



## Maintenance and repair instructions for coated surfaces

### MAINTENANCE

The treatment of products with zinc or zinc and varnish coating will provide effective protection against corrosion provided that the coating layer remains intact.

Therefore, all coatings must be checked during the annual inspection. Deposits of aggressive material found during the inspection shall be removed with a non-abrasive cleaning agent solution. If the coating layer begins to show signs of deterioration, appropriate corrective action must be taken.

The table below lists the different treatments of the product according to the condition of the product and its use. The maintenance conditions for "Krystal®" finishes do not differ from hot-dip galvanized sheets. However, it should be noted that if the Krystal® coating is locally damaged, repair must be carried out by subsequent cleaning with a wire and coating with an aluminium powder containing epoxy. The film thickness of the coating must be less than 70 microns.

### DESCRIPTION OF THE REPAIR PROCESS

It is necessary to prepare the product before starting the work:

- > determine the type of organic coating (HAIREXCEL®, INTENSE, PEARL, HAIRFLON®, KEYRON®)
- > check the adhesion of the coating if the product is exposed to the .

### Surface preparation

Surface preparation is an important stage. It aims to ensure that the surface is clean as it contributes to the adhesion of the coating

during the implementation of the corrective coating. The main procedures in surface treatment:

- > Degreasing: for cleaning, use hot pressurised water (70°C) and a non-abrasive cleaner (or clean the surface by hand, but this is less effective), then rinse with pressurised hot water (70°C) and dry.
- > Phosphate treatment: chemical cleaning (10% phosphoric acid).
- > Two effects: pickling effect, which contributes to the adhesion of the anti-corrosive base, and phosphate effect (creation of protective layers of phosphate and insoluble iron between phosphoric acid and corrosion on the substrate. Rinse with hot pressurised water (70°C) and dry.
- > Mechanical pickling: low pressure sandblasting to remove all loose particles (corrosion, paint...) from galvanized steel. This process removes white corrosion. In addition, it is possible to:
  - > clean corroded parts and rusty edges mechanically, with a hand or machine brush.
  - > clean (chemically or mechanically) the shiny parts of galvanized or painted sheet metal.
- > Then remove the corrosion (compressed air, sweeping, wiping).

### Repair system

Generally this system involves the application of a primer and a . Remark:

In order to make the right decision on which products to use and how to work with them, it is better to look for the manufacturer's recommendations, which will be based on:

- > extent of damage
- > environment (rural, urban, industrial, coastal, aggressive)
- > type of surface treatment according to customer requirements: gloss retention, barrier stability over the , change shade compared to the original colour. Paint manufacturers have relevant information available.

## SHADE CHANGE DUE TO AGEING

The condition of the surface and the shade of the painted coating change more or less over the years, depending on ageing due natural atmospheric influences (adverse weather, acid rain, UV radiation, abrasive wind...).

Where a new element is used to replace a naturally aged painted roof or cladding element, there may be a difference in shades.

## Renovation

STAV SUBSTRATE	REASONS FOR REPAIR	SURFACE PREPARATION	APPLICATION OF ANTI-CORROSION COATING	APPLICATION OF THE TOP LINK
<b>GALVANIZED STEEL</b> new / old	Painting requirement	Degreasing <ul style="list-style-type: none"> <li>• If the zinc is very shiny: acid etching (chemical treatment)</li> <li>• Rinse with pressurised water</li> <li>• Dry</li> </ul>	Apply 1 coat of anti-corrosion primer with a brush	<ul style="list-style-type: none"> <li>• After the clean material or primer has dried, apply 1 or 2 coats of polyurethane, acrylic topcoat using a brush or spray. The colour is selected according to:</li> </ul>
<b>COATED STEEL</b> new (not older than 1 year)	<ul style="list-style-type: none"> <li>• Colour change request</li> <li>• Lining installed Incorrect</li> </ul>	Degreasing	Generally no primer is needed as long as the surface is clean and degreased	
<b>COATED STEEL</b> No signs of corrosion	Painting requirement			
<b>COATED STEEL</b> With corrosion	Signs: • White corrosion or paint peeling spots	Phosphate treatment	Apply the anti-corrosion primer with a brush or by spraying.	<ul style="list-style-type: none"> <li>• Surface finish qualities required by the customer (degree of gloss retention, paint stability over the years)</li> <li>• Degrees of environmental aggressiveness</li> <li>• Paint supplier specifications</li> </ul>
	Signs: • White corrosion • Rust spots or paint peel spots  Locations with a peeled-off painted layer	<ul style="list-style-type: none"> <li>• Manual or mechanical brushing, chipping, scraping in areas with corrosion strips</li> <li>• Phosphate treatment</li> </ul>	<ul style="list-style-type: none"> <li>• If necessary, apply anti-corrosive primer on corroded edges and parts.</li> <li>• Apply an anti-corrosion primer over the entire surface using a brush or spray.</li> </ul>	
	Signs: • Total corrosion • Significant peeling of the paint layer	<ul style="list-style-type: none"> <li>• Mechanical Exposure</li> <li>• Use sandblasting or mechanical cleaning over the entire surface</li> <li>• Total removal dust</li> </ul>		

