IGP POWDER COATINGS

POWDER COATINGS FOR FAÇADES

Quality levels for high-end surfaces

THE BASIS

QUALITY LEVELS FOR SURFACE COATINGS

PRODUCT QUALITY AND UPKEEP COSTS

When you select the quality level of a coating, 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 super durable surface coating, you ensure your component retains full gloss for years. Find out more in a one-on-one talk with one of our architecture consultants. Simply 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

As the basis for the cost comparison, 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 inside and out with a weather-proof standard polyester powder coating, RAL 9006 **IGP-DURA®***one* 56.

Façade type 1: Mullion-transom façade with a glazed proportion of >70%, transom depth 160 mm, covering shells 50 x 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.

For the calculation of the different powder coating costs (see diagram, page 6), only the costs for the respective qualities on sheet metal and profiles on the exterior were taken into account. For the coated interior surfaces, a weather-proof standard powder coating of Qualicoat quality class 1 (GSB Florida 1) was assumed for all example calculations.

Note: As in the comparison example, separate coating of the half-shells is only possible with thermally separated profile sections. The cleaning costs are based on average values for façade maintenance 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 quality matrix, we consider various examples of 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.

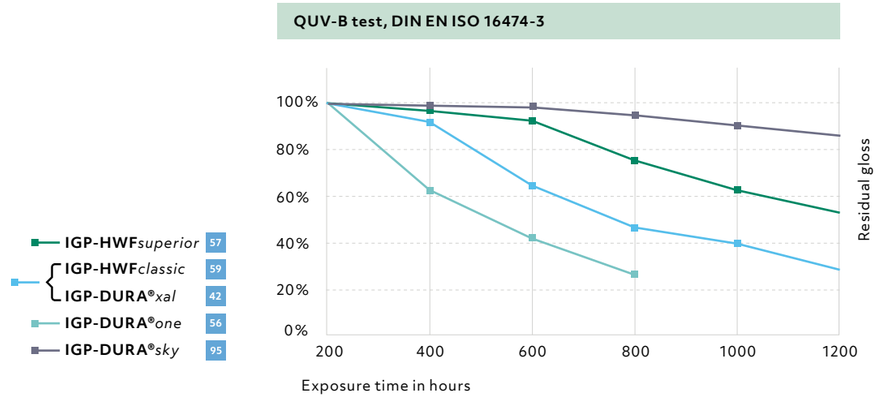
The IGP promise

WARRANTIES

On request, we 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.

