

Safe

The usage of rolled titanium-zinc for construction has proven itself to be a safe protector against the effects of weather in the areas of roof drainage, roofing and façade cladding.

“The usage of rolled zinc is not only to be judged positively due to the mechanical-technical properties of the material; in addition, it is very resource-economical thanks to the durability, favourable energy balance and the nearly 100% recycling rate of titanium-zinc”. Material erosion as a result of natural weathering is also, according to scientific findings, proven to be extremely minor and environmentally safe as well.

In order to inform critical consumers about the selected construction material as completely and objectively as possible, responsible-minded manufacturers submit their products for voluntary testing.

The test criteria checklist was developed by the experts of the TÜV Rheinland. It defines the method of testing and establishes threshold limits. As an independent, accredited institution, we can test and certify your products.

The QUALITY ZINC label shows that:

- The chemical composition of the zinc alloy has been regularly tested.
- The mechanical and technical properties, and the chemical composition, are constantly monitored.
- The measurement tolerances are regularly checked.
- The quality management in accordance with ISO 9001:2008 supports consistent process safety.
- The ISO 14001 : 2004 certification underscores the concern shown for environmental protection in your company.
- The product declaration according to ISO 14025, Type III, documents the environmental friendliness of the products.

Contact

Document your sense of responsibility. Use the QUALITY ZINC label:



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Product safety and quality

QUALITY ZINC The quality standard for tested titanium-zinc



Choose quality

The QUALITY ZINC label attests to a level of care beyond the usual standard with regard to the manufacturing and processing of rolled zinc. With QUALITY ZINC, products are identified that meet the stringent demands stemming from the test criteria of the norm.

This norm sets high standards, particularly regarding the mechanical-technical properties and the chemical composition.

The QUALITY ZINC label guarantees an independent control of the material. That evokes trust.

QUALITY ZINC test criteria for sheets and strips

Status 01/2016

Test criterion	DIN EN 988	QUALITY ZINC	
		Standard (bright rolled, blue-grey)	High Cu-alloy (graphite-grey)
Chemical composition			
Zinc	Zn 99,995 % (Z1 as per DIN EN 1179)	Zn 99,995 % (Z1 as per DIN EN 1179)	Zn 99,995 % (Z1 as per DIN EN 1179)
Copper	Cu: 0,08 – 1,0 %	Cu: 0,1 – 0,18 %	Cu: 0,8 – 1,0 %
Titanium	Ti: 0,06 – 0,2 %	Ti: 0,06 – 0,12 %	Ti: 0,06 – 0,12 %
Aluminium	Al: max. 0,015 %	Al: max. 0,015 %	Al: max. 0,015 %
Measurement tolerances for standard dimensions			
Thickness of sheet and strip	± 0,03 mm	± 0,020 mm	± 0,020 mm
Width of sheet and strip	+ 2/-0 mm	+ 2/-0 mm	+ 2/-0 mm
Length of sheet	+ 10/-0 mm	+ 2/-0 mm	+ 2/-0 mm
Mechanical-technical properties			
0,2 % expansion limit (R_{p0,2})	min. 100 N/mm ²	min. 110 N/mm ²	min. 115 N/mm ²
Tensile strength (R_m)	min. 150 N/mm ²	min. 150 N/mm ²	min. 160 N/mm ²
Breaking elongation (A₅₀)	min. 35 %	min. 40 %	min. 45 %
Vickers hardness (HV₃)	-	min. 40	min. 45
Folding test	No cracks at the edge of fold	No cracks at the edge of fold	No cracks at the edge of fold
Bending back after folding test	-	No crack when bending back	No crack when bending back
Fold tensile force test	-	D min. 0,7 ¹⁾	D min. 0,7 ¹⁾
Erichsen cupping	-	min. 8,0 mm	min. 8,0 mm
Remaining stretch in creeping behaviour test (R_{p0,1})	max. 0,1 %	max. 0,1 %	max. 0,1 %
Longitudinal curvature	max. 1,5 mm/m	max. 1,0 mm/m	max. 1,0 mm/m
Flatness	max. 2,0 mm wave height	max. 1,5 mm wave height	max. 1,5 mm wave height
Monitoring			
External monitoring	-	4 x annually, taken from plant ²⁾	4 x annually, taken from plant ²⁾
Certification			
Quality management	-	Certified according to ISO 9001	Certified according to ISO 9001
Environmental management	-	Certified according to ISO 14001 Environmental product declaration as per ISO 14025, Type III	Certified according to ISO 14001 Environmental product declaration as per ISO 14025, Type III

1) Bending by 180°, then bending back the top end of the sample by 90° and conduct of a tensile force test; D = (tensile strength of the folding sample)/(tensile strength of the material)

2) Test of the mechanical-technical properties and the chemical composition. Neutral sampling by TÜV Rheinland

Co-applicable standards: The technical stipulations and the respective plant standards and respective test requirements of the manufacturer apply.