



DIMENSIONAL AND SHAPE TOLERANCES

METAL COATED STEEL SHEETS AND COILS

SSAB

The tolerances for SSAB's metal coated sheet steel products comply with EN10143:2006. Products are delivered with normal tolerances of this standard unless an agreement has been made about special or customized tolerance specification at the time of enquiry and order.

The table below shows the metal coated steel grades and their minimum yield strengths.

| | Steel grade | Minimum yield strength | | | |
|-------------------------|---------------------|------------------------|------------------------------------|------------------------------------|--------------------------|
| | | Re<260 MPa | 260 MPa ≤ R _e < 360 MPa | 360 MPa ≤ R _e ≤ 420 MPa | R _e > 420 MPa |
| SSAB Form | 200 (●) / DX51D (o) | • | o | | |
| | 52 | • | | | |
| | 53 | • | | | |
| | 54 | • | | | |
| | 56 | • | | | |
| | PLX | • | | | |
| SSAB Domex | 220GD | • | | | |
| | 250GD | • | | | |
| | 280GD | | • | | |
| | 320GD | | • | | |
| | 350GD | | • | | |
| | 390GD | | | • | |
| | 420GD | | | • | |
| | 450GD | | | | • |
| | | | | | |
| | 220D | • | | | |
| | 260LAD | | • | | |
| | 300LAD | | • | | |
| | 340LAD | | • | | |
| | 380LAD | | | • | |
| | 420LAD | | | • | |
| | 460LAD | | | | • |
| | 500LAD | | | | • |
| Docol | CR420LA | | | • | |
| | CR460LA | | | | • |
| | HR420LA | | | | • |
| | HR550LA | | | | • |
| | HR700LA | | | | • |
| | | | | | |
| | CR290Y490T-DP | | • | | |
| | CR330Y590T-DP | | • | | |
| | CR350Y600T-CP | | • | | |
| | CR440Y780T-DP | | | | • |
| | CR570Y780T-CP | | | | • |
| | CR590Y980T-DP | | | | • |
| | CR700Y980T-DP | | | | • |
| | CR780Y980T-CP | | | | • |
| | 800DPX | | | | • |
| | 1000DPX | | | | • |
| | 800 Roll | | | | • |
| | 1000 Roll | | | | • |
| EN10346:2015 multiphase | HCT490X | | • | | |
| | HCT590X | | • | | |
| | HCT600C | | • | | |
| | HCT780X | | | | • |
| | HCT780C | | | | • |
| | HCT980X | | | | • |
| | HCT980C | | | | • |

THICKNESS TOLERANCES

Thickness is measured at a point no less than 40 mm from the edges. If the width is less than 80 mm, the product is measured from the middle.

In case of Z450 and Z600 coatings, normal and special tolerances are increased by ± 0.01 .

SPECIFIED MINIMUM YIELD STRENGTH $R_{p0.2}$ OR $R_e < 260$ MPa

| Nominal thickness, mm | Normal tolerances ¹⁾ for a nominal width of mm | | | Special tolerances (S) ¹⁾ for a nominal width of mm | | |
|-----------------------|---|-------------|------------|--|-------------|-------------|
| | – 1200 | 1201 – 1500 | 1501 – | – 1200 | 1201 – 1500 | 1501 – |
| 0.40 – 0.60 | ± 0.04 | ± 0.05 | ± 0.06 | ± 0.035 | ± 0.040 | ± 0.045 |
| 0.61 – 0.80 | ± 0.05 | ± 0.06 | ± 0.07 | ± 0.040 | ± 0.045 | ± 0.050 |
| 0.81 – 1.00 | ± 0.06 | ± 0.07 | ± 0.08 | ± 0.045 | ± 0.050 | ± 0.060 |
| 1.01 – 1.20 | ± 0.07 | ± 0.08 | ± 0.09 | ± 0.050 | ± 0.060 | ± 0.070 |
| 1.21 – 1.60 | ± 0.10 | ± 0.11 | ± 0.12 | ± 0.060 | ± 0.070 | ± 0.080 |
| 1.61 – 2.00 | ± 0.12 | ± 0.13 | ± 0.14 | ± 0.070 | ± 0.080 | ± 0.090 |
| 2.01 – 2.50 | ± 0.14 | ± 0.15 | ± 0.16 | ± 0.090 | ± 0.100 | ± 0.110 |
| 2.51 – 3.00 | ± 0.17 | ± 0.17 | ± 0.18 | ± 0.110 | ± 0.120 | ± 0.130 |

