

WireSolutions

Product Catalogue / Trellising Crapal



Transforming Tomorrow

ArcelorMittal

With an industrial presence in 18 countries, spanning 5 continents, ArcelorMittal is the largest steel manufacturing company in the world. We are proud to be leading the market in major global steel sectors, including automotive, construction, household appliances and packaging.

Our technologically advanced research and development resources, combined with our vertically integrated business model and outstanding distribution networks, enable ArcelorMittal to deliver unparalleled innovations and value to its world wide customer base.

WireSolutions

WireSolutions is the wire drawing division of ArcelorMittal, and is one of the world's largest wire drawers.

Operating 7 specialist business lines, WireSolutions delivers new levels of technological expertise and a customer centric approach to the manufacture and supply of the highest quality solutions.

Aside from our substantial presence within the worldwide fencing industry, we also manufacture corrosion resistant solutions for the following markets:

- Steel ropes for mining, hoisting, ropeways and marine
- Steel fibre reinforced concrete solutions
- Industrial wire
- Cold rolled wire
- Cold heading quality wire
- Flat shaped wire
- Nails

Our famous corrosion resistant brands, Crapal®2, and Crapal®Optimum are recognised around the world and we continue to develop and deliver long lasting vineyard solutions, complete with environmentally friendly organic coatings, offering excellent life span guarantees and value for money.

Through our core values of Sustainability, Quality and Leadership, we are committed to operating in a responsible way with respect to the health, safety and wellbeing of our employees, contractors and the communities in which we operate. We are also committed to the sustainable management of the environment and of finite resources.

The manufacturer of choice

We value the investment our customers make in our products and we strive to remain our customers' preferred manufacturer.

Our long experience and thorough knowledge of wire technologies, vineyard products and markets enable us to satisfy the most specialised requirements within tight deadlines.

Our proactive and dedicated sales team ensure a close and efficient relationship is maintained with every customer.

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Crapal®

The best protection

> Life span

The wire lifespan is determined by the lifetime of the coating layer that protects the wire.

> Corrosion

The coating is subject to damages depending on the corrosive potential of the air and on the aggressiveness of the chemicals used for treatments.

Pioneer in the manufacturing of the **heavily galvanised wire Crapo®** and the **zinc/aluminium wire Crapal®** which is today recognised worldwide, WireSolutions has never stopped working on the improvement of corrosion protection by developing the **zinc/aluminium/magnesium wire Crapal®Optimum**.



> The Crapal® coating

Zinc gives an active and sacrificial protection while aluminium provides passive protection in covering zinc and significantly slowing down its sacrificial reaction.

Addition of magnesium stabilises the whole molecular structure and gives the coating an even efficient resistance against corrosion. **Crapal®Optimum** ensures an optimal protection in the most aggressive environments.

> Properties

Increased lifespan

Economy over time

Durable smooth surface

Does not retain corrosive components

Excellent adhesion

No peeling, no flaking when the wire is folded

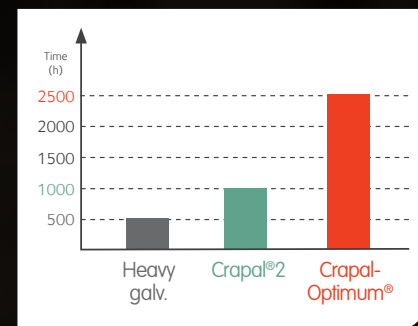
Constant protective layer all around the wire

Only guarantee of an effective protection

Corrosion protection efficiency with the environment in mind

100% recyclable

Salt spray test resistance



WireSolutions continuously works on the improvement of corrosion protection



Vineyard wire Expert

85 years experience in the vineyard trade

WireSolutions is the only vineyard wire producer worldwide with 85 years experience. We introduced our first vineyard wire in the 30's with the famous brand Crapo®. In order to meet winegrowers' needs, we innovated and developed the specific Crapal® process in the mid-80. Today, with our customers, we celebrate 30 years of success story!

This experience and collaboration with our customers give us this unique knowledge to produce the perfect vineyard wire. Something that winegrowers recognise worldwide.



