

TATA STEEL



Colorcoat® SDP 50

Sustainable high-build pre-finished steel,
aesthetic appearance and long-term durability



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COLORCOAT® SDP 50

Colorcoat® SDP 50 is an aesthetic, durable and resilient prefinished steel with long guaranteed life expectancy. It is the perfect material for profiles and sandwich panels for walls and roofs of premium architectural projects.

BENEFITS

- Long life expectancy. Buildings can maintain their aesthetic for 20 years and much more.
- Up to 25 years Tata Steel performance guarantee. No registration needed.
- Full coverage during entire guarantee period. Including metallics.
- 50µm coating for improved scratch and abrasion resistance combined with higher corrosion protection.
- Achieving highest RC5+ certification according to EN 10169.
- Low CO₂ footprint, a third Party verified EPD is available, IJmuiden supply is certified BES 6001 (responsible sourcing). Fully REACH compliant and available with Zeremis®.
- Contemporary colour range including metallics with visible sparkle.
- RUV4 certification according to EN 10169.
- 20 years track record.
- Fire rating A1 for gauges > 0,42mm
Double sided also certified A1.
- Introduction solar panels addendum or guarantee with solar panels.

THE PRODUCT

- 50µm high-build prepainted steel.
- A 25µm thick topcoat paint layer for longevity and colour retention.
- Polyamide parts in the topcoat improve scratch and abrasion resistance, and reduce risk of damage during handling and processing. The surfaces shows a light texture.
- A 25µm thick primer for excellent corrosion protection in combination with the metallic coating and pretreatment.
- Galvanized substrate produced with MagiZinc or Zinc metallic coating offering excellent corrosion protection at the cut edges and protection of the steel substrate.
- Steel substrate according to EN 10346.
- Premium backing coat for foam adhesion (especially relevant when used for sandwich panels) corrosion protection and protection from mechanical damage. Specially formulated for use in construction applications.
- Also available as double sided product.

WIDE RANGE OF COLOURS

Standard colours

Colorcoat® SDP 50 is available in a variety of standard roof and wall colours, including an attractive range of metallic colours with sparkling effect. The metallic range includes a copper green metallic and a silver-white metallic.

Non-standard colours are also available upon request. Production hand samples are available for the best assessment of texture, colour and effect. To ensure consistency of colour on a single exterior surface it is recommended to use material from the same production batch.

Additionally, for metallic colours, the directionality of surfaces should be consistent during construction.

Tailored solutions

For any customized requirements, MyriaPlus® can meet your needs with shorter lead times, flexible quantities and further processing. MyriaPlus® is offered on solid colours.



COLOUR CARD

Metallics



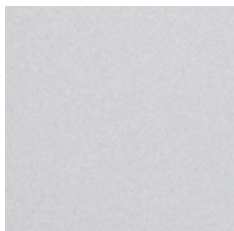
TSN9006 M



TSN9007 M



TSNCopperGreen M

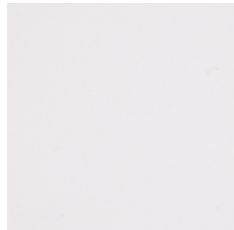


TSNSilverWhite M

Solids



TSN9005



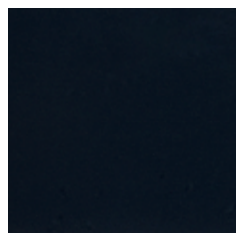
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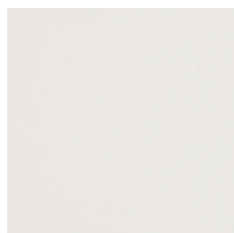
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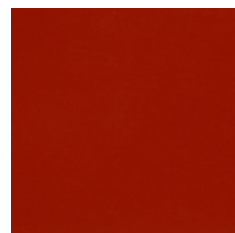
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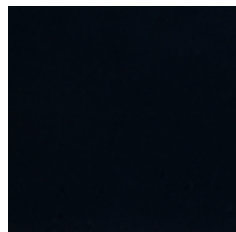
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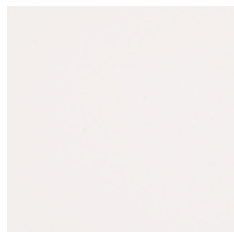
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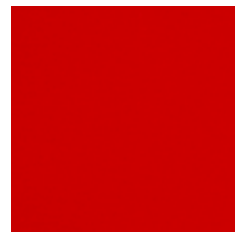
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TSN7021



