

22 Mercapto Mix – Patient Information

Your T.R.U.E. TEST results indicate that you have a contact allergy to mercapto mix. 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.

Mercapto mix contains the following three substances:

- N-Cyclohexylbenzothiazyl-sulfenamide
- Dibenzothiazyl disulfide
- Morpholinylmercaptobenzothiazole

You may contact these substances when using, wearing or handling rubber-based products at work or at home. Work shoes and athletic shoes are often made with rubber components that contain mercapto mix or related substances.

Where is mercapto mix or one of its components found?



At work, you may find mercapto mix or one of its components in:

- **Industrial and safety products** made with natural rubber, butyl rubber, nitrile or neoprene - such as boots, shoes, adhesives, plugs, goggles, mats, headphones, masks, respirators, aprons, gloves, cords, tubing, insulation, and sheeting
- **Office products** made with natural rubber, nitrile or neoprene - such as rubber bands, erasers, mats, and utility gloves
- **Health care equipment** made with natural rubber, butyl rubber, nitrile or neoprene - such as medical and utility gloves, masks, bed sheeting, dental dams, anesthesia equipment, aprons, and tubing
- **Sports equipment** made with natural rubber, butyl rubber, nitrile or neoprene - such as wetsuits, shoes, boots, masks, racquet and club handles



At home, you may find mercapto mix or one of its components in:

- **Household products** made with natural rubber, butyl rubber, nitrile or neoprene - such as rubber bands, ear- and headphones, masks, condoms and diaphragms, goggles, shoes, utility gloves, swimwear, toys, hoses, tubing, and elastic
- **Sports equipment** made with natural rubber, butyl rubber, nitrile or neoprene - such as shoes, wetsuits, boots, masks, racquet and club handles

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How can you avoid mercapto mix or one of its components?

- Avoid direct skin contact with rubber products in your car, at work and at home. Use rubber-free alternatives made of vinyl, plastic, leather, wood or fabric. Avoid rubber boots, shoes and insoles.
- Use fabric or plastic films to handle rubber products and avoid direct skin contact.
- Only use products that do not list mercapto mix, one of its components, or related chemicals on the label, ingredients list or Material Safety Data Sheet (MSDS).
- Tell your physician, pharmacist, dentist, veterinarian, beautician and hairdresser that you are allergic to mercapto mix, which is often used in rubber products. Ask for products that do not contain mercapto mix or related substances.
- Wear protective gloves and clothing made of leather, fabric, plastic or rubber that is free of mercapto mix and related substances.
- Use heavy duty non-rubber gloves (Allerderm® Heavy Duty vinyl or Silvershield®/4H® gloves) when working with chemicals that might contain mercapto mix or one of its components.
- If you think that you contact mercapto mix or a related substance 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 different 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.

- **N-Cyclohexylbenzothiazyl-sulfenamide** or cyclohexyl benzothiazolesulfenamide; 2-(cyclohexylaminothio)benzothiazole; benzothiazyl-2-cyclohexylsulfenamide
- **Dibenzothiazyl disulfide** or 2,2'-cithiobis(benzothiazole); dibenzothiazolyl disulfide; 2,2'-bis(benzothiazolyl) disulfide; 2,2'-dibenzothiazyl disulfide; 2-mercaptobenzothiazole disulfide
- **Morpholinylmercaptobenzothiazole** or 2-benzothiazolyl morpholino disulfide; 2-morpholinodithiobenzothiazole; benzothiazole 2-(4-morpholinyl); 4-morpholinyl 2-benzothiazyl disulfide; benzothiazole, 2-(4-morpholinyl)dithio)

Because mercapto mix is used in certain types of rubber products, you may also react to other substances used in the manufacture of rubber, such as *thioureas*. If your skin is regularly exposed to rubber, you may develop reactions to other substances in rubber, such as *thiurams*, *carbamates* and *mercapto mixes*.

What products may NOT contain mercapto mix substances?*

- Elastyfree® and ElastyLite® surgical gloves (thermoplastic copolymer)
- N-Dex® Free Ultimate nitrile exam gloves
- Products made entirely of vinyl (PVC), plastic, silicone, polyurethane, polyethylene or acrylates
- Ultra Preserve® neoprene surgical and exam gloves
- Allerderm® Vinyl medical exam gloves (powder free)
- Allerderm® Heavy Duty Vinyl utility gloves
- Silvershield®/4H® chemically resistant gloves
- True Advantage® nitrile surgical and exam gloves

*For additional information about products that might contain mercapto mix substances, 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.