

Quard

Your partner. Full resistance.

Quend

Your partner. Full strength.

WEAR RESISTANT STEEL

HIGH YIELD STRENGTH STEEL



Quard Quend

QUARD is a premium **wear resistant plate** specifically engineered for applications demanding exceptional hardness and resistance. Its durability is ideal for machines and equipment operating under tough conditions, ensuring they withstand the harshest environments and deliver reliable performance.

400 450 PRO 500 550



QUEND is a superior **high yield strength steel** ensuring reliable and durable performance for applications such as cranes, trucks or attachments. Its high toughness makes it perfect manufacturing lighter and stronger equipment.

700 900 960 1100 1300



Forged to perfection in our Quenching and Tempering line, developed specifically to bring them into the world, QUARD and QUEND are complementary in strength and versatility. Together, they offer a comprehensive range of solutions for the heavy industries, meeting a wide spectrum of needs with precision and reliability.

WEAR RESISTANT STEELS AND HIGH YIELD STRENGTH STEELS



Trust QUARD for all the applications that need to offer extended lifetime.



Rely on QUEND when you need to use lightweighted equipment made to lift or withstand heavy loads.

INFINITY USE OF QUARD AND QUEND



Quard Quend



Quard Quend



Quend



Quard Quend



Quard Quend



Quard Quend

MINING

- Buckets (front loader, excavator, shovel)
- Bulldozer blades
- Dump truck bodies
- Mining tipper bodies
- Loaders in underground mining
- Measuring bins and skips
- Buffer bins
- Chute liners
- Dump pockets
- Transfer chutes
- Hoppers
- Feeders
- Crushers (jaw, hammers)
- Screeners (grizzly bars, final decks)
- Conveyor systems

YELLOW GOODS

- Excavator buckets
- Loader buckets
- Dump truck bodies
- Bulldozer blades
- Grader blades
- Concrete mixer blades
- Skid steer attachments
- Compactor feet
- Snow plow blades
- Grader overlays
- Backhoe components

LIFTING

- Mobile crane booms
- Crane chassis
- Crane outriggers
- Chassis structures
- Outrigger beams
- Forklift arms
- Container stacker booms
- Hook blocks
- Counterweight structures
- Aerial platform structures

TRANSPORT

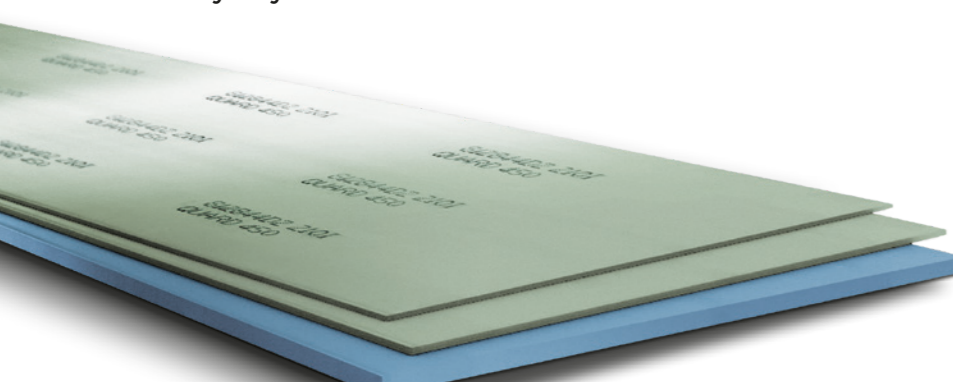
- Trailer bed flooring
- Side walls
- Tailgates
- Dump bodies
- Chassis components
- Support beams
- Tipping hydraulics enclosures
- Container locks
- Floor cross members
- Undercarriage protection
- Wheel arch sections
- Loading ramps
- Door frames
- Liftgate

AGGREGATES

- Transition chutes
- Chute liners
- Hopper liners
- Crusher liners
- Pulverizer liners
- Grinding tables
- Mixer blades
- Bucket elevators
- Screw conveyors
- Separator blades
- Cyclone separators