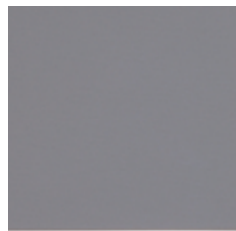
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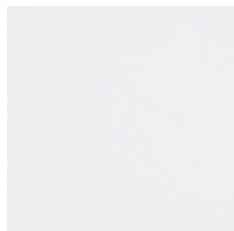
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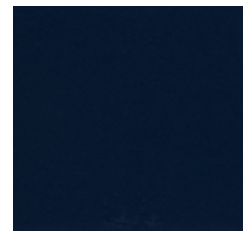
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TSN9003

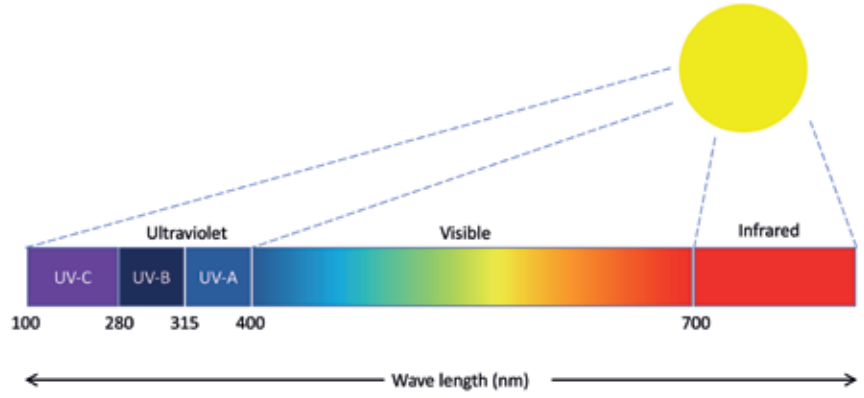


TSN5008

The printed colours are as accurate as possible and for guidance purpose only. RAL reference numbers represent the nearest colours and are not exact matches to our TSNXXXX colours. Please ensure that you request a sample from us to view accurate colour and texture prior to specification.

UV RESISTANCE

Sunlight, specifically UV exposure, can cause the polymer in coatings to break down at a molecular level, resulting in a loss of gloss, colour fading, brittleness, and ultimately, loss of adhesion. The ability to withstand UV degradation is a crucial aspect of a coating's performance. As such, the higher the resistance of a coating against UV degradation, the better its overall performance. Colorcoat SDP 50 incorporates UV blockers in the paint formula to improve durability of the coating system and its susceptibility to UV degradation.

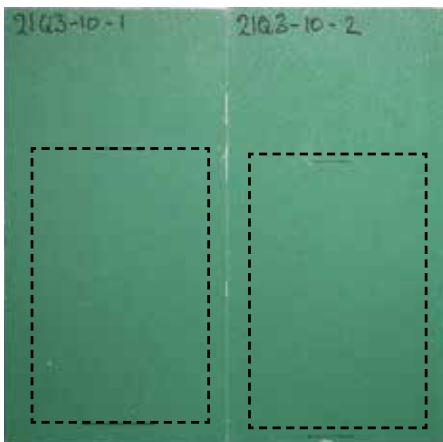


Sunlight spectrum

The product was extensively tested with artificial UV radiation and with natural exposure and fulfils the RUV4 classification according EN 10169.

Category EN 10169	Exposure	Test duration	Maximum colour change ΔE (cie-lab units)	Minimum retained gloss
RUV4	Natural exposure	2 years	3	80%
	Artificial UV radiation	2000 hours	2	80%

Requirement for UV resistance according EN 10169. The maximum ΔE value is not applicable for saturated and metallic colours.



