



Atotech Zinc Flake Coatings

Zinc flake technology provides a high grade of corrosion protection using combinations of specialized base and top coats. Largely embraced by the fastener industry such coatings find widespread use within a variety of applications. The spectrum is versatile: Ranging from fasteners, hose clamps, clips, or brake discs for the automotive industry, special fasteners in the wind power and construction industry to fasteners and fittings for furniture.

For different applications Atotech offers a comprehensive range of processes including silver and black base coats, organic and inorganic top coats as well as a large variety of lubricants. The finishes are completely Cr(VI)-free and fulfill global automotive requirements. Applied by dip spin, dip drain or spray technology, hydrogen embrittlement is irrelevant. Atotech provides a full package of outstanding zinc flake products with best technical service worldwide and leading edge coating equipment.

Features and Benefits

- Excellent corrosion protection completely Cr(VI)-free
- No hydrogen embrittlement occurring
- Approved by OEMs and Tier 1s worldwide
- Leading dip spin application technology
- High temperature and chemical resistance with inorganic top coat
- Fully black finish with excellent corrosion resistance



Coatings available from WEP Ltd

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Zintek® Coatings

Zintek 200

Zintek® is not just another zinc-rich base coat, but a high reactivity system containing zinc or zinc aluminium flakes. The metal particles, together with a reactive organic mineral resin, react on the steel substrate to produce a non-toxic zinc aluminium coating after curing. The coating does not contain any chromium (trivalent or hexavalent), or any heavy metals. It may contain a small amount of non-PTFE internal lubricant for the improvement of the friction coefficient. The minimum thickness of the Zintek® coatings in bulk treatments is governed by the properties required on the finished parts. In general a single coat thickness ranges between 4 and 6 microns, so that a typical two coat application measures between 8 and 12 microns.

Zintek® is an environmentally friendly product which meets the requirements of a low solvent content material. Zintek® produces a silver coloured sacrificial coating with a corrosion resistance of more than 600 hours which can be further enhanced by application of the inorganic top coat Zintek® Top (L) or by application of the organic top coat Techseal®. The combination of Zintek® and Techseal® is available in different colours.

Zintek® Top (L)

Zintek® Top is a chromium-free, mineral top coat. It improves the corrosion resistance and mechanical performance of Zintek® coatings. Zintek® Top L contains an internal lubricant allowing to achieve different friction coefficients. The dry film is an inorganic, transparent finish improving the sacrificial protection of Zintek® and the bimetallic corrosion as well.

Zintek® 300B

Zintek® 300B is a Cr(VI)-free zinc flake system, which forms an adhesive bonding to iron or steel base material. It is unique black base coat; avoids issues of „silver spots“ after handling.

During baking a non-toxic coating with cathodic protection effect is formed. The dry film is Pb-, Hg-, Cd- and Cr-free. As Zintek® is applied in a non-electrolytic dip-spin and/or spray technique, hydrogen embrittlement is irrelevant. The base coat can be either silver or black.

Coatings available from Anocote Limited

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Techseal® Coatings

Techseal® is an organic top coat which can be applied on top of zinc and zinc alloy deposits or zinc Flake coatings.

Techseal® is also available with lubricant for adjustment of the required friction coefficient.

Application of Techseal® over a two layer Zintek® coating (8–12microns) gives a corrosion resistance of more than 1000hours in salt spray testing according to DIN50021 SS.



Appearance

Silver or black generally but all colours are available for this high performance coating.

Performance Data

This range of Cr(VI)-free corrosion protective coatings meets the demands of the automotive industry.

White rust cosmetic corrosion	240 h SST
Base metal corrosion	1000h SST
Temperature resistance	100h–180°C
Fiction coefficient	0.10–1.16, 0.12–0.18 (DIN 946)
Climate test	20 cycles RR

Key Advantages

- Non electrolytical application: hydrogen embrittlement will not be induced.
- Standard colours: Black and Silver, other colours are available on request.
- Free from chromium, nickel, mercury and lead.
- Reduction of bimetallic corrosion with aluminium.

- Coating thickness can be modified to specific requirements of the finished parts.
 - More than 1000 hours corrosion resistance without red corrosion (CIN50021 SS).
 - Temperature stability: Heat treatment of 100 hours at 180°C has no influence on corrosion protection, optical appearance and technical characteristics of coating.
 - Various friction coefficients can adjusted, eg. μ total 0.10–0.16 or 0.12–0.18
 - Cathodic protection.
 - Good film quality, performance and adhesion.
 - Chemical resistant against acid and alkaline cleaners, fuel, brake fluid, etc.
 - Recyclable according to ELV Directive EU2000/53/EG.
- Up to 200°C no changes of mechanical and chemical properties.

Specifications

- GS90010 (BMW)
- DBL9440AO (Daimler Benz)
- GME 00255 (General Motors)
- GMW 3359 (General Motors)
- B 153320 (PSA)
- 01-71-002/-0 (Renault)
- TL245 (VW)

For more information on Atotech Zinc flake, or general metal finishing please follow this link www.atotech.com or to download these general metal finishing PDF please click [Here](#)

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