

MATERIAL DATA SHEET

RHEINZINK-prePATINA
graphite grey



- **NATURAL SURFACE**
- **PICKLING PROCESS
CREATES THE LOOK
OF A REAL PATINA EX
WORKS**
- **40 YEARS QUALITY
GUARANTEE**
- **SELF-HEALING OF
SCRATCH MARKS**
- **MAINTENANCE FREE**
- **100% RECYCLABILITY**

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BASIS-INFORMATION

The RHEINZINK-prePATINA ECO ZINC product line is pre-weathered titanium zinc without phosphating, which allows the formation of a natural and durable zinc carbonate layer (patina). The colour effect results from the metal alloy itself. A higher copper content creates a darker surface in the unique RHEINZINK pickling process. In this way the "graphite grey" colour can be produced ex work. During the natural patina formation, there may be a slight greenish colour change and the surface may lighten slightly.

Specific weight 7.2 g/cm³

Building material class A1 (non-combustible)

Titanium zinc according to DIN EN 988

DELIVERY FORM

Standard widths	500 – 600 – 670 – 700 – 1000 mm
Standard thicknesses	0.70 – 0.80 1.00 mm – 1.20 mm on request
Protective film	On request
Coil inner diameter	508 mm at > 500 kg 300 – 400 mm at < 500 kg

IMPORTANT INSTALLATION INSTRUCTIONS

Bending radius	Minimum 1.75 mm from 1.00 mm on 1.75 x t
Soldering recommendation	Soldering flux "ZD-pro" or "Power surface" (company Felder), overlap area 10 to 15 mm
Processing temperature	Warming up in temperatures below 10°C
Protective film	Remove the film immediately after after assembly

Note:

In the event of contamination due to external or environmental influences, please request the RHEINZINK cleaning recommendations. With these recommendations, RHEINZINK cannot guarantee that a new look will be created.

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GRAPHITIE GREY

prePATINA graphite grey

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ALLOY

Zinc	99.995% (Z1 according to DIN EN 1179)
Copper	0.80 – 1.00%
Titanium	0.06 – 0.12%
Aluminum	≤ 0.015%

CERTIFICATION

Quality management	Certified according to ISO 9001
Environmental management	Certified according to ISO 14001
Energy management	Certified according to ISO 50001
Environmental product declaration	Verified according to ISO 14025, TYPE III and EN 15804

MECHANICAL-TECHNOLOGICAL PROPERTIES

0.2% proof stress (Rp0.2)	≥ 115 N/ mm ²
Tensile strength (Rm)	≥ 160N/ mm ²
Breaking elongation (A50)	≥ 45%
Vickers hardness (HV3)	≥ 45
Folding test	No cracks on the bending edge
Bending up after folding test	No cracks after bending up
Erichsen cupping	≥ 8.0 mm
Permanent elongation in creep (Rp0.1)	≤ 0.1%

PHYSICAL AND CHEMICAL PROPERTIES

Melting point / range	420 °C
Boiling point / range	906 °C
Recrystallization limit	> 300 °C
Density at 20 °C	7.2 g/ cm ³
Elasticity modulus	≥ 80.000 N/ mm ²
Expansion coefficient	
In the longitudinal direction	22·10 ⁻⁶ K ⁻¹
In the rolling transverse	17·10 ⁻⁶ K ⁻¹
Thermal conductivity	110 W/ m · K
Specific heat capacity	398 J/ kg/ K
Electrical conductivity	17 m/Ω · mm ²
Viscosity	Dynamic at 500 °C: 0.0030 mPa·s

RAL-Colour* RAL 7043

* Colour values are approximate values in the as-delivered condition, deviations in the surface treatment process and due to natural patina formation are possible.