Typical test sample after 2000h.



Lab equipment to test UV performance.

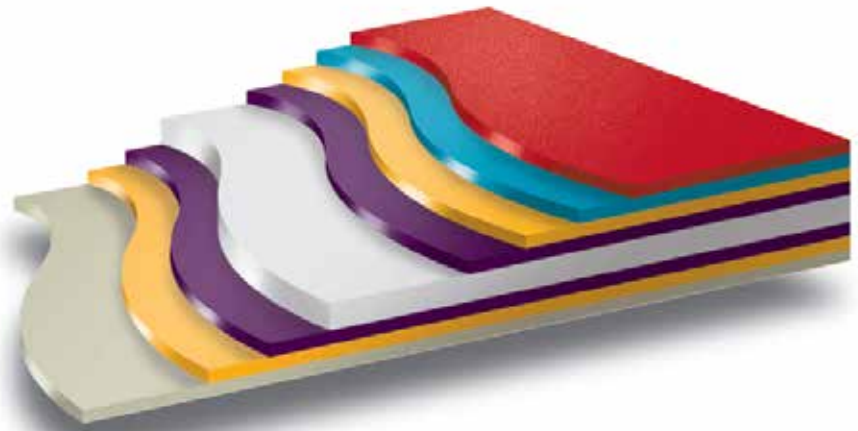
CORROSION PROTECTION

Water, Oxygen and Salts

Corrosion is a chemical process that is accelerated by the presence of water, oxygen, and salt. The organic coatings, pigments, and the pretreatment of Colorcoat® SDP 50 offers the first protective barrier against corrosion. The zinc or MagiZinc metallic coating creates a second layer of protection for the steel substrate beneath it.

The organic coating of Colorcoat SDP 50 is build-up as a layered structure. All layers have their own specific characteristics.

- On the top-side, Colorcoat SDP 50 has two paint layers. The first layer is a High Build primer of 25 µm. The primer has a durable resin with special corrosion inhibitors to protect the underlying steel. The topcoat of Colorcoat SDP 50 is 25 µm high-performance polymer with a closed surface for protection. This layer also contains pigments to create the desired colour.
- On the reverse side a backing coat is applied. This backing coat is developed to prevent corrosion and has excellent foam adhesion properties.
- To further protect the steel substrate, a metallic coating is applied. For Colorcoat SDP 50 it can be a 275 g/m² zinc layer or a ZM140 g/m² MagiZinc layer. Both layers protect the steel substrate against corrosion by so-called cathodic protection.

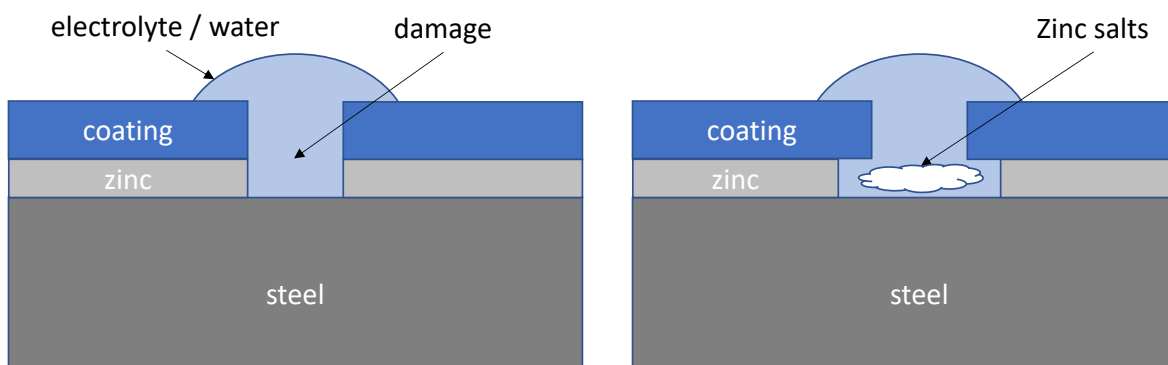


Key

■ Topcoat	■ Primer	■ Surface treatment
■ Metallic coating	■ Steel	■ Backing coat

- On the top of the zinc-alloy layer a thin inorganic coating pre-treatment layer is applied. This layer has two functions: to enhance corrosion protection and to form a stable interphase for adhesion between the metallic layer and the paint. The stability of the pre-treatment is based on the latest chrome-free Titanium / Zirconium chemistry.

