GALOL S. A.

E-PLATED, CHEMICAL AND CONVERSION COATINGS

ELECTROPLATED ZINC-NICKEL

application technology

Barrel

Rack

Standards and specs

- BMW GS90010
- DAIMLER DBL8451
- PEUGEOT B154102
- RENAULT 0171002R
- VW TL244
- VDA VDA235-104

Description

It is a zinc alloy coating with a Ni contenet between 12% to 15% or 12% to 16%. ZnNi provides good cathodic protection against corrosion; it allows subsequent Cr3+ passivation and top-coats. ZnNi is applied by means of an alkaline electrolyte. It complies with European regulations on hazardous heavy metals such as CR9+, Pb, Hg, and Cd (EU directives 2000/53, RoHS 2002/95) We offer the following zinc-nickel finishes without Cr6:

- Alkaline e-plated ZnNi with Cr6-free transparent passivation. Silver colours with slight bluish iridescense. Appearance can vary from blight silver with iridescense and dull grey depending of the substrate.
- Alkaline e-plated ZnNi with Cr6-free black passivation. Black appearance, uniform clak colour but not intense. Appearance can be improved with black top-coats.

General properties

- Silver with slight iridescense black colour.
- Service temperature resistance up to 150ºC.
- Termal shock resistance (300ºC during 30 min and quench in water at 20ºC without blistering)
- in water at 20 ° C without detachment
- Good electrical conductivity
- Good ductility
- Fair Weldability
- Good abrasion resistance
- Subsequent treatment can be applied over it: lunricants, e-coat and top-coat

Corrosion resistance properties

Corrosion resistance in salt spray test ISO 9227 with a coating of ZnNi of 12% to 16% and a layer thickness of a 8 microns with pre-heating 120ºC for 24 hours before testing corrosion. Values indicated bellow are considered minimun requirements.

Coating	System		white rust	red rust	Cr6+
E-plated ZnNi transparent passivation Cr3+ top-coat	barrel		120h	720h	No
		rack	240h	720h	No
E-plated ZnNi black passivation Cr3+ top-coat	barrel		120h	720h	No
		rack	240h	720h	No

Parts with Zinc Nickel

Uses

- E-plated zinc-nickel has many applications in several industries such as automotive, construction, heavy-duty equipment and aeronautics, specifically alkaline zinc-nickel. Application for zinc-nickel can be the following:
- Threaded fasteners which require a high corrosion resistance and temperature resistance, such as unions with service temperature up to 150 ° C in the engine compartment, brakes systems and chassis unions.
- Pipe accessories such as fittings, bushings, flanges, hydraulic valves in hydraulic systems.
- Unions where electrical conductivity is sought.
- Unions with aluminium allows.
- Not suitable with magnesium alloys.

THIS TREATMENT IS APPLIED DIRECTLY IN LINE OR IN COMBINATION WITH PREVIOUS AND SUBSEQUENT APPLICATIONS.

GALOL S.A. offers the possibility to reduce logistic costs between the different operations of manufacturing of the part.

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