

resistant
individual
dynamic
persistent
colorful
environmentally friendly
adaptable
impressive
valuable
close to nature
stable
formable

PLADUR® STRENGTHENS

DOORS & GATES

A special class of surface-refined flat-steel products
for garage-door construction

ThyssenKrupp Steel Europe
Thinking the future of steel



ThyssenKrupp



PLADUR®.
AVAILABLE
IN COATINGS
FOR ANY USE.

As one of the world's leading steel manufacturers, we see producing and marketing trendsetting materials as part of our day-to-day business. To do so, our expert and dedicated staff members draw on the vast resources of ThyssenKrupp Steel Europe: innovative capacity, cutting-edge technologies, and a wealth of experience based on a long and outstanding tradition.

One of our exceptional products is PLADUR®: organic, band-coated, high-quality flat steel suitable for any conceivable solution.

Discover the virtually unlimited possibilities of PLADUR®. On the following pages, you'll find insights into specific applications in the construction of garage doors, gates, and frames.

ENVIRONMENTALLY FRIENDLY

products that integrate harmoniously into the environment

A nature-based product, refined with a sense of responsibility.

Environmental responsibility in thought and action is a core commitment of ThyssenKrupp Steel Europe. This is reflected in the product world of PLADUR® in various ways. Even our steel production is resource efficient, with only around one-third of the primary energy consumption required for aluminum. Our systems for band coating are also designed to include wastewater treatment and flue gas cleaning processes that reduce emissions to well below legal limits.

Where economical solutions become environmentally friendly solutions: PLADUR®.

For the corrosion protection, PLADUR® uses zinc-magnesium in place of conventional galvanizing.

This drastically reduces consumption of zinc, a raw material available in limited amounts only. At the same time, our process offers even better corrosion resistance. In addition, we of course use

no chromate in pretreatment and we reject ingredients that are critical for health and the environment in all processes. In place of pigments containing heavy metals, for example, we use environmentally responsible alternatives with no loss in material quality.

A prime example of environmental responsibility in action is the ReflectionsOne® color collection, which is ideal for using PLADUR® in color schemes that blend in harmoniously in natural or built environments.

From environmentally friendly production to the outstanding visual appeal of PLADUR® solutions, we at ThyssenKrupp Steel Europe take a holistic approach to fulfilling economical and ecological demands.

Functional, colorful and beautiful.

High-quality flat steel and high-quality organic coatings add up to an endless number of outstanding options – especially when PLADUR® composite materials from ThyssenKrupp Steel Europe are involved.

At the center of our production process is our steel, which stands out for its pronounced strength and plasticity, alongside our zinc-magnesium coating ZM EcoProtect®. It ensures excellent corrosion protection and even allows a reduction in coating mass while still delivering superior corrosion resistance.

reduced coating
mass – increased
corrosion resistance

RAL or NCS color fans

high level of formability

matte_glossy_metallic

VERSATILE

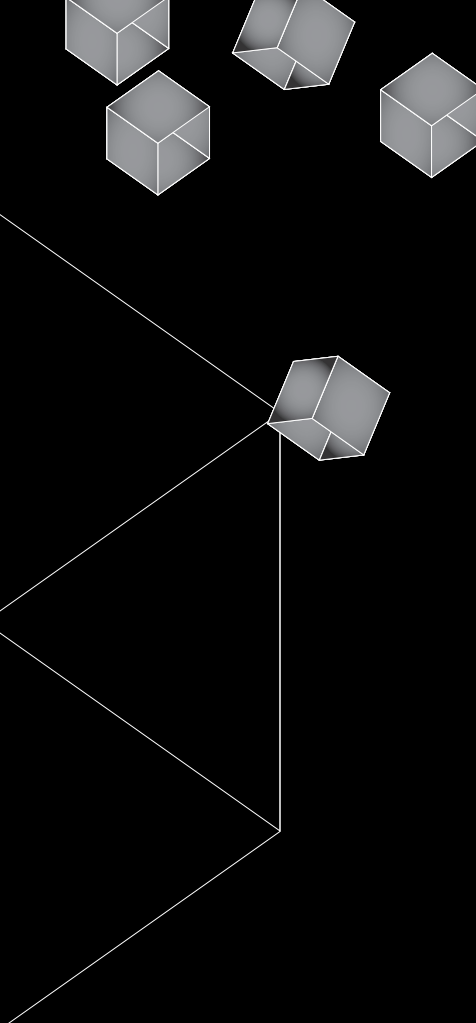
Our organic coatings are the key to the immeasurable diversity of PLADUR®, a huge range of options that have been fulfilling and surpassing the most varied requirements, demands, and wishes in many different industries and segments for decades.

