# LOW-ALLOYED STEELS WITH HIGH YIELD STRENGTH FOR COLD WORKING

## MECHANICAL PROPERTIES

| Rolled product grades | Standard | Yield strength, MPa (N/mm²) | Ultimate strength, MPa (N/mm²) | Relative elongation, %, min. | R | n | Sampling direction with respect to rolling direction |
|---|---|---|---|---|---|---|---|
| HX180YD | EN 10346 | 180–240 | 330–390 | 34 | ≥ 1.7 | ≥ 0.18 | Transverse |
| HX220YD | | 220–280 | 340–420 | 32 | ≥ 1.5 | ≥ 0.17 | |
| HX260YD | | 260–320 | 380–440 | 30 | ≥ 1.4 | ≥ 0.16 | |
| HX300YD | | 300–380 | 380–480 | 27 | – | – | |
| HX260LAD | | 260–330 | 350–430 | 26 | – | – | |
| HX300LAD | | 300–380 | 380–480 | 23 | – | – | |
| HX340LAD | | 340–420 | 410–510 | 21 | – | – | |
| HX380LAD | | 380–480 | 440–560 | 19 | – | – | |
| HX420LAD | | 420–520 | 470–590 | 17 | – | – | |

## THICKNESS/WIDTH RATIO FOR ROLLED PRODUCTS

### HX180YD

| Steel thickness before galvanizing, mm | Strip width, mm | | | | | |
|---|---|---|---|---|---|---|
| | 900 | 1,420 | 1,550 | 1,570 | 1,640 | 1,750 |
| 0.49–0.57 | | | | | | |
| 0.58–0.64 | | | | | | |
| 0.65–0.77 | | | | | | |
| 0.78–1.17 | | | | | | |
| 1.18–1.59 | | | | | | |

### HX220YD

| Steel thickness before galvanizing, mm | Strip width, mm | | | | |
|---|---|---|---|---|---|
| | 900 | 1,370 | 1,520 | 1,560 | 1,620 |
| 0.58–0.62 | | | | | |
| 0.63–0.67 | | | | | |
| 0.68–1.27 | | | | | |
| 1.28–1.50 | | | | | |

### HX260YD

| Steel thickness before galvanizing, mm | Strip width, mm | | | | |
|---|---|---|---|---|---|
| | 900 | 1,370 | 1,490 | 1,620 | 1,750 |
| 0.58 | | | | | |
| 0.59–0.80 | | | | | |
| 0.81–1.50 | | | | | |
| 1.51–2.00 | | | | | |

### HX300YD

| Steel thickness before galvanizing, mm | Strip width, mm | | | |
|---|---|---|---|---|
| | 900 | 1,270 | 1,470 | 1,520 |
| 0.58–0.62 | | | | |
| 0.63–0.96 | | | | |
| 0.97–1.50 | | | | |

### HX260LAD

| Steel thickness before galvanizing, mm | Strip width, mm | | | | |
|---|---|---|---|---|---|
| | 900 | 1,390 | 1,520 | 1,570 | 1,660 |
| 0.58–0.80 | | | | | |
| 0.81–1.50 | | | | | |
| 1.51–1.90 | | | | | |
| 1.91–2.00 | | | | | |

### HX300LAD

| Steel thickness before galvanizing, mm | Strip width, mm | | | | | |
|---|---|---|---|---|---|---|
| | 900 | 1,320 | 1,455 | 1,460 | 1,580 | 1,600 |
| 0.58–0.67 | | | | | | |
| 0.68–0.89 | | | | | | |
| 0.90–1.47 | | | | | | |
| 1.48–1.50 | | | | | | |

### HX340LAD

| Steel thickness before galvanizing, mm | Strip width, mm | | | |
|---|---|---|---|---|
| | 900 | 1,320 | 1,420 | 1,510 |
| 0.68–0.89 | | | | |
| 0.90–0.97 | | | | |
| 0.98–1.50 | | | | |

### HX380LAD

| Steel thickness before galvanizing, mm | Strip width, mm | | | | |
|---|---|---|---|---|---|
| | 900 | 1,270 | 1,320 | 1,420 | 1,560 |
| 0.68–0.69 | | | | | |
| 0.70–0.89 | | | | | |
| 0.90–0.97 | | | | | |
| 0.98–1.50 | | | | | |

### HX420LAD

| Steel thickness before galvanizing, mm | Strip width, mm | | |
|---|---|---|---|
| | 900 | 1,270 | 1,300 |
| 0.68–0.98 | | | |
| 0.99–1.50 | | | |