phreeco®

phreeco® – THE PHOSPHATE-FREE, FUTURE-READY COATING FOR COLD FORMING

voestalpine Wire Technology's innovative coating technology combines sustainability with maximum process reliability and efficiency.

The coating is a 100 % heavy metal-free, phosphate-free, and PFAS-free wax-based solution designed for top environmental and performance standards. Its organic-inorganic hybrid bond ensures strong adhesion, long-term stability, and excellent resistance to mechanical stress during cold forming – delivering reliable performance in demanding applications.

Product Highlights:

- Phosphate-free, PFAS-free, heavy-metal-free
- Designed to maintain integrity during multi-step cold forming processes
- No delta-ferrite formation, ensures optimal mechanical properties after heat treatment
- Direct compatibility with standard cold forming oils
- Superior corrosion resistance thanks to its hydrophobic properties
- Storage stability >6 months, offers high logistical flexibility
- Suitable for linked production lines → forming + thread rolling without intermediate treatment

voestalpine Wire Technology
www.voestalpine.com/wire

voestalpine
ONE STEP AHEAD.

Permanent monitoring in our laboratory

Coating of coils

Finished coil

PRODUCT DESCRIPTION

Product type	Water-diluted, phosphate-free lubricant based on inorganic binder matrix and organic waxes
Product properties	The coating enables high forming performance with low lubricant application
Areas of application	Lubricant for cold forming of wire
Colour of the dry coating layer	Colourless to slightly milky appearance
Processing temperature of the coated wire at machine inlet	20-80 °C

TECHNICAL HIGHLIGHTS AND BENEFITS

Highlights	Benefits
No phosphate wastewater	Resource conservation, lower disposal costs
Fewer washing steps	Shorter lead times, reduced manufacturing costs
No machine cleaning effort	Higher equipment availability
Excellent adhesion for hard metal layers	Quality improvement in subsequent processes

Handling of the wire

Wires treated with this innovative, phosphate-free coating can be processed using the same auxiliary materials and protective agents commonly used for zinc phosphate-coated wires. This includes drawing soaps, forming oils, and other lubricants – allowing for a smooth transition without the need for specialized media.

Typical applications

- Multi-step cold headed parts
- Hoist chain production
- Products from integrated cold forming and thread rolling machines

Detailed information – including details of our certificates – can be found in the Download Center on our website at **www.voestalpine.com/wire**. Alternatively, you can simply scan the QR code.

Customized wire solution for demanding applications:
Get in touch with us!
Our experts will accompany you from the initial idea to series production.

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