

Ymagine[®]

Product information



Ymagine is the brand name for a range of high quality pickled and oiled steel products that are manufactured on state-of-the-art equipment at the Direct Sheet Plant and high-speed pickling line of Corus Strip Products in IJmuiden.

Ymagine is a completely new type of product that is different from traditional hot and cold rolled materials. The unique properties of Ymagine, including narrow tolerances and excellent workability make the product comparable to cold rolled material. Ymagine can appeal to your imagination and offer designers, engineers and production managers a number of new possibilities.

Benefits

Ymagine combines consistency, flexibility and maximum yields in one world-class product. You can rely on:

- Trouble-free processing:
 - Narrow geometrical tolerances, regardless of strength levels
 - Homogeneous mechanical properties
 - Consistent chemical composition per grade
 - Low level of residual elements
 - Low level of inclusions
- Less handling, less obsolete stock and decreased production time:
 - Flexible coil weights that are free of welds
 - Unlimited potential for thickness:width ratios
- Better responsiveness to market demand as a result of shorter lead times than for traditional cold rolled material.
- You can offer weight reduction and cost savings to your customers thanks to the use of high-strength steel with yield levels up to 500 MPa.

Applications

Ymagine is mainly suitable for thin gauge drawing and HSLA applications. Examples of suitable applications are:

- Building & construction
- Structural automotive components
- Radiators
- Drums
- Racking
- Lighting columns
- Automotive seating and safety systems
- Furniture

Future Developments

Through the years Ymagine is developed towards thinner gauges. These developments will lead to the availability of the majority of the Ymagine HSLA qualities in gauges from 1 to 3mm and width 1000 to 1530 mm.

To meet the growing demand for weight reduction solutions and improved vehicle safety Ymagine H500 has been added to the series. This quality delivers the highest strength in the Ymagine family in addition to excellent formability and narrow thickness tolerances.

Tolerances shall be further improved to narrower values. Shorter lead times for Ymagine material are in development and also in the area of control of coil weights, further improvements shall be realised.

Services

- Our Account Managers and/or Support Engineers can help you on-site with developing your market.
- With our up-to-date Customer Information Network you can follow the progress of orders.
- Technical data sheets and all new developments are available on the Web: www.productrange.nl.
- Our customer-oriented workforce guarantees a high level of service, regardless of the operational challenge.
- All inquiries about Ymagine applications go direct to the right specialist via your dedicated contact person.
- For automotive applications, our Product Application Centre provides product design and application support, on and off-site.
- For construction applications, our Corus Construction Centre offers full technical support, on and off-site.





CORUS

Corus Strip Products IJmuiden

Ymagine[®] D1

Product information

YMagine[®]

Mechanical Properties

The repeatability of the mechanical properties of Ymagine meet or beat those of the European standards.

Ymagine® D1

(Transverse to the rolling direction)

Property	ReH / Rp (MPa)	Rm (MPa)	A80 (%)
Typical value	300	390	28
Guaranteed values	210 - 360	335 - 425	≥ 23

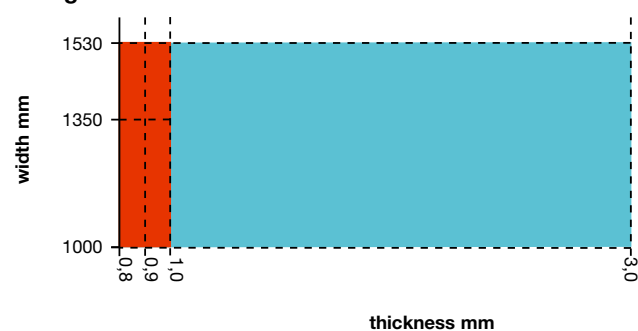
Relationship with standards EN 10111: DD11

(Transverse to the rolling direction)

Property	ReH / Rp (MPa)	Rm (MPa)	A80 (%)
Hot rolled flat products	170 - 360	≤ 440	≥ 23

Dimensions

Ymagine D1



■ Future trials ■ Current trials ■ Available

Tolerances Ymagine D1

By default Ymagine products have an excellent performance on thickness tolerances any place.