Economical advantages:

When you buy Crapal®

- ▶ More meters per kg of wire

When you install Crapal®

- ▶ Labor cost (less coils used per ha)
- ▶ Less re-tensioning required
- ▶ No breaks if correct use

Savings over time

- ▶ Long life span of Crapal®
- ▶ Even if coating is damaged, Crapal® resists to corrosion much longer than traditional wire



Our expertise in corrosion resistant solutions and our commitment to reduce the environmental footprint of our products led us to further innovate with Crapal®Optimum, designed to last as long as the vine life.



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Crapal® Optimum

› A quality never reached until now!

Product description

- ▶ Zinc/Aluminium/Magnesium coating
- ▶ Long lasting smooth surface
- ▶ High tensile strength and breaking load
- ▶ Reduced elongation
- ▶ More usable metres per coil for the same weight
- ▶ Important savings per hectare thanks to the reliable quality of the wire
- ▶ Eco-friendly product



Characteristics

Packaging

- ▶ Coils of 25 kg delivered in bundles of 500 kg
- ▶ Internal diameter of 600 mm

Specifications

- ▶ Comparison of Crapal® Optimum with EN 10244-2 heavily galvanised wire:



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Arbolu®

› Specially developed for arboriculture

Product description

- ▶ Zinc/Aluminium/Magnesium coating
- ▶ **Stability over time:** the high yield stress limit of Arbolu® avoids retensioning
- ▶ **High mechanical resistance:** Arbolu® supports heavy load and high traction without breakage
- ▶ Long lasting smooth surface
- ▶ Eco-friendly product



Characteristics

Packaging

- ▶ Coils of 25 kg delivered
- ▶ Smooth wire delivered by 20 in bundles of 500 kg; undulated wire delivered by 8 in bundles of 200 kg
- ▶ Internal diameter of 600 mm



Diameter (mm)		Number of ml per coil (approx.)		Resistance (N/mm ²)		Breaking load (kg - approx.)		Elongation (%)	
Heavily galv.	Crapal® Optimum	Heavily galv.	Crapal® Optimum	Heavily galv.	Crapal® Optimum	Heavily galv.	Crapal® Optimum	Heavily galv.	Crapal® Optimum
2.20	1.80	830	1250	400/500	700/900	170	205	20	10
2.40	2.00	700	1000	400/500	700/900	205	250	20	10
2.70	2.20	550	830	400/500	700/900	255	305	20	10
3.00	2.50	450	650	400/500	700/900	315	395	20	10
3.40	2.80	355	515	400/500	700/900	410	495	20	10
3.90	3.15	275	410	400/500	700/900	535	625	20	10
-	3.40	-	355	-	700/900	-	725	-	10

Wire	Diameter (mm)	Number of ml per kg	Number of ml per coil	Resistance (N/mm ²)	Breaking load (kg)	Elongation (%)
Smooth	2.40	28	700	1300/1500	635	6/8
Smooth	2.70	22	550	1300/1500	800	6/8
Smooth	3.00	18	450	1300/1500	990	6/8
Smooth	3.50	13	325	1300/1500	1345	6/8
Smooth	3.90	11	275	1300/1500	1670	6/8
Undulated	2.40	26	640	1300/1500	635	6/8

* on original smooth wire
Undulation length: 30 mm – Undulation height: 5 mm
Max. tensile strength recommended during installation: half the breaking load indicated in this table

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Crapal® Optimum TOP 50

> Proven Crapal® Optimum quality further refined

Product description

- ▶ Zinc/Aluminium/Magnesium coating
- ▶ Long lasting smooth surface
- ▶ High breaking load, low elongation
- ▶ Eco-friendly product

Characteristics

Packaging

- ▶ Coils of 25 kg delivered in bundles of 500 kg
- ▶ Internal diameter of 600 mm

Specifications

- ▶ Comparison of Crapal® Optimum with EN 10244-2 heavily galvanised wire:



CRAPAL OPTIMUM



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Crapal® Optimum TOP 50 PLUS

> For Viticulture and arboriculture

Product description

- ▶ Zinc/Aluminium/Magnesium coating
- ▶ Long lasting smooth surface
- ▶ High breaking load
- ▶ High ductility allowing easy handling
- ▶ Eco-friendly product

Characteristics

Packaging

- ▶ Coils of 25 kg delivered in bundles of 500 kg
- ▶ Internal diameter of 600 mm

NEW !