## Renovation

OTHER REQUIREMENTS	SURFACE PREPARATION	APPLICATION TO THE SYSTEM
Corrective colour painting scratches on new buildings	Clean with a cloth	Apply the appropriate colour according to the type of painted layer using a thin brush to avoid overpainting the surrounding area.
Corrosion protection of profiles with cut edges, flat sheets or edges	Clean with a cloth	Zinc coated: apply zinc coating with a brush  KRYSTAL®: apply the aluminium coating with a brush.  POLISHED: apply a colourless anti-corrosion varnish or anti-corrosion a layer of the same color.
Corrosion of roof profile ends along overlaps or gutters	Mechanical brushing of rusty areas. Remove dust with a cloth or pressurised water.	Mark the area to be repainted with a tape measure or adhesive tape. Brush on an anti-corrosion primer (40 microns). Apply a (40 microns) of matching color with a brush or spray. Overlap between two sheets: spray with "neutralising anti-corrosion paint".
Corrosion protection on the inside of galvanised steel gutters	Clean with pressure water. Mechanically remove corrosion. Remove dust.	Apply the bitumen layer with a brush.
Corrective painting of black spots left on profiles that rub against each other during transport <ul style="list-style-type: none"> <li>Galvanised Crystal®</li> <li>Pockmarked</li> </ul>	Clean with a cloth or pressurised water (70°) according to the extent of black spots	If there are so many black spots that the entire surface needs to be repainted, refer back to the instructions on the previous page.
Corrosion protection made of galvanised sheet metal or coated sheet metal in the immediate vicinity of the outlets		Use the instructions on the previous page and select the system according to the degree of corrosion
Painting on the existing label, log		Select the appropriate coating system depending on the type of coating (return to previous page).

**Note: The ageing of the paint varies according to the original paint applied (direction of paint application, shade ...)**

### Recommendations for maintenance

Durability can only be guaranteed if we look after the buildings carefully and them properly. It is the owner's responsibility to supervise and maintain the building after the work has been taken over. The surface must be inspected every year.

Preventive maintenance should be carried out every TWO YEARS in accordance with commercial terms and conditions, technical standards, technical reports and current regulations.

### To supervise means to take care of the following:

- >control of the elements that make up the building envelope (especially the trusses, as water can remain locally on the roof).
- >check for physical damage caused by impact or abrasion that can lead to corrosion and take corrective action (paint treatment...).
- > preventive maintenance:
  - > Removal of moss, vegetation and other impurities...
- >maintaining rainwater downspouts and gutters in good working order.
- > cleaning of facades and roofs.

More detailed information can be found in Appendix C of NFP 34.205-1 (DTU 40-35). Normal use means going to the locations in question to a minimum extent, only for routine maintenance purposes as described above, as well as for other work such as chimney cleaning, installation and maintenance of antennas ...

Care is required and appropriate measures must be taken to prevent:

- >Damage to flat parts or deformation of ribs, especially for sheets with a thickness of 0.63 mm. The solution is to create aisles.
- >damage to the protective coating.

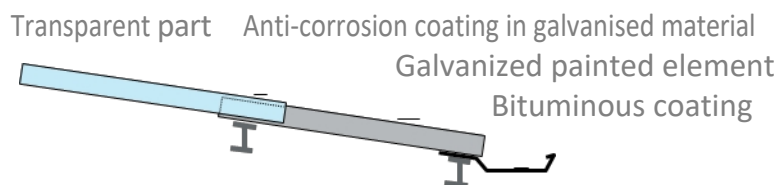
The owner's attention should be drawn to the fact that if the surrounding area becomes more aggressive (for example, with new pollution), the suitability of the original coating for its new environment must be re-examined and, if necessary, the coating must be adapted to these new conditions.

### SPECIAL ASPECTS

#### Transparent overlay - translucent profiles (polyester/ or PVC) on the roof

Requirements:

- >Sealed foam gasket, self-adhesive on one side, size 5 x 15 to provide a tight seal on all side and longitudinal overlays.
- > Support tools under each corrugated overlay.





**Remark:**

Unpainted galvanized elements:

We recommend protecting unpainted galvanized roof elements that are located below by applying an anti-corrosion coating

**Roofing, roofs - overlapping**

In case of initial corrosion along the edges at drip and/or overlapping points and around any roof parts, paint these parts with an anti-corrosion coating.

**Roof drains**

To prevent the spread of corrosion in roof spaces that are in close proximity to roof outlets, it is recommended to preventatively repaint these areas with a suitable anti-corrosive paint, or at least to monitor these areas more closely and repaint them as soon as corrosion is detected.

**Surfaces not subject to natural washing**

If the surfaces are not exposed to the natural process of washing with , then these surfaces need to be cleaned once a year, i.e:

- > wash once a year.
- > Systematically and immediately treat any parts that show incipient corrosion for any reason.