Thickness tolerances Ymagine® D1

Class	Gauge	Tolerances
1	1,0 – ≤ 2,0mm	+/- 0,05mm
2	> 2,0 – < 2,5mm	+/- 0,06mm*
3	2,5 – ≤ 3,0mm	+/- 0,07mm**

In some instances, the material will be supplied with a tolerance of:

* -0.06/+ 0.15 mm, only on the head and the tail and to a maximum of 20 metres from the start of the coil

** -0.07/+ 0.17 mm, only on the head and the tail and to a maximum of 20 metres from the start of the coil

Width tolerances Ymagine D1

The tolerances for width comply with the following standard: EN10131 (1991). Width tolerances closer than special tolerances are possible after consultation.

Tailored coil weights

Coil weights, free of welds, can be specified freely between 12 and 21 kg/mm. An order with a width of 1500 mm can be specified with a coil weight between 18 and 32 tons.

Chemical Composition

Ymagine® D1

(0.001% by weight)

Element	C	Mn	P	S
Typical	45	210	10	5
Guaranteed (max)	65	300	25	15

Application properties

Weldability

Ymagine can be welded with all conventional welding processes. Due to the low content of residual elements, the weldability of the material is good, making it comparable with that of hot rolled and cold rolled material of the same chemical composition.

Surface quality

The surface quality of Ymagine is more than adequate for hot rolled and cold rolled applications that are not surface-critical. The roughness is comparable to hotrolled pickled and oiled material i.e. 1 – 3 µm Ra (CO = 2,5 mm).

Coatability

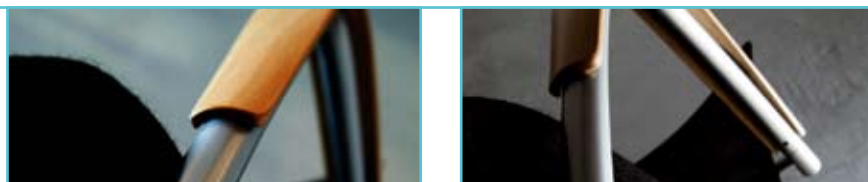
Ymagine material has been tested for wet paint as well as powder coatings. Adhesion test results were all positive for flat sample material.

Laser cutting

Thanks to the guaranteed low Si content many users have successfully applied Ymagine for laser cutting processing. A lasergrade guarantee is also available.

Galvanizing

Ymagine can be hot dip galvanized without any restrictions.



Corus Strip Products IJmuiden

Ymagine[®] S1

Product information

Mechanical Properties

The repeatability of the mechanical properties of Ymagine meet or beat those of the European standards.

Ymagine® S1

(Transverse to the rolling direction)

Property	ReH / Rp (MPa)	Rm (MPa)	A80 (%)
Typical value	325	400	27
Guaranteed values	235 - 360	360 - 510	≥ 19

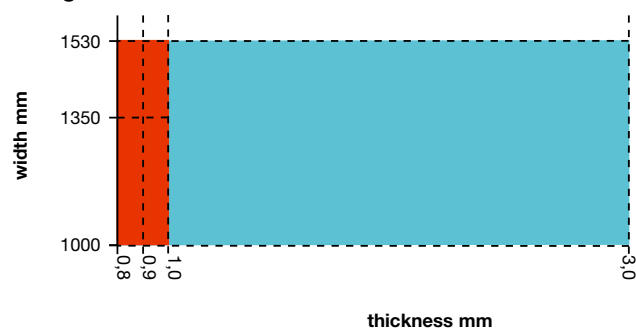
Relationship with standards EN 10025: S235J0

(Transverse to the rolling direction)

Property	ReH / Rp (MPa)	Rm (MPa)	A80 (%)
Hot rolled flat products	≥ 235	360 - 510	≥ 17

Dimensions

Ymagine S1



■ Future trials ■ Current trials ■ Available

Tolerances Ymagine S1

By default Ymagine products have an excellent performance on thickness tolerances any place.