SPECIFIED MINIMUM YIELD STRENGTH $260 \leq R_{p0.2} < 360$ MPa

| Nominal thickness, mm | Normal tolerances ¹⁾ for a nominal width of mm | | | Special tolerances (S) ¹⁾ for a nominal width of mm | | |
|-----------------------|---|-------------|------------|--|-------------|-------------|
| | – 1200 | 1201 – 1500 | 1501 – | – 1200 | 1201 – 1500 | 1501 – |
| 0.40 – 0.60 | ± 0.05 | ± 0.06 | ± 0.07 | ± 0.040 | ± 0.045 | ± 0.050 |
| 0.61 – 0.80 | ± 0.06 | ± 0.07 | ± 0.08 | ± 0.045 | ± 0.050 | ± 0.060 |
| 0.81 – 1.00 | ± 0.07 | ± 0.08 | ± 0.09 | ± 0.050 | ± 0.060 | ± 0.070 |
| 1.01 – 1.20 | ± 0.08 | ± 0.09 | ± 0.11 | ± 0.060 | ± 0.070 | ± 0.080 |
| 1.21 – 1.60 | ± 0.11 | ± 0.13 | ± 0.14 | ± 0.070 | ± 0.080 | ± 0.090 |
| 1.61 – 2.00 | ± 0.14 | ± 0.15 | ± 0.16 | ± 0.080 | ± 0.090 | ± 0.110 |
| 2.01 – 2.50 | ± 0.16 | ± 0.17 | ± 0.18 | ± 0.110 | ± 0.120 | ± 0.130 |
| 2.51 – 3.00 | ± 0.19 | ± 0.20 | ± 0.20 | ± 0.130 | ± 0.140 | ± 0.150 |

SPECIFIED MINIMUM YIELD STRENGTH $360 \leq R_{p0.2} \leq 420$ MPa

| Nominal thickness, mm | Normal tolerances ¹⁾ for a nominal width of mm | | | Special tolerances (S) ¹⁾ for a nominal width of mm | | |
|-----------------------|---|-------------|------------|--|-------------|-------------|
| | – 1200 | 1201 – 1500 | 1501 – | – 1200 | 1201 – 1500 | 1501 – |
| 0.40 – 0.60 | ± 0.06 | ± 0.07 | ± 0.08 | ± 0.045 | ± 0.050 | ± 0.060 |
| 0.61 – 0.80 | ± 0.07 | ± 0.08 | ± 0.09 | ± 0.050 | ± 0.060 | ± 0.070 |
| 0.81 – 1.00 | ± 0.08 | ± 0.09 | ± 0.11 | ± 0.060 | ± 0.070 | ± 0.080 |
| 1.01 – 1.20 | ± 0.10 | ± 0.11 | ± 0.12 | ± 0.070 | ± 0.080 | ± 0.090 |
| 1.21 – 1.60 | ± 0.13 | ± 0.14 | ± 0.16 | ± 0.080 | ± 0.090 | ± 0.110 |
| 1.61 – 2.00 | ± 0.16 | ± 0.17 | ± 0.19 | ± 0.090 | ± 0.110 | ± 0.120 |
| 2.01 – 2.50 | ± 0.18 | ± 0.20 | ± 0.21 | ± 0.120 | ± 0.130 | ± 0.140 |
| 2.51 – 3.00 | ± 0.22 | ± 0.22 | ± 0.23 | ± 0.140 | ± 0.150 | ± 0.160 |

SPECIFIED MINIMUM YIELD STRENGTH $420 < R_{p0.2} \leq 900$ MPa

| Nominal thickness, mm | Normal tolerances ¹⁾ for a nominal width of mm | | | Special tolerances (S) ¹⁾ for a nominal width of mm | | |
|-----------------------|---|-------------|--------|--|-------------|---------|
| | – 1200 | 1201 – 1500 | 1501 – | – 1200 | 1201 – 1500 | 1501 – |
| 0.40 – 0.60 | ± 0.06 | ± 0.08 | ± 0.09 | ± 0.050 | ± 0.060 | ± 0.070 |
| 0.61 – 0.80 | ± 0.07 | ± 0.09 | ± 0.11 | ± 0.060 | ± 0.070 | ± 0.080 |
| 0.81 – 1.00 | ± 0.09 | ± 0.11 | ± 0.12 | ± 0.070 | ± 0.080 | ± 0.090 |
| 1.01 – 1.20 | ± 0.11 | ± 0.13 | ± 0.14 | ± 0.080 | ± 0.090 | ± 0.110 |
| 1.21 – 1.60 | ± 0.15 | ± 0.16 | ± 0.18 | ± 0.090 | ± 0.110 | ± 0.120 |
| 1.61 – 2.00 | ± 0.18 | ± 0.19 | ± 0.21 | ± 0.110 | ± 0.120 | ± 0.140 |
| 2.01 – 2.50 | ± 0.21 | ± 0.22 | ± 0.24 | ± 0.140 | ± 0.150 | ± 0.170 |
| 2.51 – 3.00 | ± 0.24 | ± 0.25 | ± 0.26 | ± 0.170 | ± 0.180 | ± 0.190 |

1) For strips and slit strips, max. 50% larger thickness tolerances than shown in the table are allowed in the area of the coil welds, when the length is more than 10 m. This applies to all thicknesses, and unless otherwise agreed at the time of order, also to normal and special (negative and positive) tolerances..

WIDTH TOLERANCES

STRIP AND SHEET

| Nominal width, mm | Normal tolerances mm | | Special tolerances (S) ¹⁾ mm | |
|-------------------|----------------------|------|---|------|
| | Under | Over | Under | Over |
| – 1 200 | 0 | + 5 | 0 | + 2 |
| 1201 – 1500 | 0 | + 6 | 0 | + 2 |
| 1501 – | 0 | + 7 | 0 | + 3 |

1) To be applied to products, which are delivered with cut edges only.

