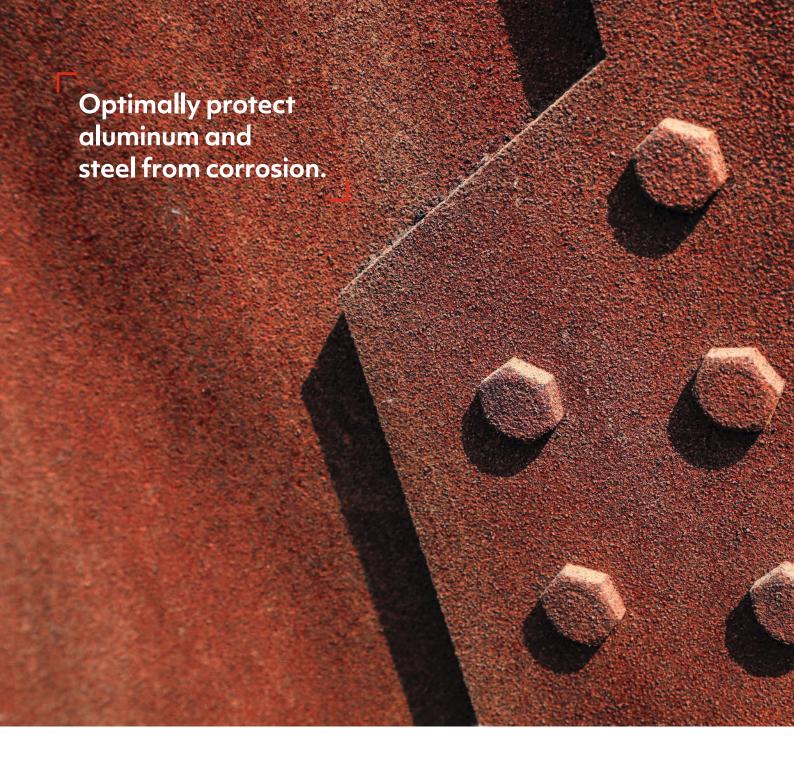


## **IGP-**KORROPRIMER

Ideal primer for steel and aluminum, providing excellent protection against chemicals and weathering.





The IGP-KORROPRIMER powder coating systems provide first-class corrosion protection for steel and aluminum structures.

These environmentally friendly and durable coatings meet the required DIN standards and Qualicoat guidelines and ensure excellent resistance to chemicals and weather conditions. Benefit from decades of experience in corrosion protection and the customized service offered by IGP Powder Coatings.

## Your benefits at a glance

- + Optimal corrosion protection
- + Versatile application areas
- + Customizable protection product portfolio
- + Ideal corrosion protection systems
- + Approved by certification bodies
- + Decades of expertise
- + Efficient, productive, and flexible
- + Bespoke service
- + Workshops and training courses

## Corrosion and its impacts.

According to estimates by the World Corrosion Organization, the annual cost of corrosion and its effects in industrialized countries is over 3% of each country's gross national income.

As defined in the DIN EN ISO 8044 standard, "corrosion is the reaction of a metallic material with its environment". This environment results from natural conditions such as the atmosphere, precipitation frequency, and proximity to rivers or the sea. Corrosion can also be caused by residues from various metalworking processes.

In such cases, even a primer may not effectively prevent rust formation.

By applying organic coating systems, corrosion on steel and aluminum structures can be avoided. IGP's two-coat powder coating systems specifically protect substrates such as steel, galvanized steel, and aluminum from the various forms of corrosion. These systems consist of IGP-KORROPRIMER, a corrosion-inhibiting and adhesion-promoting powder primer, and a weather-proof, UV resistant powder coating.

Corrosion costs over 3% of gross national income annually in industrialized countries.





## **Optimal protection**

The environmentally friendly and highly durable IGP powder coating systems provide a high level of corrosion protection in compliance with industrial and construction standards such as DIN 55633 (corrosion protection of steel structures by powder coating systems and coating application). Their efficacy is further confirmed via product certifications and compliance with the Qualisteelcoat guidelines. Especially in metal construction this is an important component in meeting the strict requirements of DIN EN 1090 (design of steel and aluminum supporting structures).