DEMOLITION & RECYCLING

- Grapple jaws
- Shear blades
- Shredder blades
- Sorting grapples
- Demolition claws
- Crusher liners
- Scrap shears
- Waste compactor
- Chute liners



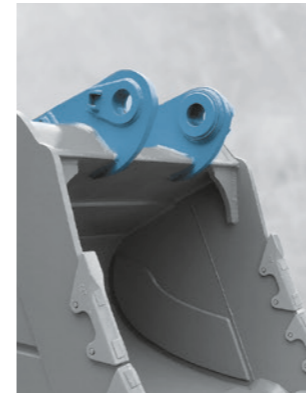
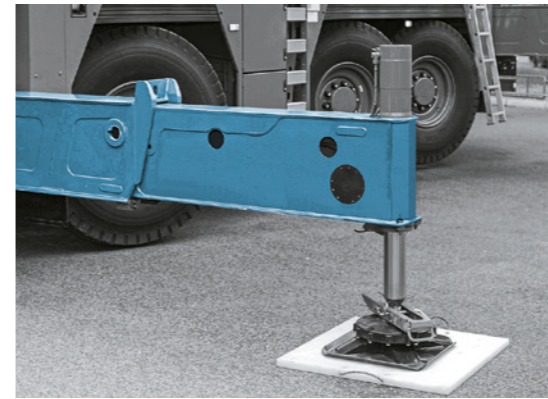
Quard Quend

**MADE FOR ENDURANCE
AND PERFORMANCE**

Quard



Quend



GRADES AND DIMENSIONS

Quard

WEAR RESISTANT STEEL		
Quard	Thickness	Width
400	4 - 40 mm	1500 - 3100 mm
450	3,2 - 64 mm	
500	4 - 64 mm	
550	6 - 30 mm	
PRO	8 - 25 mm	2000 - 2500 mm

Quend

HIGH YIELD STRENGTH STEEL		
Quend	Thickness	Width
700	4 - 50 mm	1500 - 3100 mm
900	4 - 40 mm	
960	4 - 35 mm	
1100	4 - 12 mm	
1300	4 - 12 mm	1500 - 2700 mm

Quard PRO

QUARD PRO is the newest grade within the QUARD family with higher toughness without compromising impact.

WHEN QUARD 450 IS NOT JUST ENOUGH

1. Increased hardness

It provides better resistance to wear, impact, and deformation.

2. Improved strength

The yield strength and ultimate tensile strength of QUARD PRO are higher compared to QUARD 450, enabling heavier loads and higher stresses without influencing structural integrity.

3. Longer service life

As it withstand severe operating conditions in abrasive environments and repetitive impacts, QUARD PRO reduces maintenance needs and increased productivity compared to QUARD 450.

4. Same high workability

Even with its outstanding abrasion resistance, Quard Pro offers the same good workability aptitudes as QUARD 450.

OPTIMALLY USED FOR

- dump truck bodies
- buckets and Grapples
- screeners
- crushing and pulverizing equipment
- scrap presses
- conveyor belts

15% more resistant than QUARD 450



BENEFITS ON THE FIELD



QUARD and **QUEND** contributes to enhancing equipment performance, durability, and operational efficiency. This is the right choice when you are seeking reliable and robust materials that will be used in severe conditions.



Maximize operational lifetime

- Superior wear resistance: with QUARD, benefit from enhanced durability that stands up to even the most challenging conditions, effectively reducing wear and extending the service life of your equipment.
- Reliable strength: the strength of QUARD steel boosts your equipment's performance, ensuring reliability when it matters most.
- Impact resistance: trust in QUARD's toughness to provide reliable resistance against impacts and shocks, keeping your operations smooth in various environments.



