

# Prelaq prepainted sheet steel Technical specification

TABLE 1

Product	Paint coatings and properties							
	Indoor/ Outdoor I/O	Nom. thickness  µm	Gloss  units	Minimum inner ben- ding radius <sup>1)</sup> mm	Min. temp. during forming °C	Impact strength  J	Pencil hardness	Resistans to schratching  N
Standard		ISO 2808	EN 13523-2	EN 13523-7		EN 13523-5	EN 13523-4	EN 13523-12
Prelaq Nova	0	50	40	1 T	+15 <sup>2)</sup>	8	HB	35
Prelaq Nova Matt	0	50	10	1 T	+15 <sup>2)</sup>	8	HB	-
Prelaq Nova RWS	0	35/35	40	1 T	+15	8	HB	35
Prelaq Energy Exterior	U	40	40	1 T	+15 <sup>2)</sup>	8	HB-F	35
Prelaq Energy Interior	I	20	40	-	+15	8	HB-F	9
Prelaq Clean	U	40	10, 40	1 T	+15	8	HB-F	35
Polyester	0	30	30	2 T	+15	8	HB	-
Matt Polyester	0	30	< 5	1 T	+15	8	-	-
Polyester ARS	I	30	15, 30	4 T	+15	8	HB	-
PVDF	0	30	30	0,5 T	+15	8	HB	-
Plastisol P 200	U	200	50 <sup>3)</sup>	0,5 T	+15	15	-	-
Baksideslack		10	-	-	-	-	-	-

1) Minimum inner bending radius cracks occurring in the pain coat. T is the sheet thickness. The steel grade used may impose a limitation.

2) For the Prelaq Nova PLX product, the minimum temperature is -10 °C.

3) Embossed surface.

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TABLE 2

	Maxium service temperature	Fire Classification	Fire Surface spread of flame	Fire	UV categori	Corrosion resistance category <sup>1</sup>
Standard		EN 13501-1	BS 477 Part 7	DIN 4102 Part 1	EN 10169:2010	EN 10169:2010 <sup>2)</sup>
Product						
Prelaq Nova	100 °C	A2-s2, d0	class 1	class B2	R <sub>uv3</sub>	RC5
Prelaq Nova Matt	90 °C	A2-s2, d0	class 1	class B2	R <sub>uv3</sub>	RC5
Prelaq Nova RWS	100 °C	-	-	-	R <sub>uv3</sub>	RC5
Prelaq Energy Exterior	100 °C	A2-s2, d0	class 1	class B2	R <sub>uv3</sub>	RC5
Prelaq Energy Interior	100 °C	A1	-	-	R <sub>uv3</sub>	-
Prelaq Clean	90 °C	A2-s2, d0	class 1	class B2	R <sub>uv3</sub>	RC4
Polyester	80 °C	A2-s1, d0	class 1	class B2	R <sub>uv3</sub>	RC4
Matt Polyester	80 °C	A2-s1, d0	-	-	R <sub>uv3</sub>	RC4
Polyester ARS	80 °C	A2-s1, d0	class 1	-	-	-
PVDF	120 °C	-	class 1	class B2	R <sub>uv4</sub>	RC4
Plastisol P 200	60 °C	C-s2, d1	-	-	R <sub>uv2</sub>	RC5

1) RC = Corrosion Category 1-5, where 5 is the highest resistance category.

2) The standard specifies requirements for a minimum of two years of exposure in marine environment.

TABLE 3

Thickness, µm	Tolerance on paint coat thickness						
	>10-20	>20-25	>25-35	>35-60	>60-100	>100-150	>150
Minus tolerance in µm Mean value from 3 measurements	3	4	6	8	15	20	30
Minus tolerance from 1 measurements	4	5	8	12	20	25	35

As per EN 10169, dimension in µm.

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### TOLERANCES ON GLOSS AND COLOUR

The gloss values for coats with embossed surface cannot be measured.

On delivery, impression marks in the form of patches with higher gloss may occur on certain paint types. These marks will disappear when the sheet is warmed up, which normally occurs on sheet used outdoors.

### COLOUR

The maximum deviation from the reference standard is 1 Cie-lab unit,  $\Delta E \leq 1,0$ . Certain special colours are excepted.

Minor colour variations may occur between deliveries, and sheet from one delivery should therefore be used for the whole of the roof or frontage surface.

The appearance of sheet with metallic finishes and Matt polyester is dependent on the angle from which the surface is viewed. The uncoiling direction of the strip should always be installed in the same direction when the product is made and fitted, since a difference in appearance may otherwise occur.

TABLE 4

Tolerance on gloss	
Gloss units	Tolerance
<10	+3
>10-20	+4
>20-40	+6
>40-60	+8
>60 to <80	+10
>80	minimum 80

As per EN 10169.

Values in gloss units when using 60° measuring head. For gloss <10,85° measuring head is used.

TABLE 5

Substrate material of hot-dip galvanized sheet steel						
Application	Steel grade SSAB designation	Steel type as per EN 10346	Yield strength $R_{p0,2}$ MPa	Tensile strength $R_m$ MPa	Elongation on failure $A_{80}$ % min	Minimum bending radius <sup>1)</sup> mm
Folding, bending, pressing	B500	DX 51D + Z		max 500	22	0,5T
	B420			max 420		0,5T
	F30	DX 53D + Z	260	380	30	0,5T
Deep drawing Manual working processing	F36	DX 54D + Z	220	350	36	0,5T
	PLX		ca 180			0,5T
	F40		200	350	40	
Load-bearing steel, profiling, bending	SUB 250	S250 GD + Z	250	330	19	0,5T
	SUB 280	S280 GD + Z	280	360	18	1T
	SUB 320	S320 GD + Z	320	390	17	1,5T
	SUB 350	S350 GD + Z	350	420	16	1,5T
	390 YPL		390-460	460-530	18	0,5T

All values relate to properties before painting.