CRAPAL OPTIMUM



Diameter (mm)		Number of ml per coil (approx.)		Resistance (N/mm ²)		Breaking load (kg - approx.)		Elongation (%)	
Heavily galv.	Crapal®Opt. TOP 50	Heavily galv.	Crapal®Opt. TOP 50	Heavily galv.	Crapal®Opt. TOP 50	Heavily galv.	Crapal®Opt. TOP 50	Heavily galv.	Crapal®Opt. TOP 50
2.70	1.60	550	1575	400/500	1300/1500	255	260	20	3
3.00	1.80	450	1250	400/500	1300/1500	345	330	20	3
3.10	2.00	420	1000	400/500	1300/1500	340	380	20	3
3.40	2.20	355	825	400/500	1300/1500	410	460	20	3
3.90	2.50	275	650	400/500	1300/1500	535	590	20	3
4.50	2.80	210	525	400/500	1300/1500	715	740	20	3
-	3.15	-	400	-	1300/1500	-	935	-	3

Diameter (mm)	Number of ml per coil (approx.)	Resistance (N/mm ²)	Breaking load (kg - approx.)	Elongation (%)
1.80	1250	1000/1300	290	5
2.00	1000	1000/1300	360	5
2.20	830	1000/1300	430	5
2.50	650	1000/1300	540	5
2.80	525	1000/1300	680	5
3.15	410	1000/1300	850	5

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Crapal® Optimum TOP 100 V

› The new generation of vineyard wire

Product description

- ▶ Zinc/Aluminium/Magnesium coating
- ▶ Long lasting smooth surface
- ▶ High breaking load, low elongation
- ▶ Eco-friendly product

Characteristics

Packaging

- ▶ Coils of 25 kg delivered in bundles of 500 kg
- ▶ Internal diameter of 600 mm

Specifications

- ▶ Comparison of Crapal®Optimum with EN 10244-2 heavily galvanised wire:



CRAPAL OPTIMUM



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Crapal® Optimum TOP 100

› The new generation of wire for your anti-hail installation

Product description

- ▶ Zinc/Aluminium/Magnesium coating
- ▶ Long lasting smooth surface
- ▶ High breaking load
- ▶ High ductility allowing easy handling
- ▶ Eco-friendly product

Characteristics

Packaging

- ▶ Coils of 25 kg delivered in bundles of 500 kg
- ▶ Internal diameter of 600 mm



CRAPAL OPTIMUM



Diameter (mm)	Nber of ml per kg (approx.)	Resistance (N/mm ²)	Breaking load (kg - approx.)	Packaging (kg/roll)	Nber of ml per roll (approx.)
1.40	83	1700-1900	275	25	2075
1.60	63	1700-1900	360	25	1575
1.80	50	1700-1900	460	25	1250
2.00	40	1700-1900	575	25	1000
2.20	33	1700-1900	685	25	825
2.50	26	1700-1900	880	25	650
2.80	21	1700-1900	1110	25	525

Comparative table

Applications	Galvanised wire Ø (mm)	Crapal®Optimum Ø (mm)	TOP 50 Ø (mm)	Filo Inox AISI 304 Ø (mm)	TOP 100-V Ø (mm)
Vineyard	2.70	2.20	1.80	1.40	1.40
Vineyard	3.00	2.50	2.00	1.60	1.60
Vineyard/Orchard	3.40	2.80	2.20	1.80	1.80
Vineyard/Orchard	3.90	3.10	2.50	2.00	2.00
Vineyard/Antihail	4.40	3.40	2.80	2.20	2.20
Vineyard/Antihail	4.90	4.00	3.10	2.50	2.50

Diameter (mm)	Nber of ml per kg (approx.)	Nber of ml per coil (approx.)	Resistance (N/mm ²)	Breaking load (kg - approx.)	Packaging (kg/roll)
2.80	21	1050/2100	1700-1900	1110	50 or 100
3.15	16	800/1600	1700-1900	1400	50 or 100
3.40	14	700/1400	1700-1900	1630	50 or 100
3.80	11	550/1100	1700-1900	2040	50 or 100

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Crapal® Color

› The wire that colours your projects!

