

Steel

pladur® Relief Icecrystal

Segment Construction

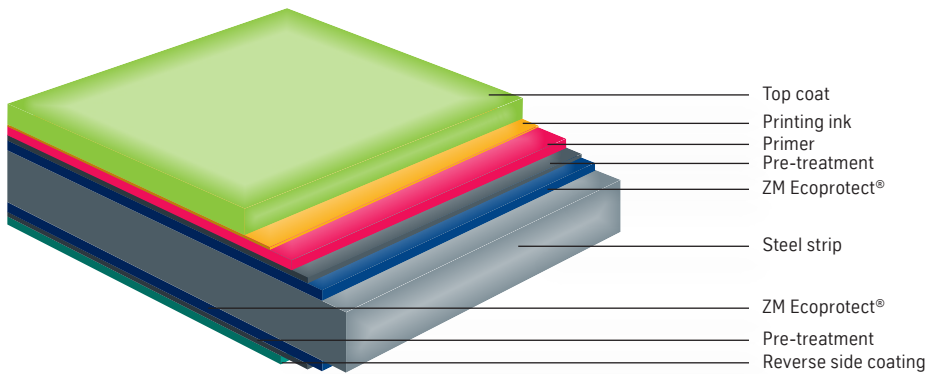
Product information for coil-coated high-grade flat steel



thyssenkrupp

Issue: April 18, 2024, version 0

Material composition



Content

01	Brief portrait
02	Available dimensions
02	Product features
02	Quality management

Brief profile

An innovative and distinctive ice crystal structure defines pladur® Relief Icecrystal. Its unparalleled surface is designed not only to stand out but also to make a sparkling statement and leave an unmistakable signature in any application environment.

pladur® Relief Icecrystal by thyssenkrupp is pioneering raw material for lightweight metal construction. It allows customers to enhance their construction projects with a unique ice crystal structure while simultaneously meeting the highest standards of aesthetics and durability. The sparkling surface of the coil-coated flat steel reflects light in a fascinating manner, resembling ice crystals depending on the viewing angle and light conditions. As a result, each building element becomes a one-of-a-kind piece, as the structure cannot be uniformly reproduced, imparting distinctive appearance to the final application.

In addition to aesthetic design freedom, pladur® Relief Icecrystal offers impressive resistance to mechanical and thermal influences. The coil-coating material can be easily formed: whether bending, drawing, edging, profiling, punching, or roll forming, pladur® Relief Icecrystal opens versatile usage possibilities in various construction projects.

This coating is an excellent choice for applications such as garage doors, steel furniture, as well as roof and facade cladding.

Available dimensions

	Thickness from_to [mm] ¹⁾	Width from_to [mm] ¹⁾	Length from_to [mm] ¹⁾
Strip	0.45–1.25	600–1,250	–
Sheet	0.45–1.25	600–1,250	450–6,000

¹⁾ Not all thickness and width combinations are possible.

Product features

Feature	Test procedure/method	Typical characteristic values
Nominal coating thickness	DIN EN 13523-1	≥ 36 µm
Appearance		
Surface appearance		Ice crystal structure
Gloss (60°)	DIN EN 13523-2	< 10 GU
Color (CIE-L*a*b* or ΔE*)	DIN EN 13523-3	according to color shade standard/by agreement
Deformation resistance		
T-bend adhesion loss	DIN EN 13523-7	≤ 2.0 T, no loss of adhesion
Erichsen cupping 4 mm cracking	DIN EN 13523-6	OK, no crack formation
Erichsen cupping 4 mm adhesion	DIN EN 13523-6	OK, no loss of adhesion
Durability		
MEK rub test	DIN EN 13526-11	> 80 double rubs
Scratch resistance	DIN EN 13523-12	> 1,000 g
Temperature resistance	DIN EN 13523-13	-20 to +80 °C (ΔE* < 1; T-bend constant)
Weathering resistance		
Constant humidity condensation atmosphere (CH)	DIN EN ISO 6270-2	Degree of blistering < 2(S2) after 1.000 h
Salt spray test	DIN EN ISO 9227	Degree of blistering < 2(S2) after 360 h Degree of delamination ≤ 2 mm after 360 h
UV resistance category (R _{UV})	DIN EN 10169	min. R _{UV} 3
Fire classification	DIN 4102	A2
Reverse-side coating		10 µm, grey/by special agreement

Quality management

All locations of thyssenkrupp Steel Europe AG are certified in accordance with ISO 9001, including the additional requirements of the international automotive industry IATF 16949. The chemistry and materials testing laboratories in the Innovation division (Duisburg and Dortmund sites) are accredited according to DIN EN ISO/IEC 17025.



FÖRDERNDES
MITGLIED IM
IFBS

General information

No explanation of the test methods has been provided here, consequently the specified standards for the test methods must be observed. The information on the product characteristics was obtained from numerous sample productions, and represents average values that serve as a guide and may vary in individual cases. The information has been compiled conscientiously, but is nevertheless not guaranteed. As a result of technical developments and legal requirements, product features may vary and are therefore subject to change.