1) Minimum inner bending radius without cracks occurring. T is the sheet thickness. The paint type used may impose a limitation.

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**TABELL 6**

Tolerances for steel grades with specified minimum yield strength  $R_e$  or specific minimum proof strength  $R_{p0,2} < 260$ MPa.

Nominal thickness (mm)	Normal tolerances <sup>1)</sup> for a nominal width (mm)		
	≤1200	>1200 to ≤ 1500	> 1500
>0,40 - 0,60	±0,04	±0,05	±0,06
>0,60 - 0,80	±0,05	±0,06	±0,07
>0,80 - 1,00	±0,06	±0,07	±0,08
>1,00 - 1,20	±0,07	±0,08	±0,09
>1,20 - 1,60	±0,10	±0,11	±0,12

1) The thickness tolerances in the region of cold rolled welds may be increased by a maximum of 50% over a length of 10 meter. This increase is applicable to all thicknesses and, unless otherwise agreed at the time of order, to normal tolerances over or under.

**TABELL 7**

Tolerances for steel grades with specified minimum proof strength  $260 \text{ MPa} \leq R_{p0,2} < 360 \text{ MPa}$  and for grades DX51D and S550GD.

Nominal thickness (mm)	Normal tolerances <sup>1)</sup> for a nominal width (mm)		
	≤1200	>1200 to ≤ 1500	> 1500
>0,40 - 0,60	±0,05	±0,06	±0,07
>0,60 - 0,80	±0,06	±0,07	±0,08
>0,80 - 1,00	±0,07	±0,08	±0,09
>1,00 - 1,20	±0,08	±0,09	±0,11
>1,20 - 1,60	±0,11	±0,13	±0,14

1) The thickness tolerances in the region of cold rolled welds may be increased by a maximum of 50% over a length of 10 meter. This increase is applicable to all thicknesses and, unless otherwise agreed at the time of order, to normal tolerances over or under.

**TABELL 8**

Tolerances for steel grades with specified minimum proof strength  $360 \text{ MPa} \leq R_{p0,2} \leq 420 \text{ MPa}$ .

Nominal thickness (mm)	Normal tolerances <sup>1)</sup> for a nominal width (mm)		
	≤1200	>1200 to ≤ 1500	> 1500
>0,40 - 0,60	±0,06	±0,07	±0,08
>0,60 - 0,80	±0,07	±0,08	±0,09
>0,80 - 1,00	±0,08	±0,09	±0,11
>1,00 - 1,20	±0,10	±0,11	±0,12
>1,20 - 1,60	±0,13	±0,14	±0,16

1) The thickness tolerances in the region of cold rolled welds may be increased by a maximum of 50% over a length of 10 meter. This increase is applicable to all thicknesses and, unless otherwise agreed at the time of order, to normal tolerances over or under.

**TABLE 9**

Tolerance on width	
Width mm	Normal tolerance <sup>3)</sup> mm
- 1200	-0/+5
1201 -	-0/+6

As per EN 10143.

3) Closer tolerances are available subject to agreement.

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TABLE 10

Tolerances on length of cut-to-length sheet	
Length mm	Normal tolerance mm
- 2000	-0/+6
2001 -	-0/+0,003x length

As per EN 10143.

#### TOLERANCE ON STRAIGHTNESS

As per EN10143. Max. deviation of 6 mm on a gauge length of 2 m.

#### TOLERANCE ON PERPENDICULARITY

As per EN 10143. Max 1% of sheet width.

#### TOLERANCE ON FLATNESS

As per EN 10143. The standard max. arch height is 6 mm. This applies only to sheet delivered in cut-to-length condition.

TABLE 11

Dimensions of coils	
Thickness mm	Width mm
0,40 - 1,50	700 - 1500

Limitations may apply depending on steel grades and weight per metre run

TABLE 12

Coil weights-directly from coil coating line		
	Min tonne	Max tonne
Plastisol	3,0	8,0
Polyester, PVDF, Nova	3,0	8,5

#### COIL DIAMETER

Inside diameter (Id) 610 mm  
508 mm is available subject to agreement  
Outside diameter (Yd) Max 1350 mm

#### DEFECT MATERIAL IN COILS

Due to the nature of the coil coating process, defects in up to a maximum of 2 % of the ordered quantity per item are included in the price and shall not constitute a reason for any claim. Individual coils may contain higher percentage of defects. Please note: The reverse side coating is only considered as transportation protection. Any special requirements by arrangement.

#### PACKAGING

When specifying the packaging, consideration must be given to the method of transport and the storage facilities available. If special requirements are made on the packaging, this should be specified in conjunction with the order.

#### PERMITTED DEVIATION FROM THE WEIGHT SPECIFIED PER COIL

Our factories are not bound to supply the exact coil weight specified. Coil weight may be between 75 and 100 % of the weight specified. 20 % of the tonnage of the sample ordered as coils may be supplied as lightweight coils, i.e. coils weighing between 25 and 75 % of the specified weight.

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