Thickness tolerances Ymagine® S1

Class	Gauge	Tolerances
1	1,0 – ≤ 2,0mm	+/- 0,05mm
2	> 2,0 – < 2,5mm	+/- 0,06mm*
3	2,5 – ≤ 3,0mm	+/- 0,07mm**

In some instances, the material will be supplied with a tolerance of:

* -0.06/+ 0.15 mm, only on the head and the tail and to a maximum of 20 metres from the start of the coil

** -0.07/+ 0.17 mm, only on the head and the tail and to a maximum of 20 metres from the start of the coil

Width tolerances Ymagine S1

The tolerances for width comply with the following standard: EN10131 (1991). Width tolerances closer than special tolerances are possible after consultation.

Tailored coil weights

Coil weights, free of welds, can be specified freely between 12 and 21 kg/mm. An order with a width of 1500 mm can be specified with a coil weight between 18 and 32 tons.

Chemical Composition

Ymagine® S1

(0.001% by weight)

Element	C	Mn	P	S
Typical	45	210	10	5
Guaranteed (max)	65	300	25	15

Application properties

Weldability

Ymagine can be welded with all conventional welding processes. Due to the low content of residual elements, the weldability of the material is good, making it comparable with that of hot rolled and cold rolled material of the same chemical composition.

Surface quality

The surface quality of Ymagine is more than adequate for hot rolled and cold rolled applications that are not surface-critical. The roughness is comparable to hotrolled pickled and oiled material i.e. 1 – 3 µm Ra (CO = 2,5 mm).

Coatability

Ymagine material has been tested for wet paint as well as powder coatings. Adhesion test results were all positive for flat sample material.

Laser cutting

Thanks to the guaranteed low Si content many users have successfully applied Ymagine for laser cutting processing. A lasergrade guarantee is also available.

Galvanizing

Ymagine can be hot dip galvanized without any restrictions.



Corus Strip Products IJmuiden

Ymagine[®] H240

Product information

Mechanical Properties

The repeatability of the mechanical properties of Ymagine meet or beat those of the European standards.

Ymagine® H240

(Parallel to the rolling direction)

Property	ReH / Rp (MPa)	Rm (MPa)	A80 (%)
Typical value	290	390	28
Guaranteed values	240 - 310	340 - 420	≥ 27

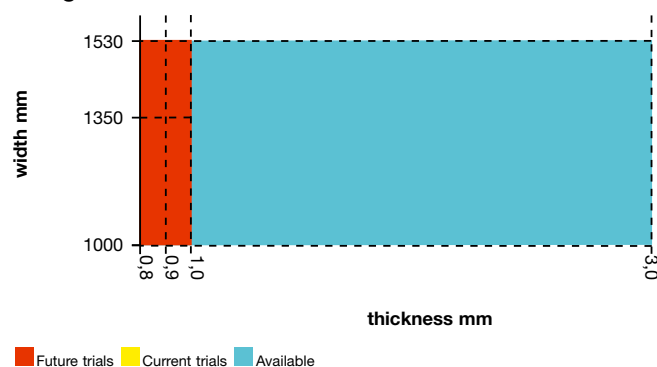
Relationship with standards EN 10268: H240LA

(Parallel to the rolling direction)

Property	ReH / Rp (MPa)	Rm (MPa)	A80 (%)
Cold rolled flat products	240 - 310	340 - 420	≥ 27

Dimensions

Ymagine H240



Tolerances Ymagine H240

By default Ymagine products have an excellent performance on thickness tolerances any place.

