

## 12 Cobalt Dichloride – Patient Information

Your T.R.U.E. TEST results indicate that you have a contact allergy to cobalt. Cobalt in contact with your skin may result in dermatitis. This contact allergy may cause your skin to react when it is exposed to this substance, although it may take several days for the symptoms to appear. Typical symptoms include redness, swelling, itching and fluid-filled blisters.

Cobalt is a silvery metal with many properties similar to those of iron and nickel. Cobalt is used with other metals to make metal alloys.

### Where is cobalt found?



*At work*, you may find cobalt in:

- Bricks and cement
- Metal carbide manufacturing, etching, grinding, welding and metal working materials
- Cobalt-based pigments, additives and drying agents in paints
- Catalyst/promoter in resins and plastics
- Printing inks
- Cobalt-based pigments and glazes during pottery manufacture and finishing
- Orthopedic and dental implants, dental prosthesis

Major industrial use of cobalt is in alloys or as a binder of tungsten in hard metals, Cobalt is present in magnets, welding rods (also in the smoke) and welding stainless steel. Industrial exposure to cobalt can also arise from glass, lubricating oils and animal feeds. It is used in the rubber tire industry, as an oxidising agent in automobile exhaust control and as a catalyst or accelerator for the production of terephthalate, polyester and acrylate plastics.



*At home*, you may find cobalt in:

- Cobalt-based pigments, additives and drying agents in ceramic paints and glazes
- Some spray paints and enamels, wood stains, paints and finishes
- Bricks and cement
- Etching and grinding metal carbides
- Metal tools, utensils and objects such as keys, magnets, clothing fasteners, and jewelry
- Orthopedic and dental implants, dental prosthesis
- Vitamin B12 supplements

Further cobalt is used as pigments in light brown hair dyes and makeup, is sometimes used in blue tattoos, and may be found in solid soaps.

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### How can you avoid cobalt?

- Only use products that do not list cobalt or related chemicals on the label, ingredients list or Material Safety Data Sheet (MSDS). If there is no information, contact the product manufacturer.
- Because cobalt and nickel can be found in many of the same metal products, allergies to both metals can develop. To prevent this, consider wearing jewelry made of sterling silver or other precious metals, rather than costume jewelry. Coat or cover the handles of frequently handled metal objects likely to contain cobalt.
- Metallic items that are difficult to avoid such as keys may be coated with several layers of clear nail polish or polyurethane lacquer. Larger objects can be covered with plastic, for example for hairdressers and textile workers who use metal tools throughout the day. If possible select scissors and tools with handles of plastic, wood or high quality stainless steel.
- Reactions to metal instruments used by dentists and physicians are unlikely because skin contact is too brief. Reactions to metal dental appliances and orthopedic implants are rare.
- Avoid work exposure from metallic dust and cobalt etching, metal salts of electroplating, wet cement and wet alkaline clay containing cobalt, paints, laquers, varnishes, printing inks, and animal feed enriched with cobalt salts. If possible avoid wet work since moisture increases the penetration of cobalt into the skin.
- Tell your physician, pharmacist, dentist, veterinarian, beautician and hairdresser that you are allergic to cobalt. Ask for products that do not contain cobalt or related substances.
- If you must contact products that contain cobalt, wear protective gloves. Heavy-duty gloves made of natural or synthetic rubber, or vinyl, can provide sufficient protection when working with liquids or wet cement and clay. Fabric or leather gloves can protect your hands from cobalt while working with dry metal, ceramics or cement products.
- If you think that you contact cobalt at work, ask your employer for MSDS or manufacturer information on the product(s). Talk to your employer about using a different product or wearing protective gloves and clothing.

### What should you look for and avoid?\*

Avoid products that list any of the following names in the ingredients, MSDS or package insert.

- **Cobalt** or cobalt dust and fume; cobalt metal and metal powder

Cobalt-related substances that you may also react to:

- Nickel
- Chromate

### Synonyms for cobalt:

- Cobalt blue
- Cobaltous chloride
- Cobalt dichloride
- Hexahydrate
- Cobalt chloride
- Cobaltous chloride hexahydrate
- Cobalt (II) chloride hexahydrate

### What are some products that may contain cobalt?\*

- Metal costume jewelry, piercings, and hair ornaments
- Cobalt-based pigments in paints, enamels, inks and glazes
- Metal fasteners including buttons, zippers, snaps, hooks, rivets, buckles, pins
- Metal tools, equipment, utensils and keys

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### What products may NOT contain cobalt?\*

- Stainless steel, plastic, gold (18k) or silver jewelry or decorative items
- Stainless steel tools and utensils, or any with plastic coated handles
- Titanium or stainless steel orthodontic materials and ceramic brackets
- Organic non-metallic pigments for paints, enamels, inks and glazes

\*For additional information about products that might contain cobalt or a related substance, go to the Household Product Database online (<http://householdproducts.nlm.nih.gov>) at the United States National Library of Medicine. These lists are brief and provide just a few examples. They are not comprehensive. Product formulations also change frequently. Read product labels carefully and talk to your doctor if you have questions. These are general guidelines. Talk to your doctor for more specific instructions