

# Anodizing

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Anodizing is the most common surface treatment of aluminium. By anodizing the surface can become natural, black, yellow, blue, red or green.

## Geomet® (Dacromet®)

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Geomet is a coating consisting of zinc flakes and some other metals in a binding agent of chromate.

The binding agent is conductive, and the coating is anodic in relation to steel. By the embedding of the zinc in chromate, the corrosion attacks on the Geomet layer are very slow compared to pure zinc. The coating is evenly distributed without weak spots on shadowed parts. It is metallic grey with a satin-etched surface.

Geomet preserves its corrosion protection ability in temperatures up to 250°C. The chromate layer of the zinc plating is broken down at 70°C.

We store Geomet 500 which contains Teflon.

Geomet 500 has a friction value of 0,14.

Source: Ferro products.

Anodizing results in:

- A new look when exposed in atmosphere.
- Dirt resistance and an easy cleaned surface, decorative surface and a surface resistant to wear.
- A good base for lacquering, printing and gluing.

### Summary of the advantages:

- Improved corrosion protection!
- No hydrogen embrittlement!
- Withstands high temperatures!
- Is anodic in relation to steel!

Environmental aspects:

The adhesive that contains chromate partly consists of hexavalent chrome, which is to be listed on Volvo's black list.

Environmental effects:

Allergy arousing, bio accumulating. Hexavalent as well as trivalent chrome is poisonous. The hexavalent chrome is very acute poisonous.

Geomet, which is free from hexavalent chromium, replaces Dacromet.

## Delta-P+S

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Delta-Protect and Delta-Seal can be applied separately or in combination, which gives additional characteristics. The two layers are together called Delta-P+S. Delta-P+S gives an optimal corrosion protection safety in extreme conditions, and can be adjusted to suit the needs of particular coating for several different branches.

Environmental aspects:

Contains organic solvents that vaporise when hardened.

Environmental effects:

Contributes to the creation of photochemical oxide, for example ground level ozone and is free from 6-worth chrome.

## Delta-Seal

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*The organic topcoat*

Delta-Seal has been developed as a topcoat together with Delta-Protect. Its main qualities are:

- Exceptional adherence.
- No heavy metals.
- High hardness together with great flexibility.
- Very low friction values.
- Electric isolation effect.
- Excellent chemical resistance.

coat of stainless steel- and acid proof steel materials, as a protection against galvanic corrosion between, for example, stainless steel and aluminium. Thanks to the low hardening temperature - approximately 200°C, the characteristics of the metal parts are not affected.

Environmental aspects:

Contains organic solvents that vaporise when hardened.

Environmental effects:

Contributes to the creation of photochemical oxide, for example ground level ozone and is free from 6-worth chrome.

Delta-Seal is very suitable as a powerful friction reducing

## Delta-Protect (KL 100)

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*The inorganic basecoat*

Delta-Protect consists of zinc and aluminium particles that are kept together by an inorganic binder. This creates an effective corrosion barrier even for very thin layers. Already at 8-10 µm when performing a salt spray test according to DIN 50021 SS you achieve a resistance that exceeds 480 hours before the original metal starts to corrode.

Delta-Protect is added in liquid form and pierce into the smallest cracks. In this way weldings are protected just as effective as plane metal surfaces.

During the hardening at approx. 200°C, a chemical reaction is created during approx. 20 min. Then the Delta-Protect creates

a tight compound with the underlying metal. Hardened metal parts are not damaged at this low temperature and the treatment with Delta-Protect means that there is no risk for hydrogen embrittlement. Delta-Protect is generally added in 4-10 µm, in thick layers. The layer thickness can vary and the corrosion protection is adjusted to the demands put in each different case.

Environmental aspects:

Contains organic solvents that evaporate when hardening.

Environmental effects:

Contributes to creation of photochemical oxides, like ground ozone and is free from 6-worth chrome.

Source: YtbehandlingsGruppen.