Thickness tolerances Ymagine® H240

Class	Gauge	Tolerances
1	1,0 – ≤ 2,0mm	+/- 0,05mm
2	> 2,0 – < 2,5mm	+/- 0,06mm*
3	2,5 – ≤ 3,0mm	+/- 0,07mm**

In some instances, the material will be supplied with a tolerance of:

* -0.06/+ 0.15 mm, only on the head and the tail and to a maximum of 20 metres from the start of the coil

** -0.07/+ 0.17 mm, only on the head and the tail and to a maximum of 20 metres from the start of the coil

Width tolerances Ymagine H240

The tolerances for width comply with the following standard: EN10131 (1991). Width tolerances closer than special tolerances are possible after consultation.

Tailored coil weights

Coil weights, free of welds, can be specified freely between 12 and 21 kg/mm. An order with a width of 1500 mm can be specified with a coil weight between 18 and 32 tons.

Chemical Composition

Ymagine® H240

(0.001% by weight)

Element	C	Mn	P	S
Typical	45	210	10	5
Guaranteed (max)	65	300	25	15

Application properties

Weldability

Ymagine can be welded with all conventional welding processes. Due to the low content of residual elements, the weldability of the material is good, making it comparable with that of hot rolled and cold rolled material of the same chemical composition.

Surface quality

The surface quality of Ymagine is more than adequate for hot rolled and cold rolled applications that are not surface-critical. The roughness is comparable to hotrolled pickled and oiled material i.e. 1 – 3 µm Ra (CO = 2,5 mm).

Coatability

Ymagine material has been tested for wet paint as well as powder coatings. Adhesion test results were all positive for flat sample material.

Laser cutting

Thanks to the guaranteed low Si content many users have successfully applied Ymagine for laser cutting processing. A lasergrade guarantee is also available.

Galvanizing

Ymagine can be hot dip galvanized without any restrictions.





CORUS

Corus Strip Products IJmuiden

Ymagine[®] H320

Product information

YMagine[®]

Mechanical Properties

The repeatability of the mechanical properties of Ymagine meet or beat those of the European standards.

Ymagine® H320

(Parallel to the rolling direction)

Property	ReH / Rp (MPa)	Rm (MPa)	A80 (%)
Typical value	370	445	28
Guaranteed values	320 - 410	400 - 510	≥ 22

Relationship with standards EN 10268: H320LA

(Parallel to the rolling direction)

Property	ReH / Rp (MPa)	Rm (MPa)	A80 (%)
Cold rolled flat products	320 - 410	≥ 400	≥ 22

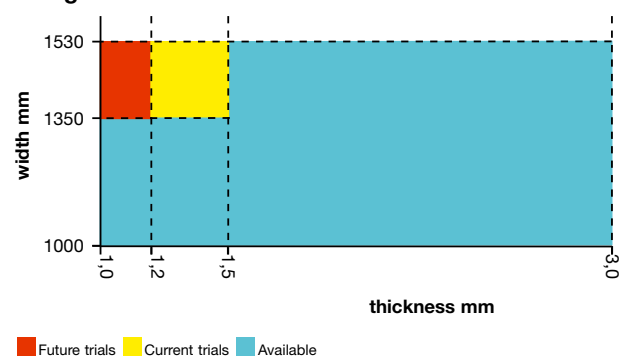
Relationship with standards EN 10149-2: S315MC

(Parallel to the rolling direction)

Property	ReH / Rp (MPa)	Rm (MPa)	A80 (%)
Hot rolled flat products	≥ 315	390 - 510	≥ 20

Dimensions

Ymagine H320



Tolerances Ymagine H320

By default Ymagine products have an excellent performance on thickness tolerances any place.

Thickness tolerances Ymagine® H320

Class	Gauge	Tolerances
1	1,0 – ≤ 2,0mm	+/- 0,05mm
2	> 2,0 – < 2,5mm	+/- 0,06mm*
3	2,5 – ≤ 3,0mm	+/- 0,07mm**

In some instances, the material will be supplied with a tolerance of:

* -0.06/+ 0.15 mm, only on the head and the tail and to a maximum of 20 metres from the start of the coil

** -0.07/+ 0.17 mm, only on the head and the tail and to a maximum of 20 metres from the start of the coil

Width tolerances Ymagine H320

The tolerances for width comply with the following standard: EN10131 (1991). Width tolerances closer than special tolerances are possible after consultation.

