

GRIPCOAT® Direct

Friction Increase Solutions

Innovation in Motion

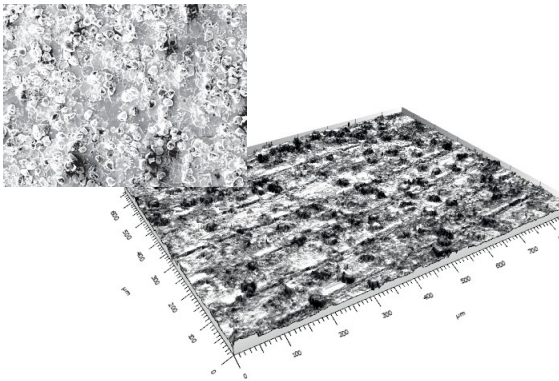


DESCRIPTION

GRIPCOAT® Direct is a friction-enhancing direct coating that is applied directly to a component to be clamped using atmospheric plasma. It will increase the static friction value even of lubricated surfaces up to $\mu = 0.75$. The surface coverage and the size of the hard particles are individually tailored to the component to be coated in order to achieve the desired static friction value. The microform bonding produced during assembly ensures reliable power transmission even under the most difficult operating conditions. Precise coating of function-relevant areas opens up innovative technical solutions using a minimum of materials.

DETAILS

Hard particles (industrial diamonds) are applied to the substrate with a nickel bonding agent.



TYPICAL APPLICATIONS

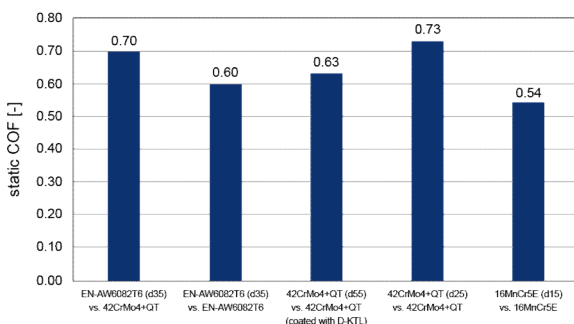
Typical areas of application include contact surfaces of pulleys, shock absorbers, sprockets, sensor wheels, VVT (rotor and stator).

APPLICATION PARAMETERS

Substrate material	steel, aluminum, magnesium, sintered parts
Particle sizes	15/25/35/55 μm (other sizes can be tested)
Surface coverage	8 – 30% (depending on requirements)
Short-term temperature limit in operation	600 °C
Specific surface pressure	starting at approx. 25 MPa

STATIC FRICTION VALUES ACHIEVED WITH GRIPCOAT® VARIANTS

Nominal surface pressure $p_{\text{nom}} = 100 \text{ MPa}$



GRIPCOAT® DIRECT PERFORMANCE CHARACTERISTICS IN SCREW CONNECTIONS

Maximization of torque transmission	++
Anti-fretting	+
Optimization of installation space	++
Reduction of clamping elements/screws	++

Legend: 0 unchanged + improved ++ excellent

Note: All values are averaged and may vary. Final specification according to drawing and application.