Colorcoat SDP 50 has a CPI4 (Corrosion Protection Interior Category) rating according to EN 10169, which makes it suitable for a variety of internal atmospheres. If you require a tailor-made recommendation for a special internal atmosphere, please contact Tata Steel.



Cathodic protection: Zinc acts as an anode and steel as cathode, where the zinc protects the steel by preferential corrosion. The zinc salts that are formed slow down the process.



OUTDOOR EXPOSURE TESTING

Outdoor exposure testing of prefinished steel is an integral part of product development and quality monitoring. Samples of Colorcoat® SDP 50 are subjected to real-world environmental conditions for over 4 years to assess the durability and performance.

The outdoor exposure tests provide insights into the paint's resistance to fading, chalking, corrosion resistance, and adhesion over time. By monitoring changes in colour, gloss, and surface integrity, Tata Steel ensures that Colorcoat SDP 50 can withstand years of outdoor exposure without compromising its structural or aesthetic quality.



A standardised sample of Colorcoat SDP 50 for outdoor exposure testing. After 4 years, the samples were assessed. RC5+ criteria according EN 10169 were fulfilled.

QUALITY MONITORING

Quality monitoring is an essential part of the manufacturing process at Tata Steel. The prefinished steel is produced through a controlled process, where various parameters are continuously measured to ensure the highest quality of the product. These include the thickness of the metallic coating, primer and topcoat, as well as colour measurements, temperatures, concentrations, and viscosity.

The company follows ISO management systems, where random samples are subjected to a rigorous test program, including outdoor exposure and neutral salt spray tests. This ensures that the customers receive the best quality product from Tata Steel.

Colorcoat® SDP 50 underwent a thorough testing programme including a variety of accelerated corrosion tests to assess its performance on the top surface, bends, scribes, and edges. All tests were conducted according to the relevant standards. In addition to accelerated tests, the product was exposed to outdoor exposure tests in certified corrosion test sites in different locations.



TATA STEEL PERFORMANCE GUARANTEE

Up to 25 years performance guaranteed!

The Tata Steel Performance Guarantee for Colorcoat® SDP 50 reflects Tata Steel's confidence in the product. The guarantee offers full coverage for the entire guarantee period, unlike other guarantees that offer reduced payouts after 5 or 10 years, an important consideration as risks increase over time. In addition, the guarantee applies when the solar panels are installed.

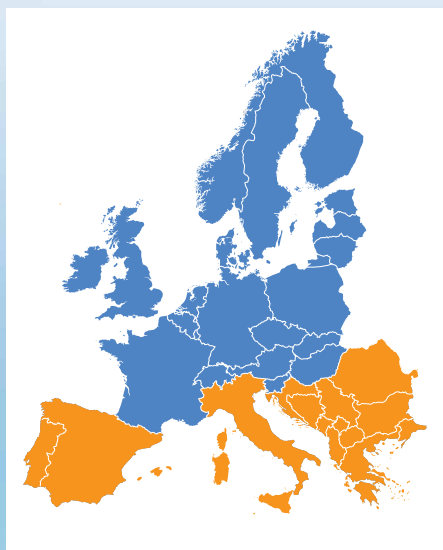


Image of Zone 1 (blue) and 2 (orange).

Natural washing

Regular cleaning and annual inspections are recommended to maintain the validity of the warranty, as natural rain washing is a very effective way of extending the life of pre-finished steel. In the design process, it is advisable to avoid overhanging roofs or extensions to improve the conditions for natural washing.