## Corrosion factors

The best-known type of corrosion is the formation of rust on iron. Iron oxide is a solid that continues to grow on the metal as a bulky, porous coating, negatively affecting its load-bearing capacity, strength, and toughness. However, corrosion is not limited to steel substrates. Due to the influence of chlorides in combination with high humidity, it also occurs on coated aluminum substrates as filiform corrosion.

## Corrosion protection on aluminum and steel.



Offering outstanding corrosion protection, the IGP-KORROPRIMER range also stands out thanks to its excellent resistance to chemicals and very good mechanical properties. These primers are suitable for overcoating with all IGP powder coatings as well as other topcoat systems.

## IGP-KORROPRIMER for outgassing substrates

The V versions of the IGP primers are specifically designed for galvanized steel and other outgassing substrates, and are suitable for most common pretreatments. They allow outgassing of the porous zinc surface before cross-linking occurs, resulting in smoother surfaces with fewer defects.

The lower the temperature during curing, the less outgassing will occur. This is why IGP-KORROPRIMER 1808 (minimum curing conditions: 140°C) is also a beneficial option for outgassing substrates.

## Practical example

The following comparison shows that the use of IGP-KOR-ROPRIMER can significantly reduce surface defects caused by outgassing.



Surface defects due to outgassing



Bubble-free coating solutions with IGP-KORRO-PRIMER 1001 V or 6007 V

## The right protection for every substrate.

IGP-KORROPRIMER enables customized corrosion protection for optimal protection of any substrate.

## **IGP-KORROPRIMER 10**

A classic modern primer based on epoxy resins. Its strong cross-linking characteristics ensure excellent adhesion to the substrate and, thanks to its barrier effect, it also guarantees the highest possible corrosion protection. We recommend 1001 V for use on galvanized steel (or other outgassing substrates).

## **IGP-KORROPRIMER 18**

The thicker the substrates, the greater the benefits of using a low-temperature epoxy primer. Thanks to its excellent corrosion protection properties, the innovative IGP-KORRO-PRIMER 1808 offers enormous potential savings. Enabling curing conditions from 140°C, it can both reduce energy costs and optimize process times. In combination with low-temperature topcoats, it thus creates the basis for an ecologically sound coating system for solid structural steel components.

## **IGP-KORROPRIMER 60**

Formulated with a polyester resin base, the series 60 universal primers offer excellent corrosion protection, high UV resistance, and perfect edge covering.

IGP-KORROPRIMER 7040 comes with additional benefits: easy overcoating, increased coating thickness and better edge covering. All this makes it ideal for different material thicknesses, protecting substrates from corrosion even more effectively. The efficient application reduces overspray and saves powder – a solution that makes sense both economically and ecologically.

The V version of the primer is also suitable for outgassing substrates.

### 10 IGP-KORROPRIMER 1001 and 1001 V 1001 1001 V **Curing conditions Curing conditions** (object temperature) (object temperature) • 190°C / 10-15 min • 190°C / 10-15 min • 180°C / 20-25 min • 180°C / 20-25 min For outgassing substrates. Color Light gray, approx. RAL 7035 Iron gray, approx. RAL 7011 Art. No. 1001A70354A00 Art. No. 1001A70114V00 Color Traffic gray B, approx. Color Telegray 4, approx. RAL 7043 **RAL 7047**

## 18 **IGP-KORROPRIMER 1808**

### **Curing conditions** (object temperature)

Art. No. 1001A70434A00

- 160°C / 6-30 min
- 150°C / 10-40 min • 140°C / 15-50 min

Low-temperature system

Light gray, approx. RAL 7035 1808A70354A00 Art. No. Black gray, approx. RAL 7021 Art. No. 1808A70214A00 SAVE ENERGY

**Art. No.** 1001A70474V00

60

## IGP-KORROPRIMER 6007 and 6007 V

## 6007

## **Curing conditions** (object temperature)

- 190°C / 8-12 min
- 180°C / 10-15 min
- 170°C / 15-20 min

Light gray, approx. RAL 7035 Art. No. 6007A70354A00

**RAL 7040** Art. No. 6007A70404O00

Window gray, approx.