Textured surfaces that imitate natural materials like stone or wood are a further strength of PLADUR®. In short, PLADUR® gives you full freedom of design, enabling you to realize your projects in line with your decorative and aesthetic ideas.

Whether paint, film, or combinations of both coatings, there is simply nothing PLADUR® can't offer. Almost all colors, including shades of the RAL or NCS spectrums, are just as easy to realize as different degrees of gloss, from matte to shiny. High-quality metallic surfaces or even highly distinctive glittering finishes are also possible.

**Outstanding plasticity,
endless surface variety:
design freedom with
PLADUR®.**

You are also free to first complete the surface of PLADUR® before using the material to construct your final object. Finish first, fabricate later – this approach can often be more economical than, for example, subsequently painting individual elements. Also worth mentioning is the fact that you can easily shape PLADUR® without formation of cracks.



looks like new even after
extended periods

Made in Germany

increases value

OF LASTING VALUE



ING

Completely reliable functionality is the top priority of PLADUR®. This means consistently ensuring the material's stability, resistance, and robustness – the reasons PLADUR® remains in good condition even after many years or even decades. Its attractive appearance over the long term makes a considerable contribution to your object's durability and value appreciation. With these proven material properties – qualities of the highest order, made in

**Two outstanding strengths
of PLADUR®: preserving
value, increasing value.**

Germany, by the most experienced coil coater – you get even more: objects and creations with intrinsic value for many years to come. Our exclusive metallic finishes like copper, titanium, or stainless steel, for example, are resistant to fingerprints and look like new after long periods of use.

This is why objects and constructions built with PLADUR® are not only easy to maintain, but may even increase in value.

PLADUR® has proven this point many times with its familiar materials in everyday use. But you can also count on our new surface refinements. We not only stand behind them with our trusted name, we also put them through punishing tests. That means each of our products has to prove itself before it gets the chance to convince you in everyday use under the name PLADUR®.

The higher the demands, the better PLADUR®.

From practical rolling gates and giant hangar doors to garage doors and gates for prestigious buildings, from sturdy industrial doors to elegant house and connecting doors with frames, from sectional doors to swing gates: PLADUR® gives you all the functional, formal, and color options you need for your individual solution. Planners, architects, developers, manufacturers, and clients can plan and build gates and doors completely in keeping with the required internal material qualities and their exterior design ideas.

THREESTAR



The quality class
that convinces
with top scores on
almost all points.



ONESTAR



The quality class that stands out for its excellent price-performance ratio.

TWOSTAR



The quality class that shines in specific categories with improved performance features.



FUNCTIONAL



**How can you handle the
strain of daily use?
With the kind of solution you
don't see every day.**

**Good looks and
functionality built in.**

Open and close, open and close, open and close. In heavy rain, in glaring heat, in freezing cold. Again and again. Year after year. In PLADUR®, you have the ideal material for garage doors, gates, and frames that stand up to the strain. The quality class ONESTAR* is a proven building material that keeps its excellent appearance, even after long-term use. Its standard features include not only resistance to corrosion and UV exposure, but also availability in tasteful and aesthetic paint finishes covering the entire RAL color spectrum. But equally important to architects and construction engineers: PLADUR® is a high-quality and easy-to-process material that retains its stability.

One more aspect that makes PLADUR® in all three quality classes the material of choice for gates and doors: the surface-refined, high-quality flat steel offers a price-performance ratio that pays off from day one – and keeps paying off long into the future.

Tough from the start, strong to the finish.

