



Technical information: Chromium-free passivation on hot-dip galvanized steel

The passivation layer that can be applied to hot-dip galvanized steel is a thin and transparent additional coating. The aim of the coating is to provide temporary corrosion protection for the surface during storage and transportation before further processing by the customer.

This passivation is free of chromium, nitrate and fluoride and replaces the previous product, which contained Cr(III). In this way, we are meeting our customers' wishes for environmental protection and sustainability. The product used by Salzgitter Flachstahl complies with the following directives:

2011/68/EU (electrical industry)
2000/53/EC (automotive industry)
REACH Regulation (EC) No. 1907/2006

Product properties

The general product properties are not negatively affected by the applied coating, but it provides additional temporary protection against white rust formation. It is a transparent and colorless coating.



Figure 1: Passivated sample according to 504h DIN EN ISO 6270-2 AHT. White rust content < 1%.

Compared to the Cr(III)-containing passivation used successfully to date, the following properties of the new chromium-free passivation have been determined in laboratory tests:

Property	Chromium-free compared to Cr(III)-containing passivation
Corrosion protection	improved
Paint adhesion	comparable
Bonding suitability	comparable
Tribology	comparable
Electrical contact resistance	comparable

The information in this document corresponds to the current state of our knowledge and experience. No guarantee is given for completeness and correctness. It does not release the customer from his customary duty of care in handling the goods. No legal liability can be derived from our information.

If you have any questions, please contact your Salzgitter Flachstahl technical customer service representative.

Further information can also be found in the information sheets 121, 130 of the German Steel Federation and the brochure „Hot-dip coated strip and sheet, Characteristic features 095“, which is also available free of charge under:

Chemische Passivierung von metallischen Überzügen auf Stahlfeinblech | stahl-online.de