## 6007 V

## Curing conditions (object temperature)

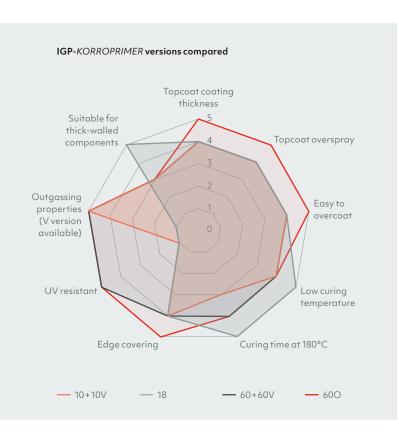
- 190°C / 8-12 min
- 170°C / 15-20 min

For outgassing substrates.

Pebble gray, approx. RAL 7032

Art. No. 6007A70324V00

# The benefits of IGP-KORROPRIMER at a glance.



[<u>i</u>]

## Improved overcoating

IGP-KORROPRIMER 6007 in the O version Window gray (RAL 7040) is optimized for easy overcoating. It ensures excellent topcoat adherence, resulting in less overspray and greater coating thickness as

well as optimal edge covering. Ideal for complex geometries with different coating thicknesses.

Tailor made for every application area.

The KORROPRIMER series from IGP Powder Coatings offer you tailored solutions for your projects. The individual primers have unique advantages that make them ideal for different applications.

## **IGP-**KORROPRIMER 10

The 10 series, including the V version, gives you excellent edge covering and is ideal for a wide range of applications. These primers possess excellent outgassing properties and are perfect for challenging environments.

## Benefits at a glance:

- Exceptional edge covering
- Excellent outgassing properties
- Suitable for outgassing substrates

## **IGP-KORROPRIMER 18**

The 18 series is distinguished by its low curing temperature (140°C) or short curing time at 180°C, plus its suitability for thick-walled components. It offers excellent coating thickness and overspray properties, making it ideal for complex applications.

## Benefits at a glance:

- Curing from 140°C
- Short curing time at 180°C
- · Suitable for thick-walled components
- Excellent coating thickness and overspray properties

## **IGP-**KORROPRIMER **60**

The 60 series, including the V and O versions, stands out for its short curing time at 180 °C and suitability for thick-walled components. It offers excellent coating thickness and overspray properties, making it ideal for complex applications.

## Benefits at a glance:

- Easy to overcoat
- Exceptional UV resistance
- Excellent outgassing properties

Long-lasting corrosion protection begins with IGP-KORROPRIMER.



# Normative foundations for corrosion protection.



The DIN 55633 standard addresses all essential aspects of corrosion protection when using powder coating systems, and defines corrosion categories based on the mass loss of uncoated steel during the first year of weathering.

The DIN 55633 standard takes into account all key factors for adequate corrosion protection by means of powder coating systems. It thus complements and closely relates to the DIN EN ISO 12944 standard, which deals exclusively with protection by means of liquid coating systems. Both standards characterize atmospheric environments in terms of corrosion categories based on mass loss data for uncoated steel in the first year of weathering. The table of corrosion categories provides an overview, making it easier to choose the correct coating build-up.



The right protection for every substrate.