If you want to permanently protect garage doors and gates from heavy stresses, PLADUR® is your ideal choice. The quality class TWOSTAR** gives you not only increased UV and corrosion resistance, but also for sturdiness that stands up to mechanical strain. A broad spectrum of paints and films lets you create color highlights, while a large selection of different surface textures allows various material impressions – even a wood look is available. But that's not everything: the prefabricated material can be equipped with special surfaces for additional product features.

**For superior performance
and aesthetics.**

Whatever color and functional properties you require, PLADUR® can deliver – along with the certainty of using best-in-class material.



WEAR
RESIS
TANT

When garage doors become decorative highlights.

PLADUR® turns gates and doors into aesthetic highlights, whether individual garage doors in single-family homes or multiple industrial hall doors in a row. Especially with materials in the quality class THREESTAR***: high-quality decorative elements combined with individually selected surface textures create truly outstanding decorative and functional focal points. Surfaces range from high gloss to deep matte and also include important features for a long service life, like exceptional corrosion resistance. A zinc-magnesium coating offers a new dimension of protection.

**All the right features for
a long and flawless future.**

The material is also extremely resistant to UV exposure as well as wear and tear – it stands up to even the most punishing mechanical stresses, including scratching.

In addition, it features true colorfastness over many years. Architects and clients also value PLADUR® as a building material for the unrivaled processing options it offers: bending, deep drawing, edging, bordering, punching, and profiling are all trouble-free. The design diversity in garage doors, gates, and frames has just one constant feature: unlimited possibilities.



AESTHETIC



central contacts

direct channels

fast
coordination



**BEING CLOSE TO
THE CUSTOMER
IS JUST PART OF
OUR DAY-TO-DAY
BUSINESS.**

Success starts with good organization.

To consistently succeed, you have to stay close to your market and the people in it. That's why intensive cooperation with our business partners, customers, and suppliers is one of our top priorities. As Europe's leading coil coater, we systematically align our organization to bring together our technology, innovation, and sales functions to meet and exceed the needs and wishes of those who use our PLADUR® products.

A contributing factor in this strongly focused customer orientation is close integration of our production, product development, logistics, and sales teams to ensure direct channels of communication.

Interdepartmental teamwork for increased efficiency.

**Organized to come up
with the best ideas for you.**

This also includes setting up simultaneous engineering project teams to help reduce development times and boost efficiency in innovation processes for our customers.

The result: We can bring innovations to market maturity faster in close cooperation with our partners.

To carry out all processes more quickly and efficiently, we host highly successful customer and innovation workshops, in addition to the customer-specific product and application consultation that ThyssenKrupp Steel Europe offers.

Interested? We're looking forward to working with you and PLADUR® to bring new ideas for success to the market – as fast as possible.

TAKING REFINED- SURFACE STEEL INTO THE FUTURE.


up-to-date
production methods

consistent
quality management

best technology

intensive
partnerships





Only the best technologies are good enough.

At ThyssenKrupp Steel Europe, we're proud of our capacity to put the unique advantages of steel with refined surfaces to work in meeting people's needs and wishes – today, tomorrow, and beyond. In keeping with our traditional principles, three band-coating systems at our Duisburg and Kreuztal sites utilize the best available technologies in highly progressive and always up-to-date production methods.

To stay at least one step ahead of the times in the research and development of new materials, we always act and think beyond the boundaries of our corporate group. For example, we have formed an extensive network with specialists from the fields of science and engineering. Intensive partnerships with universities and non-university research institutes are part of our established structure.

extensive
network

Knowledge through cooperation.

Our consistent quality management also contributes to our ability to stay ahead – and not settle with state-of-the-art solutions. We practice total quality management that incorporates our suppliers, enabling us to realize our most ambitious goals and those of our customers and business partners. This is reflected in certifications like ISO 9001:2000 and ISO/TS 16949:2002, as well as the accreditation of research and development laboratories according to DIN EN ISO/IEC 17025. And if that isn't enough, we use the European Foundation for Quality Management (EFQM) model to further refine our management and business processes.