Tailored coil weights

Coil weights, free of welds, can be specified freely between 12 and 21 kg/mm. An order with a width of 1500 mm can be specified with a coil weight between 18 and 32 tons.

Chemical Composition

Ymagine® H320

(0.001% by weight)

Element	C	Mn	P	S	Nb
Typical	45	250	7	4	10
Guaranteed (max)	65	325	25	15	15

Application properties

Weldability

Ymagine can be welded with all conventional welding processes. Due to the low content of residual elements, the weldability of the material is good, making it comparable with that of hot rolled and cold rolled material of the same chemical composition.

Surface quality

The surface quality of Ymagine is more than adequate for hot rolled and cold rolled applications that are not surface-critical. The roughness is comparable to hotrolled pickled and oiled material i.e. 1 – 3 µm Ra (CO = 2,5 mm).

Coatability

Ymagine material has been tested for wet paint as well as powder coatings. Adhesion test results were all positive for flat sample material.

Laser cutting

Thanks to the guaranteed low Si content many users have successfully applied Ymagine for laser cutting processing. A lasergrade guarantee is also available.

Galvanizing

Ymagine can be hot dip galvanized without any restrictions.



Corus Strip Products IJmuiden

Ymagine[®] H360

Product information

Mechanical Properties

The repeatability of the mechanical properties of Ymagine meet or beat those of the European standards.

Ymagine® H360

(Parallel to the rolling direction)

Property	ReH / Rp (MPa)	Rm (MPa)	A80 (%)
Typical value	390	460	26
Guaranteed values	360 - 460	430 - 550	≥ 20

Relationship with standards EN 10268: H360LA

(Parallel to the rolling direction)

Property	ReH / Rp (MPa)	Rm (MPa)	A80 (%)
Cold rolled flat products	360 - 460	≥ 430	≥ 20

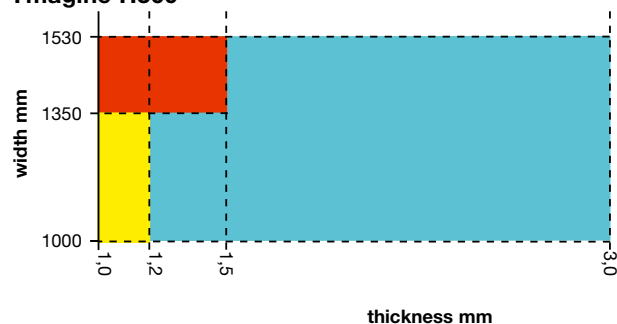
Relationship with standards EN 10149-2: S355MC

(Parallel to the rolling direction)

Property	ReH / Rp (MPa)	Rm (MPa)	A80 (%)
Hot rolled flat products	≥ 355	430 - 550	≥ 19

Dimensions

Ymagine H360



■ Future trials ■ Current trials ■ Available

Tolerances Ymagine H360

By default Ymagine products have an excellent performance on thickness tolerances any place.

Thickness tolerances Ymagine® H360

Class	Gauge	Tolerances
1	1,0 – ≤ 2,0mm	+/- 0,05mm
2	> 2,0 – < 2,5mm	+/- 0,06mm*
3	2,5 – ≤ 3,0mm	+/- 0,07mm**

In some instances, the material will be supplied with a tolerance of:

* -0.06/+ 0.15 mm, only on the head and the tail and to a maximum of 20 metres from the start of the coil

** -0.07/+ 0.17 mm, only on the head and the tail and to a maximum of 20 metres from the start of the coil

Width tolerances Ymagine H360

The tolerances for width comply with the following standard: EN10131 (1991). Width tolerances closer than special tolerances are possible after consultation.

Tailored coil weights

Coil weights, free of welds, can be specified freely between 12 and 21 kg/mm. An order with a width of 1500 mm can be specified with a coil weight between 18 and 32 tons.