## Corrosion protection systems and achievable corrosion classes

Corrosion class	Substrate	Pretreatment	Primer	Topcoat	UV quality classes*
СЗН	Steel (ST2)	mechanical	IGP-KORROPRIMER 60 (polyester-based)	IGP-DURA®one 56	Florida 1, Class 1
			IGP-KORROPRIMER 18 (low-temperature epoxy- based)	IGP-DURA®one 56	Florida 1, Class 1
			IGP-KORROPRIMER 60 (polyester-based)	IGP-HWFclassic 59	Florida 3, Class 2
C4H	Steel (ST2)	mechanical	IGP-KORROPRIMER 10 (epoxy-based)	IGP-DURA®one 56	Florida 1, Class 1
			IGP-KORROPRIMER 60 (polyester-based)	IGP-HWFclassic 59	Florida 3, Class 2
		chemical	IGP-KORROPRIMER 60 (polyester-based)	IGP-HWFclassic 59	Florida 3, Class 2
C5H	Hot-dip galvanized steel (HD)	mechanical	IGP-KORROPRIMER 60 (polyester-based)	IGP-DURA®one 56	Florida 1, Class 1
			IGP-KORROPRIMER 10 (epoxy-based)	IGP-HWFclassic 59	Florida 3, Class 2
		chemical	IGP-KORROPRIMER 60 (polyester-based)	IGP-HWFclassic 59	Florida 3, Class 2
	Spray galvanized steel (MS)	none	IGP-KORROPRIMER 10 (epoxy-based)	IGP-DURA®one 56	Florida 1, Class 1

 $<sup>^{\</sup>star}$  UV quality classes in accordance with GSB and Qualicoat

For areas with lower protection requirements in accordance with corrosion category C2, single-layer IGP indoor and outdoor qualities can be used.

For galvanized surfaces, chemical pretreatment (phosphating or organosilicon coating) is recommended. For coating of zinc-sprayed parts, IGP-KORROPRIMER 1001 (V version) is the first choice to obtain a smooth surface.

## IGP recommendations for corrosion protection systems

Choosing the right IGP-KORROPRIMER and ensuring the correct application are crucial for effective corrosion protection. In the "Corrosion Protection" section of the IGP website, you will find detailed recommendations for corrosion protection systems in accordance with the Qualisteel-coat guidelines.



igp-powder.com/corrosionprotection

## Corrosion protection – tested and certified.





## DIN-geprüft

IGP's DIN-certified coating inspectors provide advice and training for IGP's customers, including visits to their premises. They are authorized to carry out corrosion protection measures, repair corrosion damage, and certify the results



Professionally executed corrosion protection measures help to prevent damage. IGP's specialists are available to offer advice. In its inhouse laboratory, IGP can conduct corrosion tests on coating systems. This includes material testing, which is carried out in accordance with the official standards DIN 55633 or DIN EN ISO 12944.

## Qualisteelcoat

The IGP corrosion protection systems have passed the Qualisteelcoat tests with the ST2 and HD2 system structures. The IGP-KORROPRIMER 10, 18, and 60 systems are approved for use with various IGP topcoats. IGP will gladly provide the corresponding certificates for these corrosion protection systems on request.



## Institut für Oberflächentechnik

The IGP-KORROPRIMER range is additionally tested for quality assurance by the DIN EN ISO/IEC 17025-accredited Institut für Oberflächentechnik (Institute for Surface Technology). The corresponding test reports can be provided upon request.



## Qualicoat International – certification body

IGP-KORROSYSTEM 60 is a Qualicoat-certified two-coat system (No. P-1854) for aluminum substrates. The system consists of IGP-KORROPRIMER 60 and a freely selectable Qualicoat-approved IGP topcoat.



## Expertise and knowledge transfer.

The advanced corrosion protection solutions from IGP are based on decades of experience and are the result of continuous development.

For decades, IGP has focused on corrosion protection. This includes continuous product development based on the latest findings, as well as certification of IGP's products and services in accordance with official standards. The company's own specialist personnel receive ongoing training and further education to safeguard the quality of all products and processes. IGP's customers can also benefit from this extensive expertise, developed over many years, at specialist seminars and on customized training courses. We would be happy to provide you with further details of these offers.