The warranty also covers delamination, unlike other warranties which only cover rusting through the steel (perforation). A long life can be expected after the warranty period has expired. The warranty starts automatically and no further action is required. In the unlikely event of a claim, proof of purchase of the coil must be provided through the supply chain. The warranty applies to zones 1 and 2 on the map. For regions outside Zone 1 and 2, please enquire. The actual warranty duration and terms and conditions are outlined in the warranty document.

Summary

- Up to 25 years guarantee.
- Full coverage during entire period.
- Guarantee also applies if solar panels are fitted.
- Guarantee starts automatically. No further action required.
- Full coverage without any registration within Europe.





SOLAR PANEL ADDENDUM

Guarantee on Colorcoat® SDP 50 with solar panels

The use of solar panels on buildings is becoming increasingly important in the transition to renewable energy. Many roofs provide an ideal surface for the installation of solar panels. In compliance with EU directives that buildings must be designed for use with solar panels, it is important to choose a suitable organic coated product. Colorcoat SDP 50 satisfies the recommendation of the German society of profilers IFBS, which advises a coating thickness of at least 45µ for roofs used for services or solar panel installations.

Protecting the coating from corrosion underneath the solar panels is essential as contaminants can accumulate on the

surface and create a hostile environment for corrosion as the solar panels impede natural washing. Colorcoat SDP 50 offers a high level of corrosion protection. To maintain the integrity of the coating and to fulfil the conditions of the guarantee, regular cleaning and inspections are necessary. Colorcoat SDP 50 provides high mechanical robustness, however it is important to avoid placing sharp items on the coated surface without adequate protection. It is best practice to access the roof with soft anti-slip shoes or shoe covers. Leading suppliers of sandwich panels and profiles offer well-designed support structures and systems that allow for secure and effective installation of solar panels on roofs.

Colorcoat® SDP 50
is guaranteed
for use with
solar panels for
up to 25 years!



SUSTAINABILITY

Colorcoat® SDP 50 in construction

- From infrastructure to buildings, steel is an integral part of our cities and communities.
- We make steel products used to capture renewable energy, transforming buildings into their own power stations with solar panels.
- We contribute to society by providing lighter weight, higher strength steel elements which are easily installed and maintained.
- Energy reduction: long lasting Colorcoat® coatings in building envelope products enable significant energy reduction during use, increasing the sustainability of buildings and reducing operational carbon.
- Durability/Flexibility: the durability and flexibility of steel construction products makes them very well suited to a circular economy. Our coating technologies enable extremely durable and long lasting products.
- With steel we are creating adaptable buildings which can be reconfigured to have many different uses throughout their lifetime.
- Efficient reuse and recycling at end of life.

Colorcoat® SDP 50 is a sustainable product due to its exceptional resistance to corrosion and UV impact, resulting in a long lifespan.

The steelworks at Tata Steel Netherlands is one of the best performing plants in the world when it comes to CO₂ emissions per tonne of steel. The Tata Steel Netherlands steelworks ranks 3rd in the 2022 CO₂ intensity benchmark published by the World Steel Association.

Zeremis® – decarbonizing steelmaking At Tata Steel Nederland, we are dedicated to achieving zero emissions by 2045 through our commitment to Zeremis. This initiative represents our journey with our customers towards a carbon-free, circular future.

To reach our goal of zero carbon emissions, we must fundamentally transform our liquid iron and steel production processes. This transformative journey poses significant challenges in terms of technology, logistics, infrastructure, and policy, and will be a long-term effort.

In addition to decarbonizing our upstream operations, we are also committed to becoming a leader in sustainability in our downstream operations. This includes investing in cutting-edge technology, and collaborating with our suppliers to ensure a sustainable product range. We have implemented an efficient system for capturing

and reusing solvents evaporated during the paint curing process, which helps to reduce energy consumption and protect the environment. We also recognize the impact our products have on the environment and we are working with our supply chain and customers to increase circularity and reduce resource depletion and waste.

We are committed to transparent reporting, including third-party verified Environmental Product Declarations in accordance with EN 15804 and ISO 14025, and sustainability reports against the GRI standard. Colorcoat SDP 50 is free of hexavalent chromium and heavy metals, and fully compliant with REACH regulations. We are also certified with BES 6001 for responsible sourcing, ISO 14001 for environmental management, and ISO 5001 for energy management.

