

# zinc flake coating

corrosion protection for fasteners,  
structural and chassis parts



surface  
technologies

# zinc flake coating

Originally conceived as an eco-friendly chromium VI-free electroplating alternative, zinc flake corrosion protection has established itself not only in the automotive sector due to its wide range of applications. Zinc flake coatings enable safe corrosion protection, e.g. for high-strength steels, without hydrogen-induced stress cracks occurring.

Constant friction coefficients, dimensional accuracy and color choice are, along with the highest corrosion protection requirements, additional outstanding properties of zinc flake coatings.



Chassis components.



Large fastening element for wind energy/ offshore technology.



Several fastening elements.

zinc flake coating	process details	
Applications	automotive industry, construction and agricultural machinery, fastening elements, brake parts, chassis components, springs, threaded parts, aviation, punched parts, offshore wind plants	
Coatable base materials	hardened steel, spring steel, high-strength steel, zinc die-casting	
Pre-treatment	optional: degreasing, blasting, phosphating	
Properties	long-term corrosion protection, very thin layer thicknesses, integrated lubricant additives, stable friction coefficients even with multiple screw connections, no hydrogen-induced stress corrosion cracking, very high corrosion protection depending on requirements >1500 h, silver or black surfaces, no distortion from high heat treatment temperatures, topcoats for high-strength aluminum compounds, protection against contact corrosion.	
Performance characteristics	<b>outstanding corrosion protection</b> under cyclic loading; <b>no red rust</b> >1,000 h salt spray test (DIN EN ISO 9227) <b>barrier protection:</b> delayed red and white rust and contact corrosion <b>resistance to chemicals:</b> resistant to acids, alkalis, cleaning agents, oils, petrol and organic solvents	<b>layer thickness:</b> 6-25 µm (depending on requirements) <b>topcoats for duplex coatings and non-ferrous metals</b> <b>temperature resistance:</b> 180-300°C depending on the product <b>process temperatures</b> from air drying to thermal curing <b>friction coefficients:</b> according to requirement <b>color:</b> silver, black, (others on request)
Service	We find the optimal coating process for your components based on an individual consultation. From the first sampling to the introduction into series production, we define the relevant production steps together with you. On request, we can also supplement our technical services with a logistics concept tailored to your needs, including pick-up and delivery services.	
Zinc flake application method	bulk material (dip-spin), rack dip-spinner (rack-spin) and spray application (full automatized)	