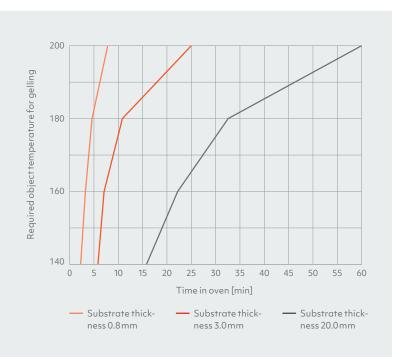


IGP coating inspectors – your experts for premium corrosion protection solutions.

## IGP's know-how and the advantages for you

- Process reliability with IGP-KORROPRIMER systems
- Maximum efficiency, adapted to the specific process parameters
- Sustainability through optimum coating system structures
- Certified products and services in accordance with official standards

## The key to success: How to achieve the perfect application.



The graphic represents guideline values. The actual gelling time may vary depending on the equipment and must be determined on a case-by-case basis.

## Yield – primers compared

	IGP-KORROPRIMER	Zinc-based primer
Specific weight	1,6g/cm²	3,2g/cm <sup>2</sup>
Coating thickness	70 µm	70 µm
Coating result	8,9 m²/kg	4,4 m²/kg

Efficient processes: gelling and powder on powder. Two smart applications that reduce time and costs while providing optimal protection for the substrate.

## Gelling of the primer coat

Two-coat application processes are laborious and costly. IGP uses the term "gelling" to describe the first point at which the object reaches the recommended object temperature in accordance with the IGP technical data sheets. Gelling does not involve complete bonding of the primer coat, which nevertheless remains stable (no more edge crawling). Immediate application of the topcoat in the following step reduces both the time and cost of the coating process. The corresponding processing guidelines are available on the IGP website (igp-powder.com).

## Powder on powder coating process

IGP-KORROPRIMER 18 is especially suitable for the powder on powder coating process in combination with IGP-DU-RA® one 56 (5607). Applying the topcoat onto the uncured primer coat and subsequently curing both layers simultaneously results in an extremely efficient process. The corresponding processing guidelines are available on the IGP website.

## Ecological and economical

The IGP-KORROPRIMER range does not contain zinc. There is a simple reason for this: The zinc content in powder coatings is never high enough to ensure active corrosion protection. Therefore, zinc, as a heavy metal subject to labeling requirements, actually makes powder coatings uneconomical due to its high specific weight – without increasing their protective effect.



# Tailored customer support. Fast and uncomplicated.



Together, we'll make your projects a success – this is the IGP promise. Our specialist advisors are experts in powder coatings and the coating process, providing support, knowhow, and helpful recommendations in all aspects of powder coating.

## Application-related consulting

IGP's highly experienced technical advisors are available to support our customers.

## Colors and color processing

Shades are individually adapted and developed for each project.

## Testing and investigations

IGP's services range from corrosion and weathering tests to mechanical tests and competitive comparisons.

## **Troubleshooting**

IGP's technical advisors identify the causes of problems in powder coating and present solutions.

## Defect evaluation, support, and expertise

The IGP service team investigates the root causes of errors and helps to eliminate them.

Quality, support, and efficiency – our passion for your product.

# Enhanced performance through further training.

Well-trained employees are a strategic success factor for every company. For this reason, IGP offers education and training for our customers. IGP certification programs are available in the area of process reliability.

## **Customized IGP training courses**

Our comprehensive training program is designed to ensure competent, efficient use of high-quality powder coatings.

The subject matter ranges from the basics to specific specialist content, and is therefore suitable for professionals at all experience levels. These intensive training courses lay a crucial foundation in terms of process reliability, correct handling of the various IGP products, and meeting our customers' challenging quality requirements.





Low Cure systems



Weathering categories of powder coatings



## Overview of IGP certifications

The IGP certification program for coating companies is designed to maximize process reliability while ensuring that all professionals who process powder coatings share a uniform understanding of the respective processes. These certifications guarantee high quality and offer IGP-certified companies attractive benefits.



The information and illustrations in this brochure are valid at the time of printing. IGP Powder Coatings reserves the right to make any necessary changes at any time and without prior notice. IGP innovations are protected by patents.

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There is an answer to every surface.



