



CONTENTS

SECTION 1	Reference standards	3
SECTION 2	Applications of pre-painted steel	4
2.1	Insulated and refrigerator vans	5
2.2	Roofing	6
2.3	Seam roofing	7
2.4	Rainwater systems	8
2.5	Garage and industrial facility gates	9
2.6	Logistics facility bays	10
2.7	Sandwich panels for walls	11
2.8	Sandwich panels for roofs	12
2.9	Facade cassettes for cladding	13
2.10	Commercial, social and agricultural facilities	14
2.11	Noise barriers	15
2.12	Washing machines, refrigerators, microwave ovens	16
2.13	Refrigerated tables and chambers, store displays	17
SECTION 3	Appendix	18



SECTION 1

REFERENCE STANDARDS

GOST 14918

Hot-dip galvanized rolled sheets

GOST 16523

General-purpose thin carbon-steel cold-rolled sheets, high and regular quality

GOST 34180

Steel cold rolled and cold rolled hot-galvanized sheet with polymer coating, pre-painted by the continuous coil-coating process

EN 10169

Continuously organic coated (coil coated) steel flat products

EN 10346

Continuously hot-dip coated steel flat products for cold forming

JIS G 3302

Hot-dip zinc-coated steel sheet and strip

TABLE LEGEND

PU	Polyurethane
PE	Polyether
RC3-RC5	Corrosion resistance class
RUV 2-RUV 4	UV resistance category
_	Not rated by the standard



SECTION 2

APPLICATIONS OF PRE-PAINTED STEEL

Transport

Group	Product	Use cases	Coating type	Grades as per EN	Grades as per GOST and TU	Section	Page
Superstructures	Insulated and	Van body panels	PE, PU	-	02, 280, 350	2.1	5
and trailer equipment	refrigerator vans						

Construction and infrastructure

Group	Product	Use cases	Coating type	Grades as per EN	Grades as per GOST and TU	Section	Page
Roofing systems	Roofing materials	Metal shingles, corrugated board	PE, Corall PE, PU	DX52D, DX53D	02, 03, 220, 280, 320	2.2	6
	Seam roofing	Seam roofing systems	Corall PE, PU	DX52D, DX53D, DX54D	02, 03, 04	2.3	7
	Rainwater systems	Runners, pipes, elbows, hooks, funnels	Corall PE, PU	HX260LAD, DX52D, DX53D	02, 03, 220, 280	2.4	8
Gate systems	Garage and industrial facility gates	Gateways, roller doors, guides	PE	-	02, 220	2.5	9
	Logistics facility bays	Cladding of bay vestibules	PE	-	02, 220	2.6	10
Sandwich panels	Sandwich panels for walls	Sandwich panel systems for walls	PE, Corall PE, PU, Chemical PU, Antibacterial PU	S220GD, S250GD	02, 03, 220, 250	2.7	11
	Sandwich panels for roofing	Sandwich panel systems for roofing	PE, Corall PE, PU, Chemical PU	S220GD, S250GD	02, 03, 220, 250	2.8	12
Facade systems	Facade cassettes for cladding	Facade cladding with cassettes, panels, siding	PE, Corall PE, PU	DX52D, DX53D, DX54D	02, 03, 220	2.9	13
Interior finishing	Commercial, social and agricultural facilities	Interior finishing (ceilings, walls, certain furniture)	PE, Corall PE, PU, Chemical PU, Antibacterial PU	DX52D, DX53D, S220GD	02, 03, 220	2.10	14
Road infrastructure	Noise barriers	Noise barrier panels	PE, Corall PE, PU	-	02, 03, 220, 280, 320, 350	2.11	15

Household appliances and commercial equipment

Group	Product	Use cases	Coating type	Grades as per EN	Grades as per GOST and TU	Section	Page
Large and small appliances	Washing machines, refrigerators, microwave ovens	Casing for washing machines, refrigerators, microwave ovens	PE	DX52D, DX53D, DX54D, SGCC, SGCD	02, 08пс	2.12	16
Commercial equipment	Refrigerated tables and chambers, store displays	Casings for industrial refrigerator chambers, refrigerated tables, commercial equipment	PE	DX52D, DX53D, DX54D, SGCC, SGCD	02, 08пс	2.13	17