QUALITY LEVELS COMPARED

THE QUALITY MATRIX FOR ARCHITECTURE



IGP product ranges		IGP-DURA®*one* 56	IGP-HWF*classic* 59	IGP-DURA®*xal* 42	IGP-HWF*superior* 57	IGP-DURA®*sky* 95
Area of application		Standard façade quality Weather-proof powder coating	Standard/object quality Super durable powder coating	Object and design quality Super durable powder coating	High object quality Super durable PLUS	Hyper-durable object quality with anti-graffiti properties
Performance	**Tests**					
Resistance to chemicals	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	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	Excellent resistance
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	2000 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	1000 h / GSB; 2000 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 %, 840/1400 MJ/m²: ≥ 50 %	10 years of exposure / QC / GSB / AAMA 3 yr: ≥ 80 %; 5 yr: ≥ 70 %; 7 yr: ≥ 60 %; 10 yr: ≥ 50 % RG
	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	GSB Florida 10, Sect. 2; No. 2.4, Qualicoat Class 3, 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 %	No WOM; QC: Pre-stage Florida 3 yr: ≥ 80 % RG
	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 %	No QUV-B; GSB: Pre-stage Florida 5 yr: ≥ 80 % RG
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	GSB Florida 10 / Qualicoat Class 3 / AAMA 2605 Test Report
Areas of application with increasing corrosiveness		**Warranty options depending on coating build-up and location**				
Possible warranty agreements depending on: ▪ Location ▪ Substrate ▪ Pretreatment ▪ Coating structure ▪ UV irradiation	Rural areas, low pollution, dry	WA max. 10 years, 1-layer structure	WA max. 15 years, 1-layer structure	WA max. 15 years, 1-layer structure	WA max. 20 years, 1-layer structure	WA max. 25 years, 1-layer structure
	Urban and industrial climate with moderate pollution	WA max. 5 years, 1-layer structure	WA max. 12 years, 1-layer structure	WA max. 12 years, 1-layer structure	WA max. 17 years, 1-layer structure	WA max. 20 years, 1-layer structure
	Urban and industrial climate with increased pollution	WA max. 5 years, 2-layer structure with **IGP**-*KORROPRIMER* 18 or 60	WA max. 10 years, 2-layer structure with **IGP**-*KORROPRIMER* 10 or 60	WA max. 10 years, 2-layer structure with **IGP**-*KORROPRIMER* 10 or 60	WA max. 15 years, 2-layer structure with **IGP**-*KORROPRIMER* 60	WA max. 17 years, 2-layer structure with **IGP**-*KORROPRIMER* 60
	Industrial area, high humidity and/or aggressive climate, coastal area	WA max. 5 years, pre-anodization for aluminum recommended, 2-layer structure on steel with **IGP**-*KORROPRIMER* 10 or 60	WA max. 10 years, pre-anodization for aluminum recommended, 2-layer structure on steel with **IGP**-*KORROPRIMER* 10 or 60	WA max. 10 years, pre-anodization for aluminum recommended, 2-layer structure on steel with **IGP**-*KORROPRIMER* 10 or 60	WA max. 15 years, pre-anodization for aluminum recommended, 2-layer structure on steel with **IGP**-*KORROPRIMER* 60	WA max. 15 years, pre-anodization for aluminum recommended, 2-layer structure on steel with **IGP**-*KORROPRIMER* 60
Coating and maintenance costs (Single-layer structure)	Glazed proportion approx. 40 % or > 75 %	40 % / 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 %	103.7 % / 103.3 %
	Payback period	– / –	30 months / 30 months	60 months / 60 months	72 months / 72 months	84 months / 84 months
	Cleanability	Good	Very good	Very good	Excellent	Excellent, anti-graffiti properties
	Cleaning intervals, example: urban area, moderate pollution	Maintenance cleaning every 18 months. Thorough cleaning every 7 years	Maintenance cleaning every 24 months. Thorough cleaning every 8 years	Maintenance cleaning every 24 months. Thorough cleaning every 8 years	Maintenance cleaning every 30 months. Thorough cleaning every 10 years	Maintenance cleaning every 36 months. Thorough cleaning every 10 years

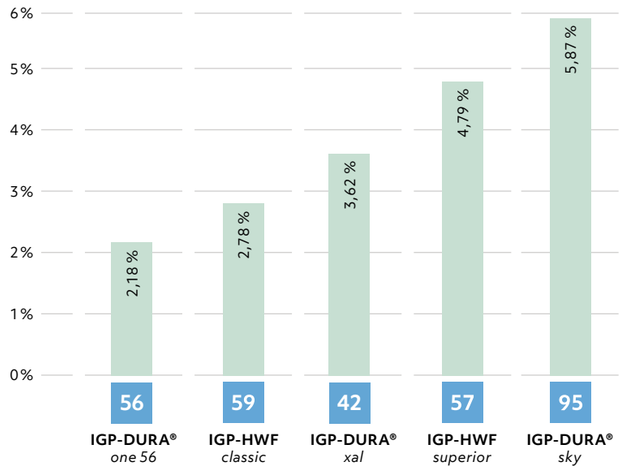
INFLUENCE OF QUALITY LEVELS ON

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 overall 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.

SHARE OF COATING IN THE FAÇADE COSTS*

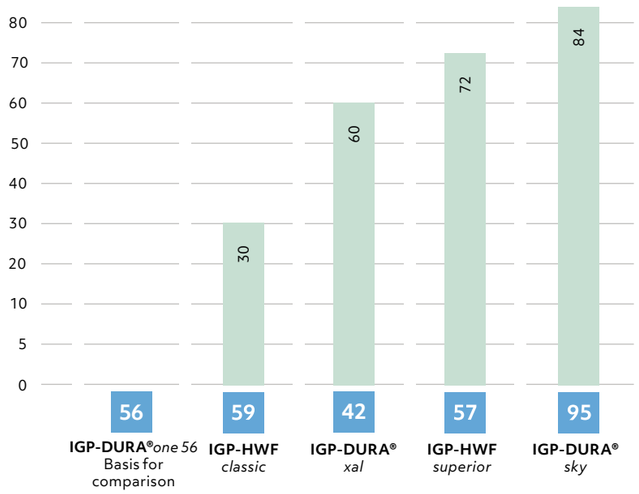


Example: powder coated ribbon-window façade, 36% glazed proportion, same standard coating on inside shell

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.

PAYBACK PERIOD IN MONTHS*



* due to longer cleaning intervals

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