berndorf
BAND GROUP

STEEL BELTS FOR TEST APPLICATIONS



TEST SIMULATIONS ACCORDING TO YOUR REQUIREMENTS

The Berndorf Band Group is the world‘s leading supplier of Steel Belts, Belt Systems and worldwide service. Identifying the latest trends and developments in the industries and integrating them into our product portfolio is an essential part of the Berndorf Band Group‘s philosophy.

As a specialist in high-quality Steel Belt processing, the Berndorf Band Group manufactures Steel Belts with an exceptionally long service life that are ideally suited for applications in the automotive and testing industry. Our Steel Belts are used in demanding tire tests, complex wind tunnel analyses, and comprehensive vehicle design processes. The test systems used for these applications consist of extremely durable Steel Belts, that can withstand speeds of up to 350 km/h | 217 mph. The combination of customer-specific Steel Belt Coatings and robust Berndorf stainless Steel Belts simulates realistic conditions for all types of test scenarios in the field of vehicle development.

REAL TESTING CONDITIONS

Due to the flat rolling area and the stiffness of the Steel Belt, realistic test simulations can be achieved. In addition, the dimensions of the Steel Belts can be adapted to suit all kind of test applications.

SURFACE COATINGS

To simulate different road surfaces, we offer an extensive portfolio of Steel Belt Coatings. Berndorf Band Group experts are continuously developing new surface coatings, and are also available to create customized coatings based on specific requirements.

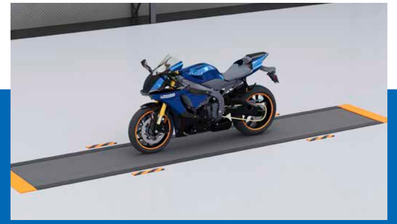




VERSATILE AREAS OF TEST APPLICATIONS







Berndorf Band Group’s Steel Belts are relied on across a broad spectrum of test applications — from vehicle development in motorsports and everyday ground transportation, to tire testing, as well as aviation and aerospace industries.

Designed for maximum durability, precision, and stability, our Steel Belts deliver consistent, high-performance results under even the most extreme testing conditions, ensuring realistic and reliable outcomes. With decades of experience, we offer tailored Steel Belt solutions that meet the unique and demanding requirements of each test application. Explore how our Steel Belts drive innovation in testing environments worldwide.

- **AUTOMOTIVE AERODYNAMICS TESTING**
- **AUTOMOTIVE ACOUSTICS TESTING**
- **TIRE TESTING & ROAD DRIVE SIMULATION**
- **AVIATION & AEROSPACE TESTING**

YOUR APPLICATION AREA IS NOT IN THE LIST? GET IN TOUCH WITH US - WE WILL DEVELOP A SOLUTION TAILORED TO YOUR NEEDS.

NICRO 52.6 - HIGH PERFORMANCE STEEL BELT MATERIAL

When it comes to the demanding conditions of vehicle development and testing, only the most advanced materials can deliver consistent performance. That is where NICRO 52.6 comes in – a premium Steel Belt material, that has been meticulously developed over many years and continuously optimized by the Berndorf Band Group to meet the high standards of the automotive and testing industry.

The high-strength NICRO 52.6 stands out with its exceptional combination of excellent tensile strength and high elongation, ensuring durability and resilience under even the most rigorous test conditions.

Thanks to Berndorf's exclusive heat and surface treatment process, the mechanical properties of the Steel Belt are significantly enhanced. As a result of this unique manufacturing process the belt lifetime is extended and a reliable long-term performance is ensured.

Engineered for precision, NICRO 52.6 is built to perform with:

» Best running characteristics in terms of flatness
» Stable and smooth straight running thanks to precise belt geometry
» Exceptional stability even under extreme testing conditions

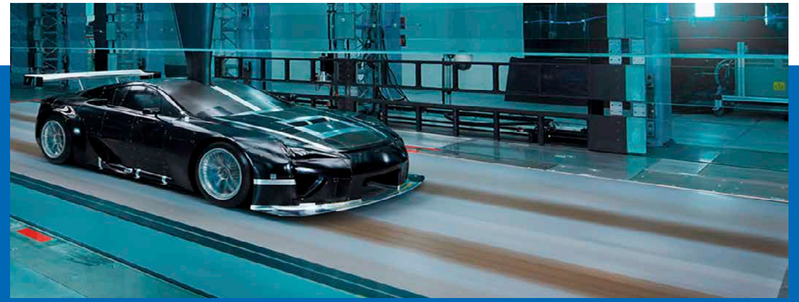
Choose NICRO 52.6 for unmatched reliability and performance in the automotive and testing industry.

STEEL BELT GEOMETRY

Material	Width in m | in*		Length in m | ft*		Thickness in mm | in*	
	Min.	Max.	Min.	Max.	Min.	Max.
NICRO 52.6	0.2 | 7.87	9.0 | 354.33	1.4 | 4.59	270 | 886	0.3 | 0.012	3.5 | 0.138

*The belt dimensions can be individually adapted to specific customer requirements.