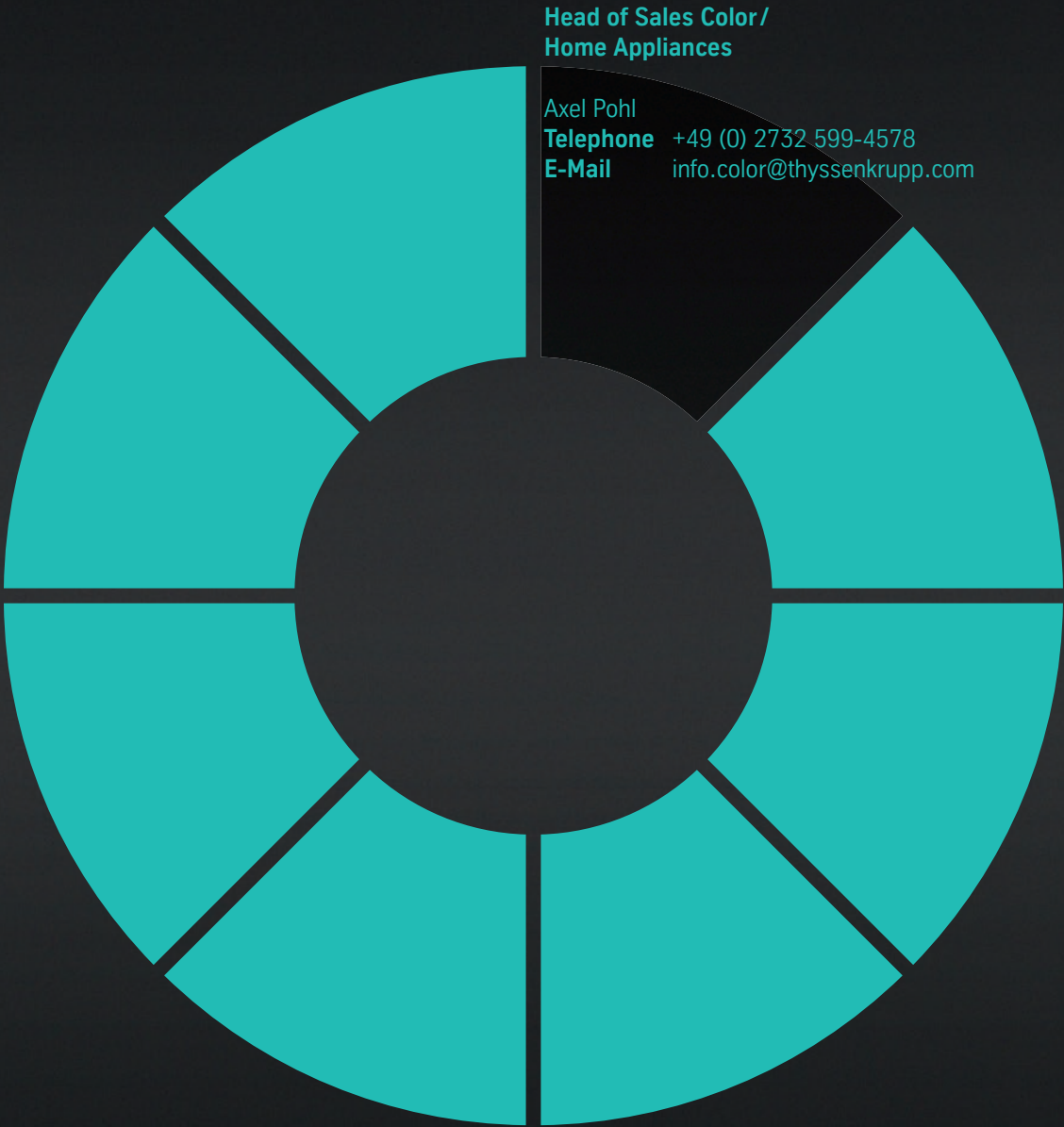
total quality
management

EFQM model

Focussing on top performance is our standard operating mode.

Everything aligned to serve one goal: to stay equipped to be a pioneer in every aspect of steel for our customers – always.

pioneer



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