Responsible sourcing

As a responsible steel supplier, we are committed to sourcing raw materials from responsible supply chains and implementing sustainable business practices. We strive to be a leader in carbon neutral steelmaking and empower our customers to become more sustainable through our sustainable solutions and expertise. Our strategy aligns with the United Nations' Key Sustainable Development Goals and we feel a strong sense of responsibility for playing a positive role in shaping a sustainable future.



ZEREMIS® CARBON LITE

Colorcoat® SDP 50 is available with certified 30% Carbon reduction

Zeremis Carbon Lite helps you reduce your carbon footprint now. It offers a certified 30% reduction in carbon intensity compared to the European average, plus the flexibility to go even further if you need to. We have

earned the trust of our partners and the certification of Det Norske Veritas (DNV). When you purchase Carbon Lite, you can report CO₂ savings on your scope 3 emissions with confidence.

CIRCULARITY

At Tata Steel, we believe in the principles of the circular economy, where waste is transformed into new raw materials. We strive to promote the ideas of reuse, recycle, and remanufacture in all of our operations. As a readily recyclable material, steel plays a crucial role in completing the circular journey.

Colorcoat SDP 50 product designed to support our sustainability goals by offering a long service life. Its excellent corrosion and UV resistance contribute to its longevity, making it a suitable candidate for reuse and eventual recycling. This ensures that the product can be a part of the circular economy, completing the full life-cycle journey.

About Tata Steel Nederland

Tata Steel Nederland is one of Europe's leading steel producers. The company supplies high-quality steel products to the most demanding markets, including construction, automotive, packaging and engineering. Tata Steel Nederland works together with their customers to develop new steel products that give them a competitive edge. Tata Steel Nederland has sites in the Netherlands, Belgium, Germany, France and elsewhere in Europe and is part of the Indian Tata Steel Group, one of the world's largest steel companies. Tata Steel Nederland recorded a turnover of 6.9 billion euros in the financial year ending 31 March, 2022. Tata Steel Nederland is working on producing steel with zero carbon emissions by 2045. It will do so by switching to producing steel by using hydrogen instead of coal.

COLORCOAT® SDP 50 APPLICATIONS

Albert Heijn XL Purmerend

The Albert Heijn XL supermarket in the Netherlands is a prime example of sustainable building design. Built in 2004, the building underwent a refurbishment in 2016 that earned it the title of the most sustainable supermarket in Europe. One of the key enhancements was the installation of a photovoltaic system, which helped to reduce the building's energy consumption.

Colorcoat SDP 50 was used for the building's facade, which features a popular RAL 9006

metallic colour. 'Despite 18 years of exposure to the elements, the product is still 'in' pristine condition, showing the product's exceptional durability'. Additionally, the building's cedar wood has aged nicely and the company branding has evolved since the original commission of the building.

This case study demonstrates the versatility of Colorcoat SDP 50 in delivering both aesthetic and functional benefits to a wide range of building types.



AFAS Stadium Alkmaar

The AFAS football stadium is a landmark building south of Dutch City Alkmaar and home location to football club AZ.

The stadium colours resemble the club colours and as such colour stability attracts much attention.

Product: Colorcoat® SDP 50 Black and Red.
After almost 20 years of hard life, in particular the area at ground floor level where supporters pass when entering the stadium, and an upgrade to the roofing structure, the wall cladding is still in a good shape.



Frontier Delft

Frontier is an office building located at Delftech Park, an area close to Delft University and TNO, leading knowledge intense institutes. The wall cladding, both in design and esthetics reflect the character of the knowledge intense activities in the area. Colorcoat SDP 50 in the colour grey aluminium, metallic (RAL 9007) was chosen. Inspired by movie Space Odyssey (2001): horizontal panels like a spacesuit.

The office was completed in June 2003.



Architect: EGM Architecten Rotterdam

www.tatasteelnederland.com

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