

IGP-DURA[®]pol 68

Low temperature powder coatings
for industrial applications



YEARS OF
INNOVATION



POWDER
COATINGS

LOW TEMPERATURE POWDER COATINGS FOR INTERIOR AND EXTERIOR INDUSTRIAL APPLICATIONS

A convenient range of curing conditions guarantees low energy usage with high process output. A high degree of practicality is another characteristic of the IGP-DURA[®]pol/ 68 powder coating systems. All products of this range possess very good over-curing resistance and gas furnace stability.

Ecology and economy

- Increases in productivity and savings in energy in the coating process (lower heating and cooling times of the material)
- Curing from 150 °C (6802 from 160 °C)
- No implementation of toxic or environmentally hazardous components

Efficiency and quality in the manufacturing process

In handling

- Quick delivery due to comprehensive inventory range, suitability for 18 months storage, very good mechanical properties, reduction of production bottlenecks in the curing process

During coating

- Simple application, high efficiency with initial order

During curing process

- Lower energy usage, convenient range of curing conditions, good over-curing stability, good resistance in directly heated gas furnaces, reliable cross-linking even with varying wall thickness of parts, quicker cooling of the parts – quicker removal – reduced waiting times, less outgassing with critical substrates

Sustainable satisfaction for your customers

- Diverse and attractive surface characteristics (smooth, fine structure, coarse structure)
- Colour diversity in single-colour and effect-coating range
- Good UV resistance
- Good chemical resistance
- Powder with technically optimised functionality is feasible
- System protection – increased corrosion protection with IGP-KORROPRIMER 1809 low-temperature primer



Perfect surfaces with reduced processing times and reduced energy usage.

IGP-DURA[®]pol 68 – ENERGY-EFFICIENT POWDER COATINGS FOR PERFECT SURFACES

Demand for ecology and economy

Increasing energy costs and growing environmental awareness lead to increased demand for low-temperature powder coating systems (NT). With IGP-DURA[®]pol 68, you exploit the additional potentials in sustainable production – for interior and exterior applications. You achieve new standards in essential aspects of production, such as energy efficiency, curing and processing times. The compelling performance of the low-temperature systems allows existing industry polyester systems to be substituted by this technology. From a comprehensive and a best-practice programme, choose inventory colours that consistently fulfil ecological and economic aspects.

New application possibilities with massive structural elements

Curing temperatures of over 180 °C impeded efficient powder coating of massive structural elements until now. The introduction of these innovative low-temperature powder coatings makes the economic and sustainable coating of complex and massive part geometries possible. In this way, the benefits of powder coating technology can also be used to coat crane parts and structures for lorries.

For increased corrosion protection

The combination of the new IGP-DURA[®]pol 68 low-temperature coverage coating system with the high-performance primer IGP-KORROPRIMER 1809 allows you to achieve corrosion categories up to C4 or C5. Even for parts weighing up to 20t. With its comprehensive NT product programme, IGP Pulvertechnik AG seamlessly covers a wide range of industrial coater demands. Certified quality and a rigorous sustainable product strategy provide you with maximum reliability.



Felder, Austria



Schulthess, Switzerland



Wintersteiger, Austria

IGP-DURA[®]pol 68 – FOR HIGH QUALITY AND PROCESS RELIABILITY

IGP-DURA[®]pol 68 provides the positive characteristics of current mixed powder systems combined with good weathering stability, in addition to good mechanics, high chemical resistance and low curing temperatures.

Product Range

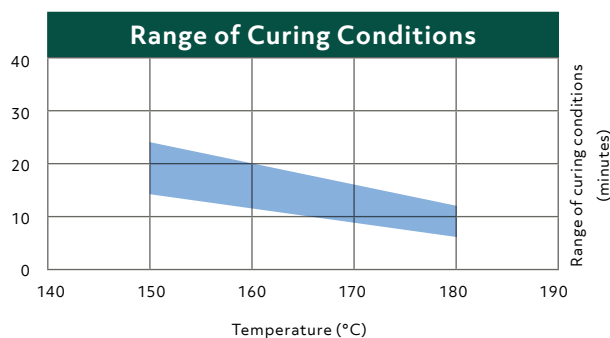
IGP-DURA[®]pol 68 is available in different gloss levels and surface characteristics. A multitude of common shades are available from stock, technical variations according to customer requirements are possible.

- RAL and NCS-S shades
- Pearl mica colour and metallic effects
- Customer-specific shades

For anti-microbial areas of application

IGP-DURA[®]care 68 is a finish which is based on the proven IGP-DURA[®]pol 68 powder coating series, which combines the excellent properties of this “low-bake” polyester range with an anti-microbial function. The coating shows no signs of surface damage from the tested disinfectants.

