



Wieland AFC®

AFC – Anti friction coating

Wieland AFC is a solid-based bonded coating. This coating enables reliable and maintenance-free permanent lubrication of highly loaded machine elements. It has very good emergency running properties and also improves poor lubrication conditions.

Properties

The AFC anti-friction coating, formulated with polyamideimide and enhanced with MoS₂ (molybdenum disulfide) and graphite lubricants, offers dual benefits. It facilitates an effective running-in process while enabling a maintenance-free design when combined with the initial greasing of the bearing system.



Structure

The coating comprises a polyimide matrix enriched with solid lubricants, including MoS₂ and graphite.

Application

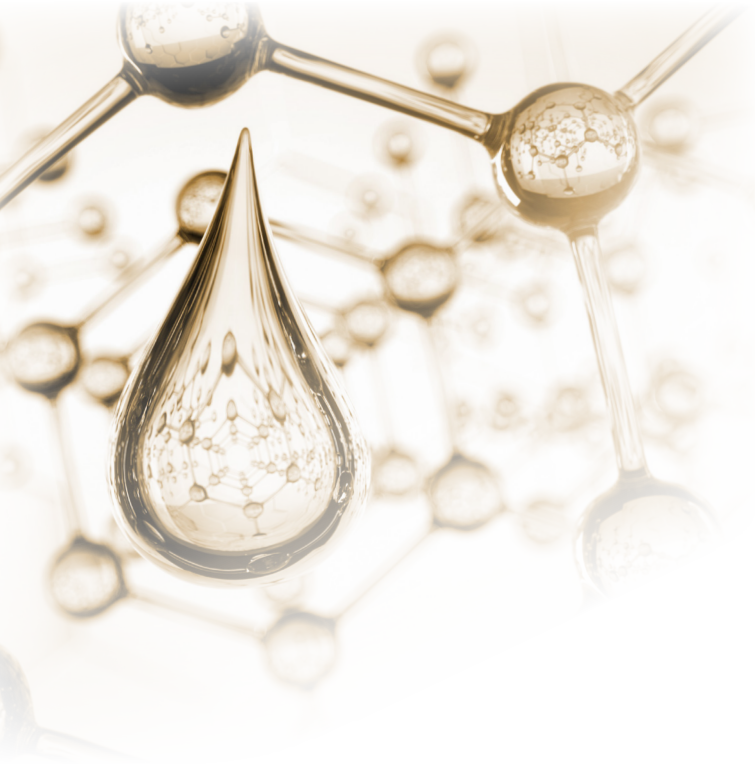
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|-------------------------------|----------------------|
| Material | Metals / composites |
| Layer thickness | 5–20 μm |
| Pretreatment | application-specific |
| Temperature range permanently | –40 °C to 250°C |
| Temperature range short-term | 400 °C |
| Process temperature | 215°C |

Comparison with high-strength wear coatings

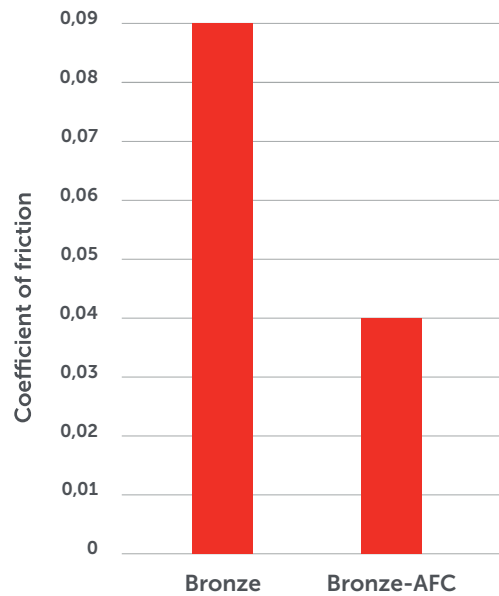
- High pressure resistance
- Excellent temperature resistance
- Low friction coefficient due to metallic separation of the sliding partners
- Very good adhesion to metallic surfaces
- Good corrosion protection
- Resistant to oil, grease and solvents

Technical properties

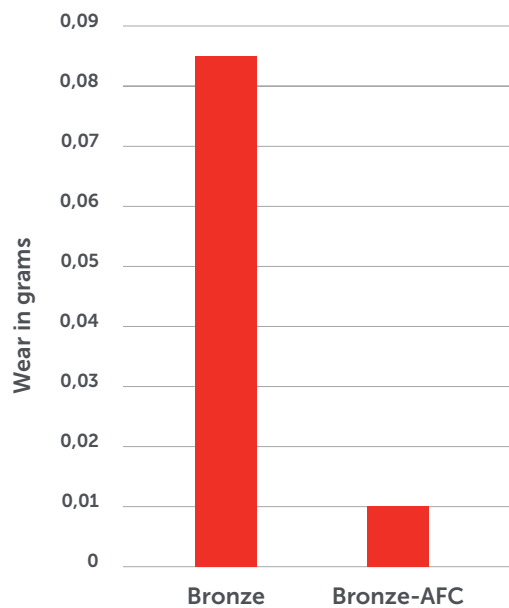
- **High Strength Across Wide Temperature Range:**
Exhibits exceptional strength from -40°C to $+250^{\circ}\text{C}$, with short-term resistance up to $+400^{\circ}\text{C}$.
- **High Permissible Surface Pressure:**
Capable of withstanding surface pressures up to approximately 400 MPa.
- **Nearly Wear-Free:**
Ensures minimal wear, enhancing longevity and performance.
- **PFAS-Free:**
Compliant with future EU regulations, ensuring long-term viability and environmental safety.



Friction values endurance test



Wear endurance test



Endurance test 6 hours at a surface pressure of 9 MPa / 1m/s
Rotary tribometer (specimen: ring/disk)

Do you want to learn more about Wieland AFC?:

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