

PRODUCT DATA SHEET

TACAB PASSIVATOR

DESCRIPTION

TACAB Passivator for use after mechanical de-scaling treatment of stainless steel such as grinding, polishing and blasting. These processes leave a surface sensitive to corrosion. Passivator removes surface contaminants and iron particles from the stainless steel surface and restore the protective chromium oxide layer (passive layer).

PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Colorless liquid
 Odor: Pungent
 PH Value: <1,5 (10 g/l)
 Solubility: Fully soluble and miscible
 Content: Nitric acid

ADVANTAGES

- ❖ Passivation after mechanical treatments such as grinding and blasting.
- ❖ Passivation after pickling.
- ❖ Accelerates rebuilding of the protective layer of chromium oxide.
- ❖ Removes surface contaminants and iron particles from the stainless steel surface.

AREAS OF USE

Can be applied with a brush or by spraying or dipping.

DIRECTION FOR USE

1. Apply TACAB Passivator by brush, spraying or dipping.

Brush:

The surface should be kept wet during treatment. Therefore, several rounds of brushing may be needed.

Spraying (apply the liquid with a custom spray equipment):

The surface should be kept wet during treatment. Therefore, several rounds of spraying may be needed.

Dipping: The details are lowered into a bath and the whole detail must be below the surface.

2. Recommended working time: 25 minutes at 20 °C.
3. Rinse thoroughly with fresh water. Preferably use high pressure rinsing. No residues of TACAB Passivator may remain after rinsing. Use drinking water quality with low chloride content, preferably below 50 ppm. (For best results or if requirement so indicates use deionized water).
4. Handle rinsing water accordingly in accordance with local regulations.

PACKAGE SIZES

Can - 25 kg.

DURABILITY

The shelf life of unopened TACAB products is 3 years.
 1 year for opened packaging.



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SAFETY PRECAUTIONS

PERSONAL SAFETY

Full protective mask must be used as the product develops dangerous fumes. The protective mask must be fitted with a type B (gray) respiratory filter and a P2 particle filter. The product can cause severe burns on skin contact. This is avoided by using acid-proof overalls, gloves and boots. For more information see the product's safety data sheet.

STORAGE

TACAB products should be stored indoors at room temperature. They should be kept standing and closed. Storage should be done in a limited area and inaccessible to unauthorized persons.

WASTE DISPOSAL

Waste and residues of this product and contaminated packaging must be taken care of as hazardous waste. Remains must not be released into sewers or watercourses or into the environment (for more information see the product's safety data sheet). Consult local authorities for information on waste management.

INFORMATION ABOUT PASSIVATION OF STAINLESS STEEL WITH AIR

Several passivation treatments may be used as described in ASTM A 380 and in ASTM A 967. The choice of surface treatment for a certain application is often based on tradition rather than insight. Although there are other options of passivation solutions, the overwhelming choice is still the nitric acid based solutions (such as TACAB Passivator).

More recently, passivation in air is included in these standards.

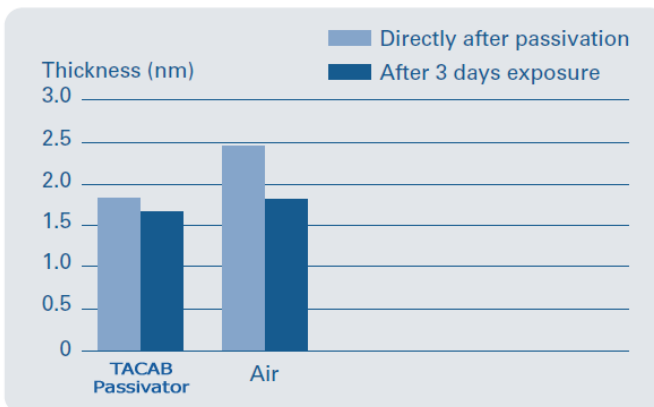
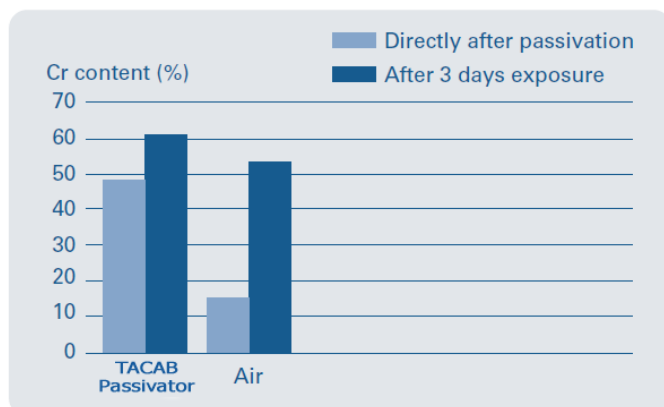
Passivation with air:

The stainless steel surface will after the pickling and rinsing procedure spontaneously react with the oxygen in the air.

This chemical reaction starts on the surface of the metal, which will be covered by a layer of oxide after a relatively short period (one day). The oxide layer will then serve as a kind of protective barrier between the air and the metal (passivation layer).

If there is time (minimum one day), passivation will happen naturally.

If the stainless steel detail is to be used immediately, it is necessary to passivate with TACAB Passivator.



Conclusions

- The passive film adjusts itself after the environment and reaches an equilibrium state with optimum properties after approximately one day.
- Passivation with nitric acid decreases the time to equilibrium and the positive effect is obtained faster than for air passivation.
- Duration studies show that the treatments have the same effect, after maximum 3 days, when regarding corrosion resistance.
- **Chemical passivation treatments are not essential as the passive film forms spontaneously in the presence of oxygen. When applied to stainless steels, the main function of a chemical passivation treatment is to clean the surface.**