SLIT STRIP (WIDTH < 600 mm)

| Tolerance class | Nominal thickness mm | Nominal width mm | | | | | | | |
|-----------------|----------------------|------------------|-------|-----------|-------|-----------|-------|-----------|-------|
| | | – 124 | | 125 – 249 | | 250 – 399 | | 400 – 599 | |
| | | Under | Over | Under | Over | Under | Over | Under | Over |
| Normal | 0.40 – 0.59 | 0 | + 0.4 | 0 | + 0.5 | 0 | + 0.7 | 0 | +1.0 |
| | 0.60 – 0.99 | 0 | + 0.5 | 0 | + 0.6 | 0 | + 0.9 | 0 | + 1.2 |
| | 1.00 – 1.99 | 0 | + 0.6 | 0 | + 0.8 | 0 | + 1.1 | 0 | + 1.4 |
| | 2.00 – 3.00 | 0 | + 0.7 | 0 | + 1.0 | 0 | + 1.3 | 0 | + 1.6 |
| Special (S) | 0.40 – 0.59 | 0 | + 0.2 | 0 | + 0.2 | 0 | + 0.3 | 0 | + 0.5 |
| | 0.60 – 0.99 | 0 | + 0.2 | 0 | + 0.3 | 0 | + 0.4 | 0 | + 0.6 |
| | 1.00 – 1.99 | 0 | + 0.3 | 0 | + 0.4 | 0 | + 0.5 | 0 | + 0.7 |
| | 2.00 – 3.00 | 0 | + 0.4 | 0 | + 0.5 | 0 | + 0.6 | 0 | + 0.8 |

LENGTH TOLERANCES

SHEETS

| Nominal length mm | Tolerance class | | | |
|-------------------|-----------------|---------------------|----------------|----------------------|
| | Normal mm | | Special (S) mm | |
| | Under | Over | Under | Over |
| – 1999 | 0 | 6 | 0 | 3 |
| 2000 – 6000 | 0 | 0.3 % of the length | 0 | 0.15 % of the length |

Tighter tolerances may also be agreed at the time of order.

FLATNESS TOLERANCES

The flatness tolerances only apply to sheets.

The flatness deviation is the maximum permitted distance between the sheet and the horizontal surface on which it is placed. The sheets delivered without the skin pass rolling are delivered with normal tolerances only.

SPECIFIED MINIMUM YIELD STRENGTH $R_{p0.2}$ OR $R_e < 260$ MPa

| Tolerance class | Nominal width mm | Nominal thickness mm | | |
|-----------------|------------------|----------------------|-------------|-------------|
| | | 0.40 – 0.69 | 0.70 – 1.59 | 1.60 – 3.00 |
| Normal | 600 – 1199 | 10 | 8 | 8 |
| | 1200 – 1499 | 12 | 10 | 10 |
| | 1500 – | 17 | 15 | 15 |
| Special (FS) | 600 – 1199 | 5 | 4 | 3 |
| | 1200 – 1499 | 6 | 5 | 4 |
| | 1500 – | 8 | 7 | 6 |

SPECIFIED MINIMUM YIELD STRENGTH $260 \leq R_{p0.2} < 360$ MPa

| Tolerance class | Nominal width mm | Nominal thickness mm | | |
|-----------------|------------------|----------------------|-------------|-------------|
| | | 0.40 – 0.69 | 0.70 – 1.59 | 1.60 – 3.00 |
| Normal | 600 – 1199 | 13 | 10 | 10 |
| | 1200 – 1499 | 15 | 13 | 13 |
| | 1500 – | 20 | 19 | 19 |
| Special (FS) | 600 – 1199 | 8 | 6 | 5 |
| | 1200 – 1499 | 9 | 8 | 6 |
| | 1500 – | 12 | 10 | 9 |

SPECIFIED MINIMUM YIELD STRENGTH $R_{p0.2} \geq 360$ MPa

The flatness tolerances are to be agreed separately at the time of order.

OUT-OF-SQUARENESS TOLERANCES

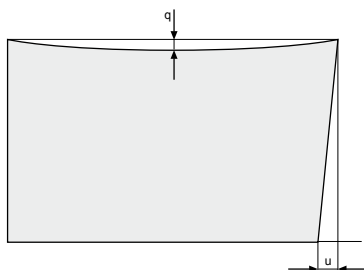
The out-of-squareness (u) can be 1% maximum of the sheet width (Figure 1).

EDGE CAMBER TOLERANCES

The edge camber (q) shall be maximum 5 mm over a length of 2 m. For lengths less than 2 metres, the edge camber can be a maximum of 0.25 % of the actual length (Figure 1).

For slit strips of width less than 600 mm, a special edge camber tolerance of max. 2 mm over a length of 2 m may be specified. This special edge camber tolerance is not applicable to high-strength slit strips.

FIGURE 1. OUT-OF-SQUARENESS AND EDGE CAMBER



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