Product description

- ▶ Crapal®Optimum quality + pigmented resin
- ▶ Excellent adhesion of the coating
- ▶ High resistance to UV-rays
- ▶ Classified and registered coating according to European standards
- ▶ Eco-friendly product

Characteristics

Packaging

- ▶ Traverse wound coils or wooden reels
- ▶ Specific characteristics can be offered; please contact us

Specifications

- ▶ Comparison of Crapal®Optimum with EN 10244-2 heavily galvanised wire:



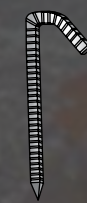
Diameter (mm)	Length (m)	Weight (kg)	Resistance (kg/mm ²)	Breaking load (kg)	Elongation (%)	Standard colour
2.10	975	25	40/60	160	20	Yellow
2.10	975	25	70/90	250	10	Yellow

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Accessories

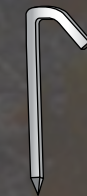
› A Complete range



Crapal® Hook for pine and wood

- Square section wire; lateral engagement
- Bucket of 5 kg

- ▶ 3.4 x 55 mm 800 pieces/bucket (approx.)
- ▶ 3.4 x 60 mm 750 pieces/bucket (approx.)
- ▶ 3.4 x 65 mm 700 pieces/bucket (approx.)



Crapal® Hook for hard wood (e.g. acacia)

- Smooth wire; square section
- Bucket of 5 kg

- ▶ 3.4 x 40 mm 1,100 pieces/bucket (approx.)



Vine fastener

- Traditional galvanised wire
- Bucket of 5 kg

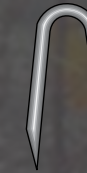
- ▶ Ø 2.4 mm 2,200 pieces/bucket (approx.)



Crapal® Nail for small chain

- Square section wire
- Bundle of 5 kg

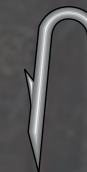
- ▶ 4.2 x 55 mm 650 pieces/bundle (approx.)



Crapal® Smooth staple

- Round wire; double bevel cut
- Bucket of 5 kg

- ▶ 2.7 x 27 mm 2,000 pieces/bucket (approx.)
- ▶ 3.0 x 30 mm 1,550 pieces/bucket (approx.)
- ▶ 3.5 x 35 mm 1,000 pieces/bucket (approx.)
- ▶ 4.5 x 40 mm 550 pieces/bucket (approx.)



Crapal® Barbed staple

- Round wire; double bevel cut
- Bucket of 5 kg

- ▶ 3.0 x 30 mm 1,550 pieces/bucket (approx.)
- ▶ 3.5 x 35 mm 1,000 pieces/bucket (approx.)
- ▶ 4.0 x 40 mm 650 pieces/bucket (approx.)
- ▶ 4.0 x 50 mm 500 pieces/bucket (approx.)



Crapal® Small chain

- 7 links
- Bucket of 4.8 kg

- ▶ Ø 3.1 mm 100 pieces/bucket (approx.)

Support for young vine

> Smooth, undulated or corugated surface

Product description

- ▶ Zinc/Aluminium/Magnesium coating
- ▶ Long lasting smooth surface
- ▶ High breaking load, low elongation
- ▶ Eco-friendly product

Characteristics

Packaging

- ▶ Coils of 25 kg delivered in bundles of 500 kg
- ▶ Internal diameter of 600 mm

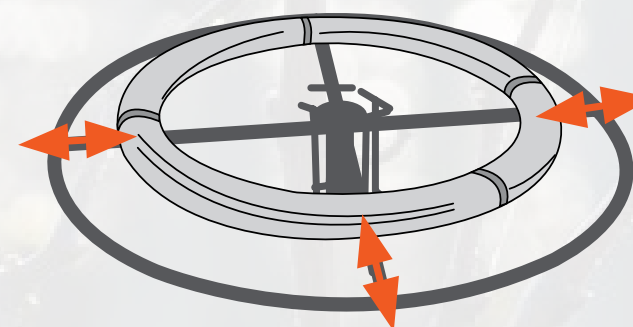
Specifications

- ▶ Comparison of Crapal®Optimum with EN 10244-2 heavily galvanised wire:

