

Stainless steel surface treatment technology
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DRY PASSIVATION TECHNOLOGY FOR STAINLESS STEEL 300 Serie

NEW: Step-by-step color rags – more absorbent, more effective, no confusion. Color code: Blue (E1), Green (E2), Red (E3), White (E4).

TECHNICAL DATA SHEET

Introduction

Passivation or passivity represents a state of metals or alloys in which their rate of corrosion is slowed by the presence of a natural passive film, compared to what it would be in the absence of this film. In the case of stainless steel this passive film appears spontaneously by oxidation, because the oxide formed on the surface is insoluble and constitutes an obstacle which slows down the subsequent processes. In an aqueous medium, the formation of this film is related to a range of electrochemical potential as well as to a pH range in which the oxide is stable. As a result, the passive film is formed in the air before the part is put into service

In some cases, the use of water is a big challenge (for example, near electrical circuits, schools, hospitals, drinking water station, etc.). For this type of situation, we have created single use pads, soaked in products specially designed to eliminate fat film, decontaminate the surface of the presence of free iron, create chromed oxide film, neutralize trays acid and then release the surface of all possible contamination using easy-evaporate cleaning agents. This last step ensures an unbeatable quality of surface passivity.

CODES AND DESCRIPTION

Code	Nom	Description	PADS SIZE
KP-T21	KPNOX T21	DEGREASING PADS bleu	11X11 INCH
KP-T22	KPNOX T 22	PASSIVATION AND DECONTAMINATION PADS GREEN	11X11 INCH
KP-T23	KPNOX T23	ACID NEUTRALIZATION PADS. RED	11X11 INCH
KP-T24	KPNOX T24	VALIDATION & INSPECTION PADS AND SOLUTION. YELLOW	11X11 INCH

PADS KP-T21-T24 are designed to passivate the surface of stainless steel in cases where the use of rinse water is difficult to implement.

PRECAUTIONS: Wear rubber boots, waterproof POLYURETHANE COATED gloves, plastic lab coat and goggles. Avoid all contact with skin and eyes. Keep away from all sources of ignition. Handle in a well-ventilated area.

FIRST AID: If you feel unwell, move to a well-ventilated place. If the person is no longer breathing, give artificial respiration and consult a doctor. In case of contact with eyes, rinse with plenty of water and seek medical advice. See SDS.

STORAGE AND HANDLING: Store in a cool, well-ventilated place. Keep away from heat, sparks and flame. Keep away from caustic or alkaline solutions of reducing agents. Keep containers tightly closed.

DIRECTION

Stainless-Steel Passivation Procedure (KP-T Series Pads)

Critical precondition: Heat-affected (thermal) zones must be removed by chemical or mechanical stripping *before* applying this procedure.

Scope: Field cleaning, passivation, and verification of stainless-steel surfaces in accordance with ASTM A380 and ASTM A967. Coverage: Use one pad per 10-20 ft² of surface area (typical).

1. Degreasing – KP-T21 Lightly rub the surface with a KP-T21 pad in circular motions for ≥ 3 minutes (or until oils/soil are removed). *Reference: ASTM A380, §6.2.1.*
2. Dry with a paper towel.
3. Passivation – KP-T22 Using a KP-T22 pad (citric acid buffer, ~15% per ASTM A967, §7.1.1.3), rub the surface in circular motions for ≥ 5 minutes or until visible rust is removed. A stainless-steel brush may be used as needed. Then dry with a clean paper towel
4. Neutralization – KP-T23 Lightly rub the surface with a KP-T23 pad in circular motions for ≥ 3 minutes.
5. Wipe dry with a clean paper towel.
6. Finalization & Inspection – KP-T24 Scrub the entire surface with KP-T24 pads until a white cloth/rag wipes clean, indicating the surface is free of residual contaminants.
7. Verification Test (Ferroxyl or Copper Sulfate) Perform a Ferroxyl test (KPNOXTEST) or Copper (II) sulfate test (KPNOX CuSO₄) per ASTM A380 and ASTM A967.
 - If the test indicates free iron/contamination, repeat Steps 3-6 and retest.
 - If the Ferroxyl test is negative, the surface is considered decontaminated.
See the respective TDS for test-solution preparation.
8. Post-Test Cleaning Immediately clean the tested area with 95% ethanol or deionized water and dry.
9. Compliance & Documentation When the surface passes verification, it meets ASTM A380 and A967 requirements, and a passivation certificate may be issued.

*To avoid dripping, wring out the pad into the bag.

This method ensures a perfect passivation of the surface of stainless steel.

For any questions, please call groupe kemplus inc at +1-514-333-0754