

# KPNOX $\text{CuSO}_4$

## PASSIVATION TEST FOR STAINLESS STEEL



Made in / Fabriqué au Canada 🇨🇦

**THE COPPER SULFATE TEST MEETS THE REQUIREMENTS OF ASTM A967, ASTM A380, ASTM B912, ASTM F1089, AMS 2700**

The copper sulphate test is intended to verify the effectiveness of the passivation treatment of stainless steel. It can also be used to determine if there is a need for passivation.

The purpose of the copper sulfate test is to determine the presence of free iron which is often transferred to the surface of a part during fabrication with steel components. The principle of the test is based on an oxidation-reduction reaction which causes the deposit or deposition of dissolved copper ions at the locations of free iron particles. This test is recommended for the detection of free iron on the surface of 200 and 300 series austenitic stainless steels, precipitation hardened stainless steels and 400 series ferritic stainless steels having a minimum of 16% chromium. This test is not recommended for 400 series martensitic stainless steels or 400 series ferritic stainless steels containing less than 16% chromium, as these steels will generally give a positive indication regardless of the presence or absence of anodic surface contaminants (a "false failure"). This test is also not recommended for laser marked areas.

For more information about our products and customized solutions, or for a free demonstration, contact us:

T. 1-514-333-0754 | E. [info@gkemplus.com](mailto:info@gkemplus.com)  
F. 1-514-333-5780 | W. [gkemplus.com](http://gkemplus.com)

### DIRECTIONS

The test solution is applied to the surface of the sample(s) representing the batch of passivated parts, applying additional solution as necessary to keep the surface wet for a period of at least 6 minutes. At the end of this period the surface should be thoroughly rinsed and dried taking care not to disturb any copper deposits if present. The test sample must not show copper deposits visible to the naked eye

A copper color on the metal surface (brown or pinkish) indicates that surface iron was still present and is considered a test failure. If no reaction occurs it is considered a test pass.

### PACKAGING

60 mL

### STORAGE AND HANDLING

Store in a cool, well-ventilated area. Keep away from heat, sparks and flames. Keep away from caustic solutions and alkaline reducing agents. Keep containers well closed.

### NEUTRALIZATION METHOD

Residues and contaminated water must be neutralized to pH 6-8. Heavy metals released in the cleaning of stainless steel must be disposed of, along with residues and neutralized solutions, in facilities authorized to treat hazardous waste in compliance with applicable regulations.

### PRECAUTIONS

Wear rubber boots, impervious gloves, a plastic apron and protective glasses. Avoid all contact with skin. Keep away from sources of ignition. Handle in a well-ventilated area or wear a suitable breathing apparatus. Use non-metallic tools.

### FIRST AID

In case of discomfort, move to well-ventilated area. If a person has stopped breathing, administer artificial respiration and get medical attention. In case of contact with eyes, flush thoroughly with water and get medical attention. See Safety Data Sheet.