Insulated and refrigerator vans



GRADES PRODUCED BY NLMK

Steel grade	Steel thickness,mm	Coating type	Glossiness	Texture	Zn mass, g/m²	Corrosion resistance	Coating thickness, µm	UV resistance	T-bend strength
02, 280, 350	0.45-1.5	PE	Gloss Semi-matte	Smooth	140/100-275	RC3	25	RUV 2-3	1.5-2.0
02, 280, 350	0.5-1.5	PE	Semi-gloss Semi-matte	Textured	180-275	RC4	35	RUV 4	0.5-1.0
02, 280, 350	0.5-1.5	PU	Semi-gloss Semi-matte	Textured	180-275	RC4	35	>RUV 4	0.5-1.0
02, 280, 350	0.5-1.5	PU	Semi-gloss Semi-matte	Textured	200-275	RC5	50	>RUV 4	0.5-1.0

Recommended by NLMK



Roofing materials



GRADES PRODUCED BY NLMK

Steel grade	Steel thickness,mm	Coating type	Glossiness	Texture	Zn mass, g/m²	Corrosion resistance	Coating thickness, µm	UV resistance	T-bend strength
02, 03, 220, 280, 320, DX52D	0.35-1.5	PE	Gloss Semi-matte	Smooth	140/100-275	RC3	25	RUV 2-3	1.5-2.0
DX53D, DX54D	0.5-1.5	PE	Gloss Semi-matte	Smooth	140/100-275	RC3	25	RUV 2-3	1.5-2.0
02, 03, 220, 280, 320, DX52D	0.45-1.5	PE	Deep matte	Wrinkled Corall	140/100-276	RC3	25	RUV 4	1.5-2.0
DX53D	0.5-1.5	PE	Deep matte	Wrinkled Corall	140/100-276	RC3	25	RUV 4	1.5-2.0
02, 03, 220, 280, 320, DX52D	0.35-1.5	PE	Semi-matte Matte	Textured	140/100-277	RC3	28	RUV 2-3	0.5-1.0
DX53D	0.5-1.5	PE	Semi-matte Matte	Textured	140/100-277	RC3	28	RUV 2-3	0.5-1.0
02, 03, 220, DX52D, DX53D,	0.5-1.5	PU	Semi-gloss Semi-matte	Textured	180-275	RC4	35	>RUV 4	0.5-1.0
02, 03, 220, DX52D, DX53D	0.5-1.5	PU	Semi-gloss Semi-matte	Textured	200-275	RC5	50	>RUV 4	0.5-1.0
02, 03, 220, DX52D, DX53D	0.5-1.5	PU	Deep matte	Wrinkled	180-275	RC4	35	>RUV 4	0.5-1.0
02, 03, 220, DX52D, DX53D	0.5-1.5	PU	Deep matte	Wrinkled	200-275	RC5	50	>RUV 4	0.5-1.0

Recommended by NLMK



Seam roofing



GRADES PRODUCED BY NLMK

Steel grade	Steel thickness,mm	Coating type	Glossiness	Texture	Zn mass, g/m²	Corrosion resistance	Coating thickness, µm	UV resistance	T-bend strength
02, 03, DX52D	0.45-1.5	PE	Deep matte	Wrinkled Corall	140/100-276	RC3	25	RUV 4	1.5-2.0
DX53D, DX54D	0.5-1.5	PE	Deep matte	Wrinkled Corall	140/100-276	RC3	25	RUV 4	1.5-2.0
02, 03, DX52D	0.35-1.5	PE	Semi-matte Matte	Textured	140/100-277	RC3	28	RUV 2-3	0.5-1.0
DX53D, DX54D	0.5-1.5	PE	Semi-matte Matte	Textured	140/100-277	RC3	28	RUV 2-3	0.5-1.0
02, 03, DX52D, DX53D, DX54D	0.5-1.5	PU	Semi-gloss Semi-matte	Textured	180-275	RC4	35	>RUV 4	0.5-1.0
02, 03, DX52D, DX53D, DX54D	0.5-1.5	PU	Semi-gloss Semi-matte	Textured	200-275	RC5	50	>RUV 4	0.5-1.0
02, 03, DX52D, DX53D, DX54D	0.5-1.5	PU	Deep matte	Wrinkled	180-275	RC4	35	>RUV 4	0.5-1.0
02, 03, DX52D, DX53D, DX54D	0.5-1.5	PU	Deep matte	Wrinkled	200-275	RC5	50	>RUV 4	0.5-1.0

