



MATERIAL SPECIFICATION SHEET

GRADE: 4140



Material n°:

No: -

Equivalencia norma - Standard Reference:

ASTM A 29 / A 29 M

Other references:

DIN EN 10083-3

Tipo de acero - Steel type:

Cold Heading grade

Aplicación - Application:

Wire rod for a process of cold heading / cold extrusion, with a high productivity using punch and dies to transform a steel wire rod at room temperature.

This steel grade has a high Chromium. Chromium is a powerful alloying element in steel. It strongly increases the hardenability of steel, and markedly improves the corrosion resistance of alloys in oxidizing media

Composición química (%) - Chemical composition (%):

Element	Min	Max
%C	0,39	0,43
%Mn	0,75	1,00
%Si	0,15	0,30
%P		0,025
%S		0,020
%Cr	0,90	1,10

%Ni		0,10
%Cu		0,10
%Mo	0,15	0,25
%Al	0,020	0,060
%N		0,0100

Característica mecánicas bruto - Mechanical characteristics (As rolled)

Resistencia - Tensile strength (Mpa) $\varnothing < 15$ 1100Mpa max

Estricción - Reduction of Area (%) $\varnothing < 15$ mm 30 min

Resistencia - Tensile strength (Mpa) $\varnothing > 15$ 1050 Mpa max

Estricción - Reduction of Area (%) $\varnothing > 15$ mm 20 min

Característica mecánicas recocido globular - Mechanical characteristics (As annealed)

Resistencia - Tensile strength (Mpa) = 650 max

Estricción - Reduction of Area (%) = 60 min

Tolerancias dimensionales - Dimensional tolerances

According to **EN 10108 Class B**

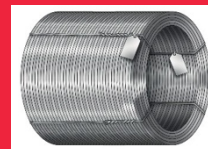
Calidad superficial - Surface quality

Suitable for cold heading. Upsetting test 1/2 with no cracks

According to **ISO 9443:2018 class C**

Material verified by **Eddy Current Control**

Dimensiones y peso del rollo – Coil dimensions and coil weight



3100 kg or 2600 kg aprox. and half coils packed together of 1650 kg or 1300 kg aprox. Each coil tied minimum with four strips

Stelmor line (rod sizes from 5.5 up to 24.0 mm)

Coil weight (kg) aprox.	Coil length (mm) aprox.	Inner diameter (mm) aprox.	Outer diameter (mm) aprox.
2600	1800	800	1250
3100	2000	800	1250

Note: when cutting the coil ties, the length can be increased significantly.

Stelmor line: Half coils

Coil weight (kg) aprox.	Coil length (mm) aprox.	Inner diameter (mm) aprox.	Outer diameter (mm) aprox.
1300	900	800	1250
1550	1000	80	1250

Note: half coils are delivered in bundles of two coils packed together.

Hot coiling line (rod sizes from 25.0 up to 52.0 mm)

Coil weight (kg) aprox.	Coil length (mm) aprox.	Inner diameter (mm) aprox.	Outer diameter (mm) aprox.
2600	1700	880	1300
3100	1800	880	1300

Note: when cutting the coil ties, the length should not have a significant increase. Other coil weights could be made, if customer needs.