Minimize breakdown costs

- Extended maintenance cycles: QUARD's superior wear life not only prolongs the intervals between maintenance but also optimizes your maintenance scheduling, contributing to more predictable and efficient operations.
- Minimized downtime: the consistent performance of QUARD in demanding conditions helps decrease unexpected equipment failures, preventing costly downtime and lost productivity.



Increase efficiency and be sustainable

- Efficiency through weight saving: QUARD used in light-weight solutions makes you benefit the dual advantage of increased payload capacity and enhanced fuel efficiency, all while maintaining exceptional durability.
- Eco-friendly choice: by choosing QUARD, you're not just investing in superior performance but also in sustainability, as QUARD plates mean fewer material replacements, supporting your commitment to environmental stewardship.



Performance advancements

- Elevated load support: QUEND empowers structures to endure significant loads without needing thicker materials, which is a key factor for applications such as crane booms, truck chassis or structural parts of large attachments in the mining sector.
- Structural lightness: the optimal strength-to-thickness ratios of QUEND enable the creation of light yet robust structures for the lifting, transport and heavy machinery sectors.



Environmental and safety contributions

- Promoting sustainability: the design efficiencies afforded by QUEND contribute to decreased operational energy needs and lower carbon emissions, supporting eco-friendly initiatives.
- Safety enhancement: the outstanding mechanical properties of QUEND enhance the integrity and reliability of structures, providing improved resistance and minimizing the risk of structural failures.

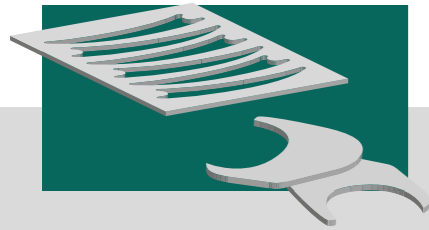
QUARD excels in wear resistance, making it ideal for tough conditions.

QUEND provides high yield strength and structural lightness, optimizing strength-to-thickness ratios. Together, they meet various industrial needs, increasing operational efficiency and sustainability

BENEFITS IN THE WORKSHOP

QUARD and QUEND are both produced with a high level of expertise from rolling to heat treatment. So you can experience easier operations in your workshop. Leverage this superior workability to perform high-quality manufacturing.

1. Steels with high workability



CUTTING

Cutting QUARD or QUEND can be performed by any of the conventional cutting methods:

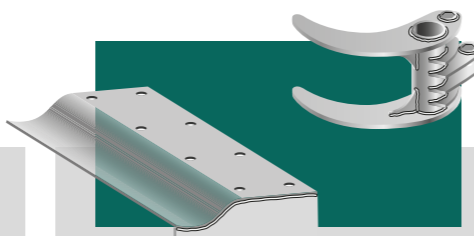
- With heat input - oxycutting, conventional or underwater plasma cutting and laser.
- Without heat input - shearing, sawing, abrasive grinding and water jet cutting.



COLD FORMING

QUARD and QUEND are designed for optimal cold forming performance.

- Excellent surface finish > helps to prevent crack initiation points along the bend line.
- Narrow thickness tolerances > secures a constant spring back when bending.
- Flatness > improves shape tolerance when bending.



WELDING

QUARD and QUEND are based on a low alloy steel composition securing carbon equivalents at low levels and combine outstanding performance with an excellent weldability.

Welding QUARD or QUEND is as easy as welding commercial steel grades and can be performed with all weldable steel grades using any of the conventional welding methods, either as manual or automatic.



2. Consistent quality

QUARD and QUEND wear plates are renowned for their uniform hardness, consistent quality, and predictable performance, which translates to fewer surprises and reworks in the workshop. This reliability helps maintain schedules and enhances the workshop's reputation for quality.



3. Time efficiency

The superior mechanical properties of QUARD and QUEND mean that parts made from it last longer and require fewer replacements. This durability translates to less frequent maintenance and repairs, optimizing equipment uptime and contributing to faster project turnaround times.



