Meet Gerdau's Clean Steels Brand

PERFORMA®

GERDAU

Made with quality. Sustained by performance.

Nonmetallic inclusions are particles inherent to the steelmaking process that are known to reduce the fatigue life on parts exposed to continuous stresses. Steel producers are challenged to minimize inclusions and ultimately reduce detrimental effects on the final product, especially on critical vehicular applications.

The need for high-strength steel parts with lightweight design and increased fatigue life and better performance is more important than ever. Bearing steels used in safety-critical parts – including wheel hubs, constant-velocity joints (CVJs), transmission and differential gears, pinions, and others – are clear examples. The automotive industry is driving this need for increased performance, and Gerdau Special Steel is here to rise to the occasion by producing cleaner steels using sustainable processes.

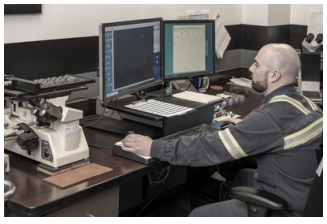
Meet Performa®

Your search for high-performing, quality SBQ ends with Performa® - premium steel carefully processed to improve the fatigue life and meet the properties of the most critical automotive applications.

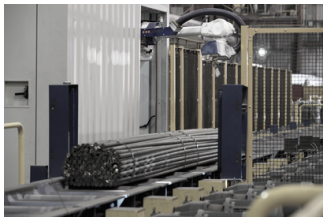
Performa® steels are produced with special chemistry and property controls, through advanced processes, to further improve the cleanliness of Gerdau's steel. Our special processes are designed to minimize nonmetallic inclusions in terms of size and frequency, while optimizing distribution, shape and chemical composition, to minimize their detrimental effects. As a result, these clean steels are capable of exceeding the performance expectations of automotive and commercial vehicle applications.

The Four Pillars of Performa®

The Process
A customized steelmaking process focused on meeting the most critical customer specifications



The Testing
Advanced testing to ensure the highest product quality and performance



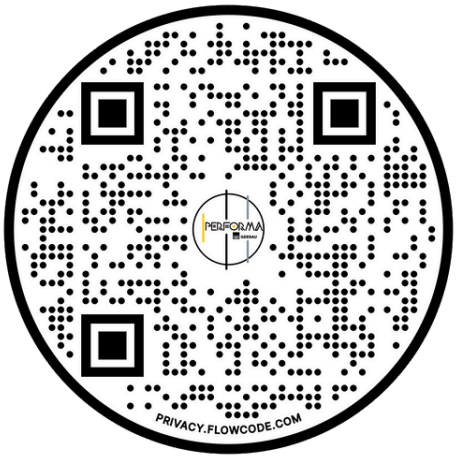
The Investment
Continued investments in processes and technologies to make clean steels

The Team
A Gerdau team dedicated to consistent process control for product repeatability, heat after heat

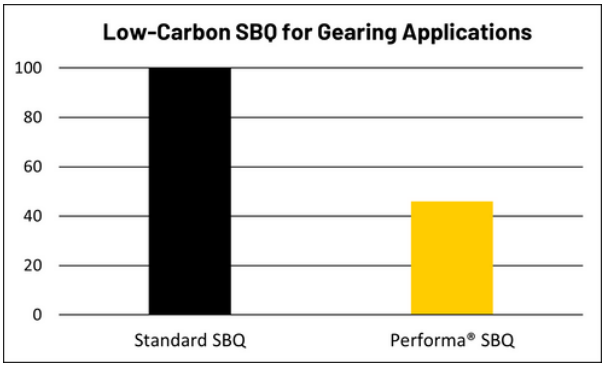
High Quality Yields Increased Performance

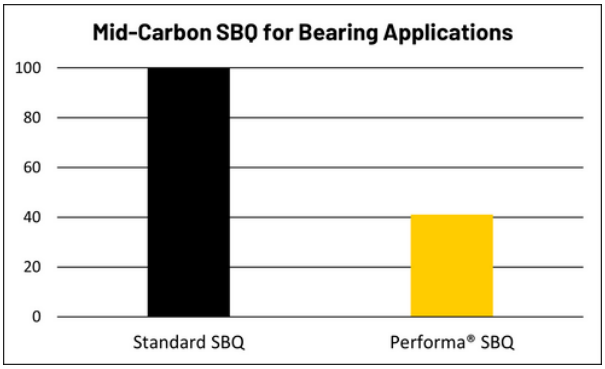
Steel cleanliness is critical in many automotive applications. This is because hard inclusions cause stress, ultimately leading to fatigue failure. By using modern scanning technology, we can characterize steel inclusions and improve our processes to avoid/minimize fatigue failure. This allows us to create premium steels, Performa®—higher performing steels that meet stringent metallurgical specifications for nonmetallic inclusion content.

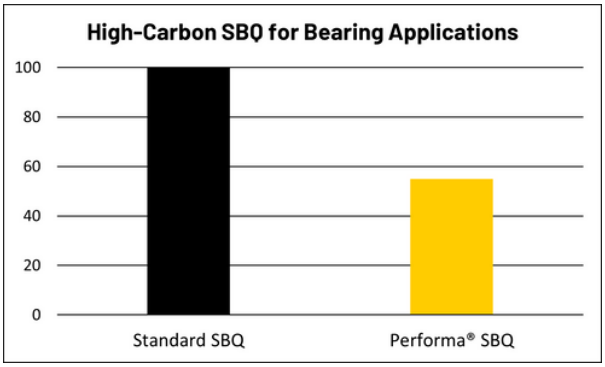
The data to the right shows that Performa® SBQ contains at least 50% less micro-inclusions than standard SBQ in low-carbon SBQ for gearing applications. In mid-carbon SBQ for bearing applications, Performa® SBQ contains almost 60% fewer micro-inclusions. In high-carbon SBQ for bearing applications, Performa® SBQ contains almost 45% fewer micro-inclusions.



Scan the QR code to visit our website!







Product Information

Sizes

- Diameters from 5/8" to 3 ½ "
- Lengths from 15' to 32'
- Inquire for other diameters and lengths

Grades

- Bearing quality meeting ASTM specifications, including A295, A485, A534, and A866 specifications
- Aircraft quality meeting AMS 2301 and AMS 2304 specifications
- Carbon and alloy ASTM grades and customized SBQ chemistries

Heat Treating

Full range of in-house heat treating capabilities, including: spheroidizing, normalizing, stress relieving, annealing, quench and tempering, and any customized heat treat cycles

Product Verification Capabilities

- 100% automated ultrasonic and magnetic flux leakage testing
- ASTM E45
- ISO 4967
- JIS G 0555

Process Verification Capabilities

- Immersion ultrasonic
- Extreme value analysis (EVA)
- Automated scanning electron microscope (SEM) analysis

Want to learn more?
Reach out to your Sales Representative, or request a quote by emailing info@gerdau.com

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Shape the future