Chemical Composition

Ymagine® H360

(0.001% by weight)

Element	C	Mn	P	S	Nb
Typical	45	500	10	5	13
Guaranteed (max)	65	600	25	15	18

Application properties

Weldability

Ymagine can be welded with all conventional welding processes. Due to the low content of residual elements, the weldability of the material is good, making it comparable with that of hot rolled and cold rolled material of the same chemical composition.

Surface quality

The surface quality of Ymagine is more than adequate for hot rolled and cold rolled applications that are not surface-critical. The roughness is comparable to hotrolled pickled and oiled material i.e. 1 – 3 µm Ra (CO = 2,5 mm).

Coatability

Ymagine material has been tested for wet paint as well as powder coatings. Adhesion test results were all positive for flat sample material.

Laser cutting

Thanks to the guaranteed low Si content many users have successfully applied Ymagine for laser cutting processing. A lasergrade guarantee is also available.

Galvanizing

Ymagine can be hot dip galvanized without any restrictions.



Corus Strip Products IJmuiden

Ymagine[®] H420

Product information

Mechanical Properties

The repeatability of the mechanical properties of Ymagine meet or beat those of the European standards.

Ymagine® H420

(Parallel to the rolling direction)

Property	ReH / Rp (MPa)	Rm (MPa)	A80 (%)
Typical value	465	520	23
Guaranteed values	420 - 500	480 - 620	≥ 18

Relationship with standards EN 10268: H400LA

(Parallel to the rolling direction)

Property	ReH / Rp (MPa)	Rm (MPa)	A80 (%)
Cold rolled flat products	400 - 500	≥ 460	≥ 18

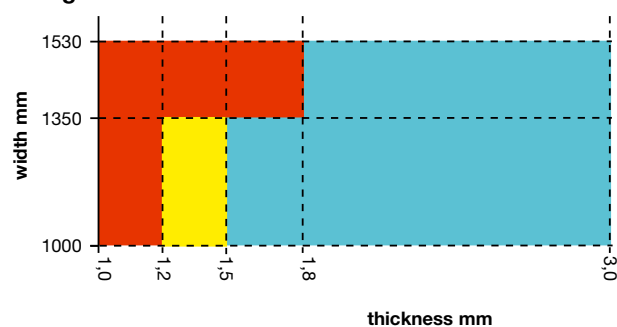
Relationship with standards EN 10149-2: S420MC

(Parallel to the rolling direction)

Property	ReH / Rp (MPa)	Rm (MPa)	A80 (%)
Hot rolled flat products	≥ 420	480 - 620	≥ 16

Dimensions

Ymagine H420



■ Future trials ■ Current trials ■ Available

Tolerances Ymagine H420

By default Ymagine products have an excellent performance on thickness tolerances any place.

Thickness tolerances Ymagine® H420

Class	Gauge	Tolerances
1	1,0 – ≤ 2,0mm	+/- 0,05mm
2	> 2,0 – < 2,5mm	+/- 0,06mm*
3	2,5 – ≤ 3,0mm	+/- 0,07mm**

In some instances, the material will be supplied with a tolerance of:

* -0.06/+ 0.15 mm, only on the head and the tail and to a maximum of 20 metres from the start of the coil

** -0.07/+ 0.17 mm, only on the head and the tail and to a maximum of 20 metres from the start of the coil

Width tolerances Ymagine H420

The tolerances for width comply with the following standard: EN10131 (1991). Width tolerances closer than special tolerances are possible after consultation.

Tailored coil weights

Coil weights, free of welds, can be specified freely between 12 and 21 kg/mm. An order with a width of 1500 mm can be specified with a coil weight between 18 and 32 tons.

Chemical Composition

Ymagine® H420

(0.001% by weight)

Element	C	Mn	P	S	Nb	V
Typical	45	785	10	5	15	40
Guaranteed (max)	75	1000	25	15	20	60

Application properties

Weldability

Ymagine can be welded with all conventional welding processes. Due to the low content of residual elements, the weldability of the material is good, making it comparable with that of hot rolled and cold rolled material of the same chemical composition.