Recommended by NLMK



Rainwater systems



GRADES PRODUCED BY NLMK

Steel grade	Steel thickness,mm	Coating type	Glossiness	Texture	Zn mass, g/m²	Corrosion resistance	Coating thickness, µm	UV resistance	T-bend strength
02, 03, 220, 280, 320, DX52D	0.35-1.5	PE	Gloss Semi-matte	Smooth	140/100-275	RC3	25	RUV 2-3	1.5-2.0
DX53D, DX54D	0.5-1.5	PE	Gloss Semi-matte	Smooth	140/100-275	RC3	25	RUV 2-3	1.5-2.0
02, 03, 220, 280, 320, DX52D	0.45-1.5	PE	Deep matte	Wrinkled Corall	140/100-276	RC3	25	RUV 4	1.5-2.0
DX53D, DX54D	0.5-1.5	PE	Deep matte	Wrinkled Corall	140/100-276	RC3	25	RUV 4	1.5-2.0
02, 03, 220, DX52D, DX53D, DX54D	0.5-1.5	PU	Semi-gloss Semi-matte	Textured	180-275	RC4	35	>RUV 4	0.5-1.0
HX260LAD	0.7-1.5	PU	Semi-gloss Semi-matte	Textured	180-275	RC4	35	>RUV 4	0.5-1.0
02, 03, 220, DX52D, DX53D, DX54D	0.5-1.5	PU	Semi-gloss Semi-matte	Textured	200-275	RC5	50	>RUV 4	0.5-1.0
HX260LAD	0.7-1.5	PU	Semi-gloss Semi-matte	Textured	200-275	RC5	50	>RUV 4	0.5-1.0
02, 03, 220, DX52D, DX53D, DX54D	0.5-1.5	PU	Deep matte	Wrinkled	180-275	RC4	35	>RUV 4	0.5-1.0
HX260LAD	0.7-1.5	PU	Deep matte	Wrinkled	180-275	RC4	35	>RUV 4	0.5-1.0
02, 03, 220, DX52D, DX53D, DX54D	0.5-1.5	PU	Deep matte	Wrinkled	200-275	RC5	50	>RUV 4	0.5-1.0
HX260LAD	0.7-1.5	PU	Deep matte	Wrinkled	200-275	RC5	50	>RUV 4	0.5-1.0

Recommended by NLMK



Garage and industrial facility gates



GRADES PRODUCED BY NLMK

Steel grade	Steel thickness,mm	Coating type	Glossiness	Texture	Zn mass, g/m²	Corrosion resistance	Coating thickness, µm	UV resistance	T-bend strength
02, 220	0.4-1.5	PE	Gloss Semi-matte	Smooth	140/100-275	RC3	25	RUV 2-3	1.5-2.0
02, 220	0.45-1.5	PE	Deep matte	Wrinkled Corall	140/100-275	RC3	25	RUV 4	1.5-2.0
02, 220	0.45-1.5	PE	Semi-matte Matte	Textured	140/100-275	RC3	28	RUV 2-3	0.5-1.0

Recommended by NLMK



Logistics facility bays



GRADES PRODUCED BY NLMK

Steel grade	Steel thickness,mm	Coating type	Glossiness	Texture	Zn mass, g/m²	Corrosion resistance	Coating thickness, µm	UV resistance	T-bend strength
02, 220	0.4-1.5	PE	Gloss Semi-matte	Smooth	140/100-275	RC3	25	RUV 2-3	1.5-2.0
02, 220	0.45-1.5	PE	Deep matte	Wrinkled Corall	140/100-275	RC3	25	RUV 4	1.5-2.0
02, 220	0.45-1.5	PE	Semi-matte Matte	Textured	140/100-275	RC3	28	RUV 2-3	0.5-1.0

