GEOMET® 320

GEOMET® 320 is a non-electrolytic grey aluminium coating for the corrosion protection of articles made from steel, cast iron or other metals efficient at low thickness.
A GEOMET® 320 coating is obtained through the application of aqueous dispersions by cold immersion or spraying and is therefore free of any risk of hydrogen embrittlement. The film is formed after a curing of approximately 300°C.
GEOMET® 320 is a zinc and aluminium based coating in a mineral matrix without chromium or any heavy metal and offers an excellent corrosion protection. **It is particularly well-suited to brake rotors**

CHARACTERISTICS

GEOMET® 320 is a sacrificial coating ; its resistance to corrosion is proportional to the de-posited thickness and arises from the combination of several mechanisms:

• barrier effect due to the flaky structure of the film,
• controlled sacrificial protection of the zinc in relation to the metal substrate,
• intrinsic passivation of the film which controls the speed of the natural consumption of zinc and aluminium.

PROPERTIES

1 / Thickness

Thickness : from 3µm to 12µm

The anti-corrosion performances required by the different automotive manufacturers are obtained by adjusting the deposited thickness.

2 / No hydrogen embrittlement risk

With a suited surface preparation, the non-electrolytic application of the film does not induce any hydrogen embrittlement risk.
GEOMET® 320 is therefore particularly well-suited to the protection of security parts.

3 / Corrosion protection

The GEOMET® 320 range offers an excellent protection against the corrosion of metallic parts in their use.

3.1 / Salt spray test (ISO 9227) with or without a heat shock of one hour at 300 °C

GEOMET® 320 > 240 hours without red rust with a 8µm thickness.

3.2 / Resistance to bi-metallic corrosion

GEOMET® 320 is perfectly well-suited to aluminium

and zinc contact.

3.3 / Accelerated corrosion test on vehicle

The performances of GEOMET® 320 must be adjusted to satisfy the different speci-fication sheets relating to the protection of brake rotors.

4 / Resistance to automotive fluids

GEOMET® 320 shows an excellent resistance to normalized trial motor fuel, diesel, motor oil, organic solvents, cooling liquid, brake fluid: there is no deterioration of the coating (according to VDA 621-412).

5 / Electrical conductivity

GEOMET® 320 is conductive. It enables cataphoresis deposit.

6 / Heat resistance

GEOMET® 320 coating being formed by curing at temperatures of 300°C – 340°C, it of-fers an excellent heat resistance.

7 / Penetration power of the coating

The application by cold immersion enables a total coating of the inner surfaces of parts.

APPLICATION FIELD

GEOMET® 320 was conceived for the protection of brake rotors on all surfaces were the use of a lubricating top-coat was not wished. A deadener PLUS® top-coat (lubricated or not) can be added for other types of parts (e.g. brake callipers, reinforcement arms) in order to increase the corrosion protection and the hardness of the dry film.

APPLICATION

The industrial application of GEOMET® 320 is carried out on lines specifically adjusted for the protection of brake rotors. Concerning other uses, it could be applied on DACROTIZING® lines after adaptation.