 16474-2 Method A)	Residual gloss after 1000 h ≥ 50%		Residual gloss after 1000 h ≥ 90%		Residual gloss after 1000 h ≥ 90%		Residual gloss after 1500 h ≥ 90%	
	UV-B-(313 nm) accelerated weathering test	Residual gloss after 300 h ≥ 50%		Residual gloss after 600 h ≥ 50%		Residual gloss after 600 h ≥ 50%		Residual gloss after 1000 h ≥ 50%	
Certification bodies	GSB / Qualicoat / Qualisteelcoat / AAMA (test reports)	GSB Florida 1 / Qualicoat Class 1 / Qualisteelcoat SD2, HD2		GSB Florida 3 / Qualicoat Class 2 / AAMA 2604 Test Report		Qualicoat Class 2 / AAMA 2604 Test Report		GSB Florida 5 / Qualicoat Class 2 / AAMA 2604 test report	
Areas of application with increasing siveness	corro-	Warranty options de	epending on coating stru	cture and location					
Possible warranty agreements depending on:  Location Substrate Pretreatment Coating structure UV irradiation	Rural areas, low pollution, dry	WA max. 10 years, 1-coat structure		WA max. 15 years, 1-coat structure		WA max. 15 years, 1-coat structure		WA max. 20 years, 1-coat structure	
	Urban and industrial climate with moderate pollution	WA max. 5 years, 1-coat structure		WA max. 12 years, 1-coat structure		WA max. 12 years, 1-coat structure		WA max. 17 years, 1-coat structure	
	Urban and industrial climate with increased pollution	WA max. 5 years 2-coat structure with <b>IGP</b> -KOR- ROPRIMER 10 or 60		WA max. 10 years 2-coat structure with <b>IGP</b> -KOR-ROPRIMER 10 or 60		WA max. 10 years 2-coat structure with <b>IGP</b> -KORRO- PRIMER 10 or 60		WA max. 15 years 2-coat structure with <b>IGP</b> -KOR-ROPRIMER 60	
	Industrial area, high humidity and/or aggressive climate, coastal area	WA max. 5 years, pre-anodization for aluminum recommended, 2-coat structure on steel with <b>IGP</b> -KORROPRIMER 10 or 60		WA max. 10 years, pre-anodization for aluminum recommended, 2-coat structure on steel with IGP-KORROPRIMER 10 or 60		WA max. 10 years, pre-anodization for aluminum recommended, 2-coat structure on steel with <b>IGP</b> -KORROPRIMER 10 or 60		WA max. 15 years, pre-anodization for aluminum recommended, 2-coat structure on steel with <b>IGP</b> -KORROPRIMER 60	
Coating and mainte- nance costs (Single-coat structure)	Glazed proportion approx. 40% or > 75%	40%	75%	40%	75%	40%	75%	40%	75%
	Influence on façade costs (100% = standard)	100%	100%	100.6%	100.2%	101.4%	101.0%	102.6%	102.2%
	Payback period	-	-	30 months	30 months	60 months	60 months	72 months	72 months
	Cleanability	Good		Very good		Very good		Excellent	
	Cleaning intervals, example: urban area, moderate pollution	Upkeep cleaning every 18 months Thorough cleaning every 7 years		Upkeep cleaning every 24 months Thorough cleaning every 8 years		Upkeep cleaning every 24 months Thorough cleaning every 8 years		Upkeep cleaning every 30 months Thorough cleaning every 10 years	
								More sustainable, 1	nore durable

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# INFLUENCE OF QUALITY LEVELS ON

# **FAÇADE AND**CLEANING COSTS

# THE IMPACT OF POWDER COATING COSTS

When the overall façade costs are considered, the different material costs of powder coatings become less significant. This is because the share of the coating in the costs is usually in the lower single-digit percentage range. Nevertheless, weather-resistant coating systems are one of the biggest factors affecting a building's ability to sustain its aesthetic impact and retain its value.

### **CLEANING INTERVALS**

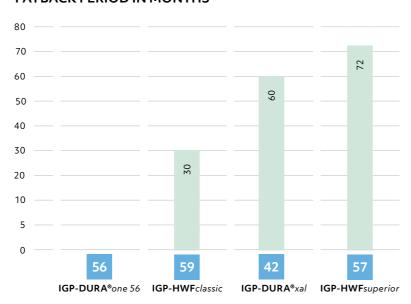
Vehicle and industrial emissions combined with UV radiation put a strain on façade coatings and lead to visible changes in the decorative and protection layers. With regular cleaning and preservation, it is possible to strengthen the color retention, effect, gloss level, and protective function of the coating for a long period of time. This is why we advise architects and planners to inform their customers about the certification bodies' cleaning recommendations (e.g. https://www.grm-online.de/ oder www.szff.ch) with regard to the retention of value.

## SHARE OF COATING IN THE FAÇADE COSTS\*



 $<sup>^\</sup>star Example$ : powder coated ribbon-window façade, 36% glazed proportion, same standard coating on inside shell

### **PAYBACK PERIOD IN MONTHS\***



<sup>\*</sup> due to longer cleaning intervals











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