Recommended by NLMK



Sandwich panels for walls



GRADES PRODUCED BY NLMK

Steel grade	Steel thickness,mm	Coating type	Glossiness	Texture	Zn mass, g/m²	Corrosion resistance	Coating thickness, µm	UV resistance	T-bend strength
02, 03, 220	0.35-1.5	PE	Gloss Semi-matte	Smooth	140/100-275	RC3	25	RUV 2-3	1.5-2.0
02, 03, 220	0.35-1.5	PE	Deep matte	Wrinkled Corall	140/100-275	RC3	25	RUV 4	1.5-2.0
02, 03, 220	0.35-1.5	PE	Semi-matte Matte	Textured	140/100-275	RC3	28	RUV 2-3	0.5-1.0
02, 03, 220, 250, S220GD, S250GD	0.5-1.5	PU	Semi-gloss Semi-matte	Textured	180-275	RC4	35	>RUV 4	0.5-1.0
02, 03, 220, 250, S220GD, S250GD	0.5-1.5	PU	Semi-gloss Semi-matte	Textured	200-275	RC5	50	>RUV 4	0.5-1.0
02, 03, 220, 250, S220GD, S250GD	0.5-1.5	PU	Deep matte	Wrinkled	180-275	RC4	35	>RUV 4	0.5-1.0
02, 03, 220, 250, S220GD, S250GD	0.5-1.5	PU	Deep matte	Wrinkled	200-275	RC5	50	>RUV 4	0.5-1.0
02, 03, 220, 250, S220GD, S250GD	0.5-1.5	Chemical PU	Semi-gloss Semi-matte	Textured	200-275	RC5	50	>RUV 4	0.5-1.0
02, 03, 220	0.35-1.5	Antibacterial PU	Gloss Semi-matte	Smooth	140/100	RC3	25	RUV 2-3	1.5-2.0

Recommended by NLMK



Sandwich panels for roofs



GRADES PRODUCED BY NLMK

Steel grade	Steel thickness,mm	Coating type	Glossiness	Texture	Zn mass, g/m²	Corrosion resistance	Coating thickness, µm	UV resistance	T-bend strength
02, 03, 220	0.35-1.5	PE	Gloss Semi-matte	Smooth	140/100-275	RC3	25	RUV 2-3	1.5-2.0
02, 03, 220	0.35-1.5	PE	Deep matte	Wrinkled Corall	140/100-275	RC3	25	RUV 4	1.5-2.0
02, 03, 220	0.35-1.5	PE	Semi-matte Matte	Textured	140/100-275	RC3	28	RUV 2-3	0.5-1.0
02, 03, 220, 250, S220GD, S250GD	0.5-1.5	PU	Semi-gloss Semi-matte	Textured	180-275	RC4	35	>RUV 4	0.5-1.0
02, 03, 220, 250, S220GD, S250GD	0.5-1.5	PU	Semi-gloss Semi-matte	Textured	200-275	RC5	50	>RUV 4	0.5-1.0
02, 03, 220, 250, S220GD, S250GD	0.5-1.5	PU	Deep matte	Wrinkled	180-275	RC4	35	>RUV 4	0.5-1.0
02, 03, 220, 250, S220GD, S250GD	0.5-1.5	PU	Deep matte	Wrinkled	200-275	RC5	50	>RUV 4	0.5-1.0
02, 03, 220, 250, S220GD, S250GD	0.5-1.5	Chemical PU	Semi-gloss Semi-matte	Textured	200-275	RC5	50	>RUV 4	0.5-1.0