Product Range IGP-DURA [®] pol 68			
Qualities	Surface	Gloss level	Function
6802 ... D10	Smooth	Matt	Low-temperature, Abrasion-resistant
6807	Smooth	Silk gloss	Low-temperature
6809	Smooth	Gloss	Low-temperature
681T	Fine structure	Deep matt	Low-temperature
682S	Coarse structure	Silk gloss	Low-temperature
683S	Hammer finish	Silk gloss	Low-temperature

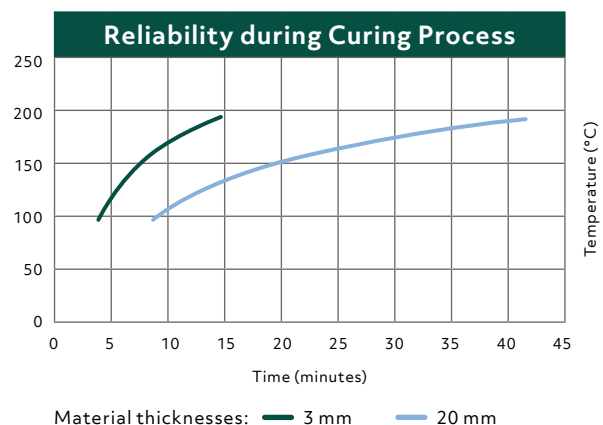


Convenient range of curing conditions

Curing starting at 150 °C opens up new possibilities: reduced energy usage and optimised processing time. Time and temperature combinations that result in ideal cross-linking of the coat are displayed. The maximum curing temperature should not exceed 200 °C. Please note our current technical data sheets.

Reliability during curing process

The two curves show the various time and temperature combinations with a circulating air temperature of 200 °C and material thicknesses of 3 mm and 20 mm. Complex parts with different material thicknesses need low temperature systems with a convenient range of curing conditions and good over-curing stability for reliable coating results with complex parts geometry. The IGP low temperature systems provide this necessary practicality. Component groups with different wall thicknesses are cross-linked in a reliable manner (no over-curing or under-curing of different material thicknesses). Practical experience reveals the multitude of areas of application with sustainable coating quality.



GOOD WEATHERING STABILITY COMBINED WITH CHEMICAL RESISTANCE

Very good chemical resistance

Different chemical influences were tested on IGP-DURA[®]pol 68. In particular caustic solutions and acids, petrol, acetone and reference lubricants were tested and the impact on the surface after corresponding contact time described. In this process, the 68th polyester systems achieved very good results which also exceeded those of the mix systems. Presented here, as an example, are the results with petrol and its impact on RAL 9010.

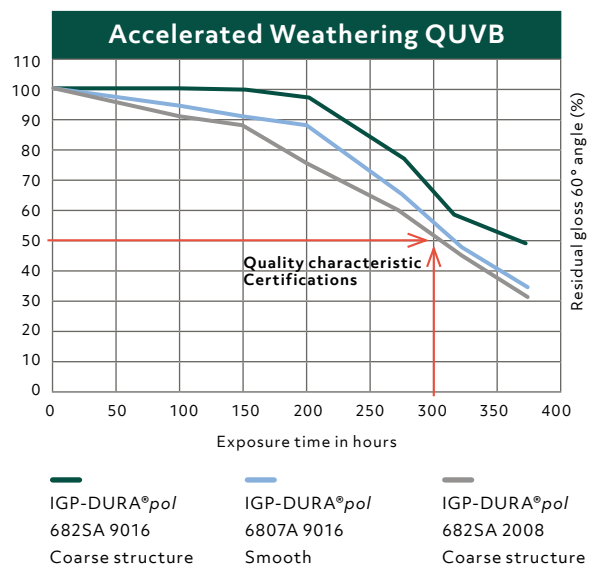
Chemical Resistance – Example with Petrol					
Contact time	1 minute	10 minutes	30 minutes	1 hour	2 hours
IGP-DURA [®] pol 6807, smooth	Unchanged	Unchanged	Unchanged	Unchanged	Unchanged
Mixed powder, smooth	Unchanged	Unchanged	Unchanged	Unchanged	Unchanged
IGP-DURA [®] pol 682S, coarse	Unchanged	Unchanged	Unchanged	Unchanged	Unchanged
Mixed powder, coarse structure	Unchanged	Unchanged	Unchanged	Unchanged	Unchanged

Surface analysis:

- Unchanged
- No longer scratch-proof
- Slight softening
- Slightly dilated, soft on the surface
- Dilated, soft down to substrate

Weathering stability

IGP-DURA[®]pol 68 is characterised by very good weathering stability. Accelerated weather tests demonstrate excellent results for individual colours. The colour examples depicted in the graph correspond to architecture-quality certifications. Representatively, it documents the outstanding quality of the IGP-DURA[®]pol 68 product range.



Outgassing behaviour

Exhaling substrates could lead to surface defects during the coating process (see left image). Practical experience shows that the implementation of low-temperature systems and the associated low stoving temperature can reduce these defects (see right image).



Surface defects from outgassing

Bubble-free coating solutions

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