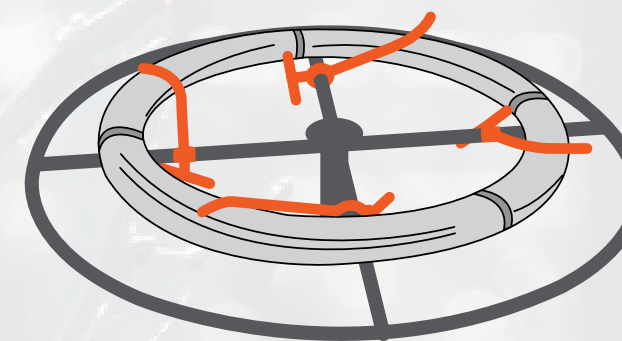


Unwinding device

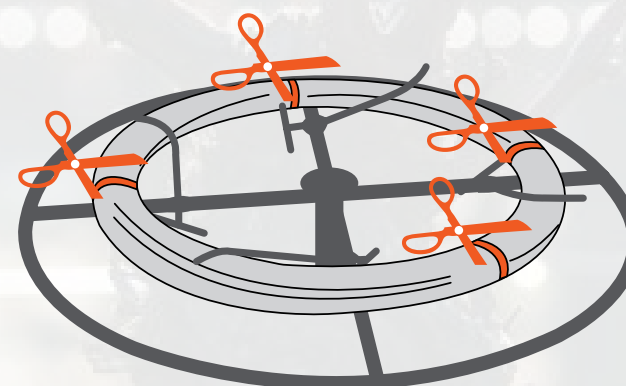
> How to unwind your vineyard wire properly?



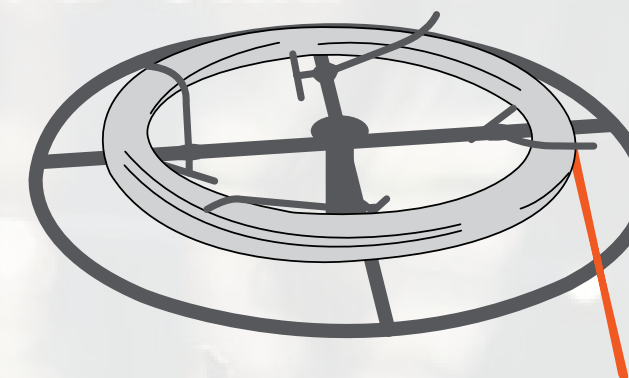
1. Place the coil in the middle of the unwinding device



2. Fix the brackets in unwinding direction



3. Cut the straps once the coil is well fixed



4. Smoothly unwind your vineyard wire

Crapal®2 Smooth support

- ▶ Ø 5.5 mm (high resistance)
- ▶ Length (mm): 1100, 1200, 1400, 1500
- ▶ Bundles of 100 units packed in 10's on blocks

▶ Ø 7.0 mm

- ▶ Length (mm): 1200, 1300, 1500
- ▶ Bundles of 50 units packed in 10's on blocks

▶ Ø 8.0 mm

- ▶ Length (mm): 1000, 1200
- ▶ Bundles of 50 units packed in 10's on blocks.

Crapal®2 Undulated support

- ▶ Ø 6.0 mm
- ▶ Length (mm): 1200, 1500
- ▶ Bundles of 100 units packed in 10's on blocks

Crapal®2 Corugated support

- ▶ Ø 6.0 mm
- ▶ Length (mm): 1200, 1300, 1400, 1500
- ▶ Bundles of 100 units packed in 10's on blocks

▶ Ø 7.0 mm

- ▶ Length (mm): 1200, 1300, 1400, 1500
- ▶ Bundles of 50 units packed in 10's on blocks

▶ Ø 8.0 mm

- ▶ Length (mm): 1400, 1500
- ▶ Bundles of 50 units packed in 10's on blocks

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