Recommended by NLMK



Facade cassettes for cladding



GRADES PRODUCED BY NLMK

Steel grade	Steel thickness,mm	Coating type	Glossiness	Texture	Zn mass, g/m²	Corrosion resistance	Coating thickness, µm	UV resistance	T-bend strength
02, 03, 220	0.35-1.5	PE	Gloss Semi-matte	Smooth	140/100-275	RC3	25	RUV 2-3	1.5-2.0
02, 03, 220	0.35-1.5	PE	Deep matte	Wrinkled Corall	140/100-275	RC3	25	RUV 4	1.5-2.0
02, 03, 220	0.35-1.5	PE	Semi-matte Matte	Textured	140/100-275	RC3	28	RUV 2-3	0.5-1.0
02, 03, 220, DX52D, DX53D, DX54D	0.5-1.5	PU	Semi-gloss Semi-matte	Textured	180-275	RC4	35	>RUV 4	0.5-1.0
02, 03, 220, DX52D, DX53D, DX54D	0.5-1.5	PU	Semi-gloss Semi-matte	Textured	200-275	RC5	50	>RUV 4	0.5-1.0
02, 03, 220, DX52D, DX53D, DX54D	0.5-1.5	PU	Deep matte	Wrinkled	180-275	RC4	35	>RUV 4	0.5-1.0
02, 03, 220, DX52D, DX53D, DX54D	0.5-1.5	PU	Deep matte	Wrinkled	200-275	RC5	50	>RUV 4	0.5-1.0

Recommended by NLMK



Commercial, social and agricultural facilities



GRADES PRODUCED BY NLMK

Steel grade	Steel thickness,mm	Coating type	Glossiness	Texture	Zn mass, g/m²	Corrosion resistance	Coating thickness, µm	UV resistance	T-bend strength
02, 03, 220	0.35-1.0	PE	Gloss Semi-matte	Smooth	140/100-275	RC3	25	RUV 2-3	1.5-2.0
02, 03, 220	0.35-1.0	PE	Deep matte	Wrinkled Corall	140/100-275	RC3	25	RUV 4	1.5-2.0
02, 03, 220	0.35-1.0	PE	Semi-matte Matte	Textured	140/100-275	RC3	28	RUV 2-3	0.5-1.0
02, 03, 220, DX52D, DX53D, S220GD	0.5-1.0	PU	Semi-gloss Semi-matte	Textured	180-275	RC4	35	>RUV 4	0.5-1.0
02, 03, 220, DX52D, DX53D, S220GD	0.5-1.0	PU	Semi-gloss Semi-matte	Textured	200-275	RC5	50	>RUV 4	0.5-1.0
02, 03, 220, DX52D, DX53D, S220GD	0.5-1.0	PU	Deep matte	Wrinkled	180-275	RC4	35	>RUV 4	0.5-1.0
02, 03, 220, DX52D, DX53D, S220GD	0.5-1.0	PU	Deep matte	Wrinkled	200-275	RC5	50	>RUV 4	0.5-1.0
02, 03, 220, DX52D, DX53D, S220GD	0.5-1.0	Chemical PU	Semi-gloss Semi-matte	Textured	200-275	RC5	50	>RUV 4	0.5-1.0
02, 03, 220	0.35-1.0	Antibacterial PU	Gloss Semi-matte	Smooth	140/100	RC3	25	RUV 2-3	1.5-2.0

Recommended by NLMK



Noise barriers



GRADES PRODUCED BY NLMK

Steel grade	Steel thickness,mm	Coating type	Glossiness	Texture	Zn mass, g/m²	Corrosion resistance	Coating thickness, µm	UV resistance	T-bend strength
02, 03, 220, 280, 320, 350	0.45-1.5	PE	Gloss Semi-matte	Smooth	140/100-275	RC3	25	RUV 2-3	1.5-2.0
02, 03, 220, 280, 320, 350	0.45-1.5	PE	Deep matte	Wrinkled Corall	140/100-275	RC3	25	RUV 4	1.5-2.0
02, 03, 220, 280, 320, 350	0.5-1.5	PU	Semi-gloss Semi-matte	Textured	180-275	RC4	35	>RUV 4	0.5-1.0
02, 03, 220, 280, 320, 350	0.5-1.5	PU	Semi-gloss Semi-matte	Textured	200-275	RC5	50	>RUV 4	0.5-1.0
02, 03, 220, 280, 320, 350	0.5-1.5	PU	Deep matte	Wrinkled	180-275	RC4	35	>RUV 4	0.5-1.0
02, 03, 220, 280, 320, 350	0.5-1.5	PU	Deep matte	Wrinkled	200-275	RC5	50	>RUV 4	0.5-1.0