Surface quality

The surface quality of Ymagine is more than adequate for hot rolled and cold rolled applications that are not surface-critical. The roughness is comparable to hotrolled pickled and oiled material i.e. 1 – 3 µm Ra (CO = 2,5 mm).

Coatability

Ymagine material has been tested for wet paint as well as powder coatings. Adhesion test results were all positive for flat sample material.

Laser cutting

Thanks to the guaranteed low Si content many users have successfully applied Ymagine for laser cutting processing. A lasergrade guarantee is also available.

Galvanizing

Ymagine can be hot dip galvanized without any restrictions.



Corus Strip Products IJmuiden

Ymagine[®] H500

Product information

Mechanical Properties

The repeatability of the mechanical properties of Ymagine meet or beat those of the European standards.

Ymagine® H500

(Parallel to the rolling direction)

Property	ReH / Rp (MPa)	Rm (MPa)	A80 (%)
Typical value	520	570	21
Guaranteed values	500 – 600	560 – 700	≥ 14

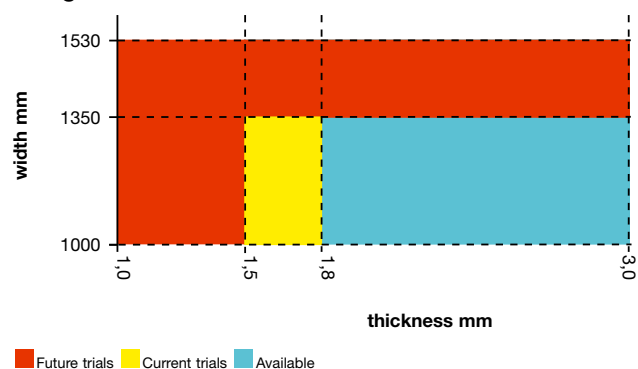
Relationship with standards EN 10149-2: S500MC

(Parallel to the rolling direction)

Property	ReH / Rp (MPa)	Rm (MPa)	A80 (%)
Hot rolled flat products	> 500	550 – 700	> 12

Dimensions

Ymagine H500



Tolerances Ymagine H500

By default Ymagine products have an excellent performance on thickness tolerances any place.

Thickness tolerances Ymagine® H500

Class	Gauge	Tolerances
1	1,0 – ≤ 2,0mm	+/- 0,05mm
2	> 2,0 – < 2,5mm	+/- 0,06mm*
3	2,5 – ≤ 3,0mm	+/- 0,07mm**

In some instances, the material will be supplied with a tolerance of:

* -0.06/+ 0.15 mm, only on the head and the tail and to a maximum of 20 metres from the start of the coil

** -0.07/+ 0.17 mm, only on the head and the tail and to a maximum of 20 metres from the start of the coil

Width tolerances Ymagine H500

The tolerances for width comply with the following standard: EN10131 (1991). Width tolerances closer than special tolerances are possible after consultation.

Tailored coil weights

Coil weights, free of welds, can be specified freely between 12 and 21 kg/mm. An order with a width of 1500 mm can be specified with a coil weight between 18 and 32 tons.

Chemical Composition

Ymagine® H500

(0.001% by weight)

Element	C	Mn	P	S	Nb	V
Typical	45	800	10	5	13	130
Guaranteed (max)	75	1000	20	10	20	150

Application properties

Weldability

Ymagine can be welded with all conventional welding processes. Due to the low content of residual elements, the weldability of the material is good, making it comparable with that of hot rolled and cold rolled material of the same chemical composition.

Surface quality

The surface quality of Ymagine is more than adequate for hot rolled and cold rolled applications that are not surface-critical. The roughness is comparable to hotrolled pickled and oiled material i.e. 1 – 3 µm Ra (CO = 2,5 mm).

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