

ISO 11949:2026-04 (E)

Cold-reduced tinmill products - Electrolytic tinplate

Contents

Page

Foreword	v
1 Scope	1
2 Normative references	1
3 Terms and definitions	1
4 General technical delivery condition	4
5 Classification	4
6 Information to be supplied by the purchaser	4
6.1 Designation	4
6.2 Mandatory information	5
6.3 Options	5
7 Manufacturing features	6
7.1 Manufacture	6
7.2 Annealing	6
7.3 Finish	6
7.4 Passivation	7
7.5 Oiling	7
7.6 Imperfections	7
7.6.1 Coils	7
7.6.2 Sheets	8
8 Tin coating mass	8
9 Mechanical properties	8
9.1 General	8
9.2 Hardness requirement	8
9.3 Tensile property requirement	8
10 Tolerances on dimensions and shape	9
10.1 General	9
10.2 Thickness and feather edge	9
10.2.1 Thickness	9
10.2.2 Feather edge	9
10.3 Width	9
10.4 Length	9
10.4.1 Length of coil	9
10.4.2 Length of sheet	9
10.5 Edge camber	9
10.6 Out-of-squareness of sheet	10
10.7 Flatness	11
10.7.1 Edge wave	11
10.7.2 Longitudinal and transverse bow	11
10.7.3 Centre fullness	11
11 Joint within a coil	12
11.1 General	12
11.2 Number of joints	12
11.3 Location of joints	12
11.4 Dimension of joints	12
11.4.1 Thickness	12
11.4.2 Overlap	12

12	Marking of differentially coated cold-reduced tinplate	12
12.1	General.....	12
12.2	Marking on heavily coated surface	13
12.3	Marking on lightly coated surface.....	13
12.4	Marking designation.....	13
13	Sampling	13
14	Test method	13
14.1	Tin coating mass	13
14.1.1	Test piece.....	13
14.1.2	Method of determination.....	14
14.2	Hardness test.....	14
14.2.1	Test piece.....	14
14.2.2	Test method	15
14.3	Tensile test.....	15
14.3.1	Test piece.....	15
14.3.2	Test method	15
14.4	Flatness test.....	15
14.4.1	General.....	15
14.4.2	Edge wave.....	15
14.4.3	Longitudinal or transverse bow.....	16
14.4.4	Centre fullness.....	16
15	Retests	18
16	Inspection document	18
17	Dispatch and packaging	18
17.1	Coils.....	18
17.2	Sheets.....	19
17.3	Labelling.....	19
	Annex A (normative) Hardness requirements for tinplate	20
	Annex B (normative) Tensile property requirements for tinplate	21
	Annex C (informative) Steel types	23
	Annex D (informative) Springback test for routine determination of $R_{p0,2}$ or R_{eL} for tinplate	24
	Annex E (informative) Alternative marking system for differentially coated tinplate	25
	Annex F (normative) Referee method for determining tin coating mass	27
	Annex G (normative) Rockwell HR15Tm values and their HR30Tm equivalents	34
	Annex H (informative) Types of chromium-free passivation (CFP)	35
	Bibliography	36