

# TEST REPORT

**No. 111000563 22-01 (EN)**1<sup>st</sup> copy**Customer**IEQSA Industrias Electro Quimicas S. A.  
Av. Elmer Faucett no. 1920  
LIMA 100  
PERÚ**Date of order:**

20.12.2022

**Receipt of sample:**

30.12.2022

**Sample identification:**

876/22

**Samples**

The customer delivered several zinc sheet samples as listed in the following table. The samples were marked at the MPA NRW.

MPA No.	Amount	Dimensions mm
1-3	3	300 x 300 x 0.7
A-C	3	68 x 68 x 2

**Order**

The following tests should be done on the delivered sheet samples according to DIN EN 988:1996-08:

- Tensile test according to DIN EN ISO 6892-1:2020-06, system B on each 0.7 mm sheet sample parallel and transverse to the rolling direction,
- Creep test according to DIN EN 988:1996 on each 0.7 mm sheet sample,
- Chemical composition analysis on the samples thickness 2 mm.

**This test report consists of 3 page(s).**

The results of the tests are only valid for the sample(s) given in the report. In case of doubt or litigation the German version of this test report is decisive. Copying of the report is only allowed of an unchanged and complete version. To give a modified or abridged version is only allowed with permission of the MPA NRW.

### Tests and test results

The following chemical composition was determined by spectroscopic analysis internal method no. A040300 on the sheets, thickness 2 mm. Test date: 31.01.2023.

sample no.	Pb %	Cd %	Sn %	Fe %	Cu %	Ti %	Al %	Ni %
A	0,001	<0,001	<0,001	0,002	0,123	0,081	0,006	<0,001
B	0,001	<0,001	<0,001	0,002	0,123	0,082	0,012	<0,001
C	0,001	<0,001	<0,001	0,002	0,123	0,081	0,011	<0,001
desired value 1)	-	-	-	-	min. 0,08 max. 1,0	min. 0,06 max. 0,2	max. 0,015	-

1) according to DIN EN 988: Zinc and zinc alloys - Specification for rolled flat products for building; German version EN 988:1996

From the 0.7 mm sheets a test piece parallel to the rolling direction was made according to DIN 50150 and tested in a tensile test according to DIN EN ISO 6892-1, system B. Test date: 26.01.2023.

Sample no.	0,2%-yield-strength R <sub>p0,2</sub> MPa	Tensile strength R <sub>m</sub> MPa	elongation A <sub>50mm</sub> %
1-L	116	164	55,0
2-L	119	166	50,0
3-L	118	167	55,5
desired value 1)	min. 100	min. 150	min. 35

1) according to DIN EN 988: Zinc and zinc alloys - Specification for rolled flat products for building; German version EN 988:1996

On demand of the customer a test piece transverse to the rolling direction was made additionally and tested in a tensile test according to DIN EN ISO 6892-1, system B. Test date: 26.01.2023.

Sample no.	0,2%-yield-strength R <sub>p0,2</sub> MPa	Tensile strength R <sub>m</sub> MPa	elongation A <sub>50mm</sub> %
1-Q	150	223	35,0
2-Q	150	223	39,0
3-Q	150	223	34,0

The creep test was done according to DIN EN 988 chapter 6.3.3 with the following result. Test Date: 30.01.2023.

sample no.	elongation in creep test %
1	0,03
2	0,03
3	0,04
desired value <sup>1)</sup>	max. 0,1

1) according to DIN EN 988: Zinc and zinc alloys - Specification for rolled flat products for building; German version EN 988:1996

### Assessment

The sheet samples fulfill the requirements in the tested values according to DIN EN 988:1996.

Dortmund, 01-Feb-2023

by order



Dipl.-Ing. S. Hönig  
Head of test laboratory

