MATERIAL DATA SHEET

RHEINZINK-CLASSIC

- NANATURAL SURFACE
- NATURAL PATINA FORMATION
- 40 YEARS QUALITY GUARANTEE
- SELF-HEALING OF SCRATCH MARKS
- MAINTENANCE FREE
- 100% RECYCLABILITY

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BASIC-INFORMATION

The bright-rolled titanium-zinc alloy has proven itself for over 50 years. Depending on the climatic conditions, the natural, metallically shiny surface develops the typical blue-grey patina over time after assembly. The formation of this natural protective layer is responsible for the high corrosion resistance of zinc. The bright-rolled surface gradually becomes more and more charismatic through the formation of the patina and develops a very individual character.

Specific weight 7.2 g/cm³
Building material class A1 (non-combustible)
Titanium zinc according to DIN EN 988
Certified according to QUALITY ZINC, TÜV Rheinland

DELIVERY FORM

Standard widths	200 – 250 – 333 – 400 – 500 – 570 600 – 670 – 700 – 800 – 1000 mm
Standard thicknesses	0,65 – 0,70 – 0,80 – 1,00 mm
Protective film	On request
Coil inner diameter	508 mm at > 500 kg 400 mm at < 500 kg

IMPORTANT INSTALLATION INSTRUCTIONS

Bending radius	Minimum 1.75 mm
Soldering recommendation	Soldering flux "ZD-pro" (company Felder), overlap area 10 to 15 mm
Processing temperature	Warming up in te peratures below 10°C
Protective film	Remove the film mediately 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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CLASSIC

ALLOY

Zinc	99.995% (Z1 according DIN EN 1179)
Copper	0.10 – 0.18%
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
External monitoring	4 times per year by TÜV Rheinland

MECHANICAL-TECHNOLOGICAL PROPERTIES

0.2% proof stress (Rp0.2)	≥ 110 N/ mm²
Tensile strength (Rm)	≥ 150 N/ mm²
Breaking elongation (A50)	≥ 40%
Vickers hardness (HV3)	≥ 45
Fold tensile force test*	D ≥ 0.7
Erichsen cupping	≥ 8.0 mm
Longitudinal curvature	≤ 1.0 mm/ m
Flatness	≤ 1.5 mm wave height
Permanent elongation in creep (Rp0.1)	≤ 0.1%

*D = (tensile strength of folding sample) / (tensile strength of material)

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/ cm³
Elasticity modulus	≥ 80.000 N/ mm²
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·mm²
Viscosity	Dynamic at 500 °C: 0,0030 mPa·s

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