4. Improved precision

The uniformity of QUARD and QUEND through the whole thickness ensures improved precision in applications where dimensional accuracy is crucial.





WHY QUARD IS SO EASY TO WORK WITH

At NLMK Clabecq, where QUARD and QUEND are produced, everything is done to ensure high quality at the highest level. From the rolling benefitting from a reversible quarto mill on the same line than the continuous finishing mill with four independent stands. To the heat treatment with XXXX.

3 FEATURES OF QUARD AND QUEND THAT YOU WILL LIKE

How the way QUARD and QUEND are produced will make your life in the workshop easier



Tight thickness tolerances

- **Ensures** that the material delivered is consistently within the specified range, which is crucial for your applications when precise dimensional control is necessary.
- **Minimizes** the need for adjustments or compensations during the assembly or manufacturing process, saving time and reducing material waste.
- **Ensures** uniform performance during bending or forming across the part, which is critical for maintaining the structural integrity and performance of the finished product.



Excellent surface finish

- **Reduces** the need for additional surface preparation before implementing them into applications or further processing, like welding or painting.
- **Facilitates** a cleaner and more aesthetic appearance, which is beneficial for your applications when the visual quality of the product is a consideration.



Superior flatness

- **Simplifies** fabrication processes like cutting, bending, and welding, and helps ensure that components fit together correctly during assembly.
- **Advantageous** when fabricating large components or structures, as it minimizes the occurrence of misalignments or distortions that can arise from material irregularities.
- **Contributes** to the overall quality and longevity of the components or structures made from them, as it ensures even distribution of stresses and loads, reducing the likelihood of premature wear or failure.

InThinity offered to you as a standard service

≤ 15 MM

InThinity symbolizes the innovative approach adopted by NLMK Clabecq for producing thin plates. It extends the focus from achieving very narrow thickness tolerances to include enhanced flatness, superior surface finish, and consistent quality. This new manufacturing philosophy, from which recent investments originate, redefining how to control optimal parameters throughout the rolling process. InThinity thus becomes the logical solution to meet the evolving expectations of those seeking quality thin steel plates.



PARTNERSHIP PROGRAMS

Quard AMBASSADOR

Becoming a QUARD Ambassador means aligning with a community dedicated to excellence and innovation in high-strength steel. As a QUARD Ambassador, you will have the opportunity to significantly impact the market by distributing QUARD and QUEND plates. This role allows you to utilize your industry expertise to position yourself as a key player in the market. You will benefit from tailored incentives designed to promote your business growth and support your promotional efforts. Ambassadors receive comprehensive marketing support, including custom catalogs and publicity opportunities, along with exclusive training sessions and networking events. Additionally, you will play an active role in recruiting new "QUARD at Work" members, further expanding the network and influence of QUARD steels.

Quard At Work

Joining the QUARD at Work program integrates you into a global network dedicated to excellence in high-strength steel. As a member, you will manufacture products with QUARD and QUEND steels, adding significant value to the supply chain. This program allows you to leverage the extended properties of QUARD and QUEND to develop new products, offering superior performance and services to your customers. Members benefit from extensive support, including technical training and personalized marketing materials. You can showcase your success stories through our digital platforms and use the QUARD at Work quality seal as a guarantee of superior quality. Additionally, you will receive specific stock availability and efficient delivery logistics, enhancing your brand's reputation and ensuring customer satisfaction.



Scan this QR code and find directly the right partner who can help you

Interested in joining our exclusive QUARD partnership programs? Become a QUARD Ambassador or QUARD at Work member and drive growth, innovation, and excellence in the high-strength steel industry.

For more details, please contact us:

Klaudiusz Raszka, our Business Development Manager, at k.raszka@eu.nlmk.com.



CONTACT US

Quard & Quend are available to all users worldwide, from stock or on special order.

The Q&T commercial network can provide you with more information about delivery times.



Quard Quend



Scan this QR code and find directly the right contact person for you.



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