Recommended by NLMK



Washing machines, refrigerators, microwave ovens



GRADES PRODUCED BY NLMK

Steel grade	Steel thickness,mm	Coating type	Glossiness	Texture	Zn mass, g/m²	Corrosion resistance	Coating thickness, µm	UV resistance	T-bend strength
02, DX52D, 08пс	0.4-1.0	PE	Gloss Semi-matte	Smooth	100-180	RC3	25	RUV 2-3	1.5-2.0
DX53D, DX54D, SGCC, SGCD	0.5-1.0	PE	Gloss Semi-matte	Smooth	100-180	RC3	25	RUV 2-3	1.5-2.0
02, DX52D, 08пс	0.4-1.0	PE	High gloss	Smooth	100-180	RC3	25	RUV 2-3	1.5-2.0
DX53D, DX54D, SGCC, SGCD	0.5-1.0	PE	High gloss	Smooth	100-180	RC3	25	RUV 2-3	1.5-2.0

Recommended by NLMK



Refrigerated tables and chambers, store displays



GRADES PRODUCED BY NLMK

Steel grade	Steel thickness,mm	Coating type	Glossiness	Texture	Zn mass, g/m²	Corrosion resistance	Coating thickness, µm	UV resistance	T-bend strength
02, DX52D, 08пс	0.4-1.0	PE	Gloss Semi-matte	Smooth	100-180	RC3	25	RUV 2-3	1.5-2.0
DX53D, DX54D, SGCC, SGCD	0.5-1.0	PE	Gloss Semi-matte	Smooth	100-180	RC3	25	RUV 2-3	1.5-2.0

Recommended by NLMK



SECTION 3

APPENDIX

TECHNICAL SPECIFICATIONS OF THE STEEL SUBSTRATE

Steel	Standard	Product mix		Mechanical properties				
grade		Thickness, mm	Width*, mm	Tensile Strength, N/mm²	Yield Strength, N/mm²	Relative Elongation L=80 mm, %		
02	GOST 14918	0.35-0.70	900-1,600	270-500	-	≥20		
		0.71-2.00	900-1,600	270-500	_	≥22		
03	GOST 14918	0.35-0.70	900-1,600	270-420	_	≥24		
		0.71-1.50	900-1,600	270-420	-	≥26		
		1.51-2.00	900-1,600	270-420	-	≥28		
DX52D	EN 10346	0.35-0.50	900-1,520	270-420	140-300	≥22		
		0.51-0.70	900-1,600	270-420	140-300	≥24		
		0.71-2.00	900-1,600	270-420	140-300	≥26		
DX53D	EN 10346	0.50-0.70	900-1,600	270-380	140-260	≥38		
		0.71-2.00	900-1,600	270-380	140-260	≥30		
DX54D	EN 10346	0.50-0.70	900-1,600	260-350	120-220	≥34		
		0.71-2.00	900-1,600	260-350	120-220	≥36		
220	GOST 14918	0.35-0.70	900-1,520	≥300	≥220	≥18		
		0.71-2.00	900-1,600	≥300	≥220	≥20		
250	GOST 14918	0.35-0.70	900-1,500	≥330	≥250	≥17		
		0.71-2.00	900-1,600	≥330	≥250	≥19		
280	GOST 14918	0.35-0.70	900-1,320	≥360	≥280	≥16		
		0.71-2.00	900-1,600	≥360	≥280	≥18		
320	GOST 14918	0.47-0.70	900-1,270	≥390	≥320	≥15		
		0.71-2.00	900-1,600	≥390	≥320	≥17		
350	GOST 14918	0.50-2.00	900-1,600	≥420	≥350	≥16		
S220GD	EN 10346	0.35-0.70	900-1,520	≥300	≥220	≥18		
		0.71-2.00	900-1,600	≥300	≥220	≥20		
S250GD	EN 10346	0.35-0.70	900-1,500	≥330	≥250	≥17		
		0.71-2.00	900-1,600	≥330	≥250	≥19		
HX260LAD	EN 10346	0.70-2.00	900-1,600	350-430	260-330	≥26		
SGCC	JIS G 3302	0.50-2.00	900-1,600	≥274	≤225	≥39		
SGCD	JIS G 3302	0.50-2.00	900-1,600	≥274	≤196	≥41		
08пс	GOST 16523	0.40-2.00	900-1,600	270-410	-	≥25		

^{*} Ranges are given for the largest thickness