STEEL BELTS FOR THE AUTOMOTIVE & TESTING INDUSTRY

PHYSICAL AND MECHANICAL PROPERTIES. TYPICAL VALUES.

Material			Nicro 52.6
Type			CrNiCuTi 15 7
Similar material		DIN AISI	- -
Tensile strength	at 20 °C at 68 °F	N/mm² psi	1,550 224,800
0.2 %-offset yield strength	at 20 °C at 68 °F	N/mm² psi	1,500 217,600
Hardness		Rockwell HRC Vickers HV 10	48.0 480
Elongation 50 mm | 1.97 in		%	6
Welding factor			0.80
Fatigue strength under reversed bending stress*	at 20 °C at 68 °F	N/mm² psi	700 101,500
Modulus of elasticity	at 20 °C at 200 °C at 68 °F at 392 °F	N/mm² N/mm² ksi ksi	200,000 188,000 29,000 27,300
Density		kg/dm³ lb/in³	7.74 0.28
Mean coefficient of thermal expansion	20-100 °C 20-200 °C 20-300 °C 20-400 °C 68-212 °F 68-392 °F 68-572 °F 68-752 °F	10⁻⁶m/m°C 10⁻⁶m/m°C 10⁻⁶m/m°C 10⁻⁶m/m°C 10⁻⁶in/in°F 10⁻⁶in/in°F 10⁻⁶in/in°F 10⁻⁶in/in°F	10.9 11.5 11.7 6.1 6.4 6.5
Specific heat		J/g°C BTU/lb°F	0.50 0.12
Thermal conductivity	at 20 °C at 68 °F	W/m°C BTU/lb°F	16 9.3
Specific electric resistance	at 20 °C at 68 °F	Ω mm²/m µΩ in	0.80 31.50
Min. permissible operating temperature		°C °F	- -
Max. permissible operating temperature		°C °F	350 662
Tensile strength at max. permissible operating temp.		N/mm² psi	1,250 181,300
0.2 %-offset yield strength at max. permissible oper. temp.		N/mm² psi	1,180 171,100

Special materials available upon request. | *50 % of the test specimens withstand 2,000,000 load cycles. If not otherwise specified, the values given apply at room temperature. Subject to change due to technological progress. Errors and omissons excepted.

YOUR ROAD ON OUR STEEL BELTS

Issues such as fuel consumption, rolling resistance, acoustics, and safety are top priorities in the development of motor vehicles and tires. For this reason automotive-releated tests are highly relevant worldwide. Berndorf Steel Belts can be equipped with a big variety of surface coatings. The different surfaces enabling tests to be carried out under realistic conditions tailored to customer requirements. Additional coatings are continuously developed by our R&D team in close cooperation with customers. Thanks tight manufacturing tolerances, Berndorf stainless Steel Belts offer an extended belt lifetime. Their high quality allows a large number of test cycles under extreme loads and speeds of up to 350 km/h (217 mph). This makes them the preferred choice for all types of automotive test simulations.

Berndorf Steel Belts can be applied with a wide variety of Surface Coatings. The different surfaces enable tests to be carried out under realistic conditions according to the requirements of the customers. Further Steel Belt Coatings are constantly developed by our R&D-Team in cooperation with customers.

ADVANTAGES

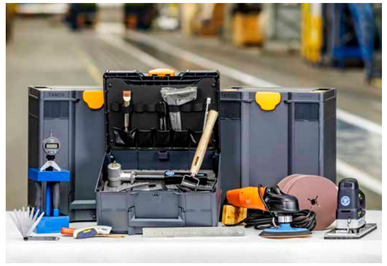
- KEY PLAYER WITH MANY YEARS OF EXPERIENCE IN THE AUTOMOTIVE & TESTING INDUSTRY
- OUTSTANDING STEEL BELT CHARACTERISTICS FOR VARIOUS TESTING APPLICATIONS
- HIGHT QUALITY STEEL BELTS OPERATING AT SPEEDS UP TO 350 KM/H | 217 MPH
- BROAD PORTFOLIO OF SPECIALLY DEVELOPED SURFACE COATINGS TO YOUR REQUIREMENTS
- CONTINOUS BELT SERVICE & REFURBISHMENT FOR A LONG LASTING STEEL BELT PERFORMANCE



MINIMIZED DOWNTIMES & OUTSTANDING SERVICE QUALITY







We offer tailored training programs to empower your in-house technicians. These sessions strengthen the fundamental understanding of Steel Belts, enable early damage detection, and teach effective repair techniques. This helps your team reduce unplanned downtimes and maintenance efforts.

For on-site maintenance, we provide a specialized automotive tool kit containing all necessary tools and materials for minor repairs directly at the test stand.

For more extensive work, our headquarters in Berndorf delivers professional Steel Belt repair, including refurbishing to an improved quality standard, and quick and easy coating replacement. This ensures the highest quality standards, an extended belt lifetime, and maximum flexibility.

- Training for your in-house technicians
- Reduced downtimes thanks to training qualifications
- Special automotive tool kits available
- Extended Steel Belt lifetime through refurbishment

OUR WORLDWIDE SALES & SERVICE NETWORK

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