

Please Read Carefully

General Instructions

HexChecks™ Testing Swabs are an instant field test for the detection of hexavalent chromium (Cr (VI)) ions also called Chrome (VI) on any surface. Chemicals containing hexavalent chromium are frequently used in industry. Cr (VI) can enter the environment through many processes such as, but not limited to, plating operations, paint primers, abrasive blasting, and sanding processes.

When HexChecks™ Testing Swabs come in contact with hexavalent chromium, the Swab tip turns a pink/purple color. The intensity of the color development is directly related to the amount of hexavalent chromium present.

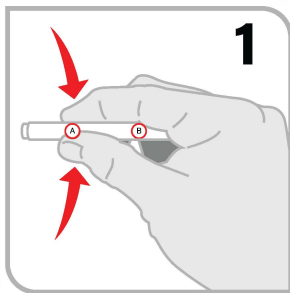
Sensitivity: < 0.1 microgram on solid surfaces
Specificity: Specific for hexavalent chromium ions (CrO_4^{2-})
Stability: Indefinite shelf life
Interferences: Contact Figure Engineering for more information

HexChecks™ Testing Swabs contain glass ampoules of testing chemicals. For ALL TESTING APPLICATIONS, use the steps found in the HOW TO USE SWAB section.

HexChecks™ Testing Swabs are a screening test. It is not intended to be a quantitative test for hexavalent chromium. Please consult a certified laboratory to quantify a HexChecks™ Testing Swab result.

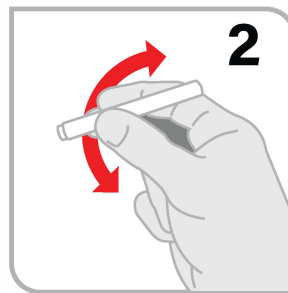
How To Use Swab

Surface Preparation: Do not clean the surface before testing. The surface of the part may contain dust or other impurities that contain hexavalent chromium. Do not cut a notch into the surface. This test is for surface contamination. Cutting into the surface is not necessary.



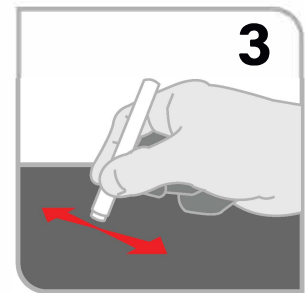
1. CRUSH:

Squeeze and crush points marked "A" and "B" located on the barrel of the swab.



2. SHAKE AND SQUEEZE:

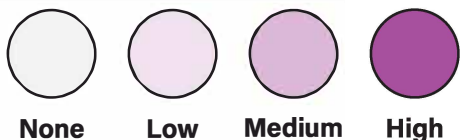
With the porous fiber swab tip facing down, shake twice and squeeze gently until the liquid comes to the tip of the swab. **THE SWAB IS NOW ACTIVATED FOR TESTING.**



3. RUB:

While squeezing, gently rub the swab on the test area for 30 seconds.

4. Wait: After two to three minutes a pink to purple color appears on the tip of the swab if Chrome VI is present.



5. Identify: The intensity of the color provides an estimation of the Cr (VI) content inside the sample.

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Dangers of Hexavalent Chromium

Hexavalent chromium is a toxic form of the element chromium. Hexavalent chromium compounds are man-made and widely used in many different industries.

Some major industrial sources of hexavalent chromium are:

- chromate pigments in dyes, paints, inks, and plastics
- chromates added as anti-corrosive agents to paints, primers and other surface coatings
- chrome plating by depositing chromium metal onto an item's surface using a solution of chromic acid
- particles released during abrasive blasting or sanding of aerospace parts
- fume from welding stainless steel or nonferrous chromium alloys
- impurity present in portland cement.

Hexavalent Chromium is known to cause cancer. NIOSH considers all Cr(VI) compounds to be occupational carcinogens. Health effects associated with Cr(VI) exposure include occupational asthma, eye irritation and damage, perforated eardrums, respiratory irritation, kidney damage, liver damage, pulmonary congestion and edema, upper abdominal pain, nose irritation and damage, respiratory cancer, skin irritation, and erosion and discoloration of the teeth. Some workers can also develop an allergic skin reaction, called allergic contact dermatitis. Allergic contact dermatitis is long-lasting and more severe with repeated skin exposure. Furthermore, contact with non-intact skin can lead to ulceration of the skin sometimes referred to as chrome ulcers. Chrome ulcers are crusted, painless lesions showing a pitted ulcer covered with fluid.

Common Surfaces to Test

Materials: Steel, aluminum, paint, plastic

General Surfaces: Tables, walls, door handles, floors

Areas: Break room facilities, food preparation areas, keyboards

Work Surfaces: surrounding abrasive blast booths, paint facilities, welding and grinding areas, PPE Lockers

Testing Precautions

- **DO NOT touch swab tip - wash hands after use.**
- **Surfaces which become pink or purple during testing may be washed with an all purpose cleaner.**

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