

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

Thiuram mix contains the following four substances:

- Tetramethylthiuram monosulfide
- Disulfiram (tetraethylthiuram disulfide)
- Tetramethylthiuram disulfide
- Dipentamethylenethiuram disulfide

These substances are used as fungicides and pesticides and in the manufacture of many rubber products. You are most likely to contact this substance when using, wearing or handling natural or synthetic rubber products at work or at home.

WHERE IS THIURAM MIX OR ONE OF ITS COMPONENTS FOUND?

At work, you may find thiuram 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, and racquet and club handles
- Chemicals used to prevent mildew or mold
- Agricultural chemicals used as fungicides, seed protectants and pesticides

At home, you may find thiuram 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, and racquet and club handles
- Chemicals for the garden such as fungicides, pesticides and animal repellents

HOW CAN YOU AVOID THIURAM 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.
- Use fabric or plastic films to handle rubber products and to avoid direct skin contact.
- Only use products that do not list thiuram mix, one of its components, or related chemicals on the label, ingredient list or Material Safety Data Sheet (MSDS).
- Tell your physician, pharmacist, dentist, veterinarian, beautician and hairdresser that you are allergic to thiuram mix, which is often used in rubber products. Ask for rubber products that do not contain thiuram mix or related substances.
- Wear protective gloves (fabric or leather) when handling dry rubber goods at work and at home.
- Use heavy duty nonrubber gloves (SmartPractice[®] Heavy Duty vinyl or Silvershield[®]/4H[®] gloves) when working with chemicals that might contain thiuram mix or one of its components.
- If you think that you contact thiuram mix or one of its components at work, ask your employer for MSDS or manufacturer information on the product(s). Wear protective clothing when handling items such as rubber hoses, seals, and cables. Talk to your employer about using a different product.

WHAT SHOULD YOU LOOK FOR AND AVOID?*

Avoid products with thiurams or the following names in the list of ingredients, MSDS, or package insert.

- Tetramethylthiurammonosulfide or bis(dimethylthiocarbamoyl) sulfide; tetramethylthiuram sulfide; tetramethyldithiocarbamic acid anhydrosulfide; sulfide, bis(dimethylthiocarbamoyl)
- Tetramethylthiuramdisulfide or thiram; bis(dimethyl thiocarbamoyl)disulfide; tetramethylthioperoxydicarbonic diamide; N,N'-(dithiodicarbonothioyl)bis(N-methylmethanamine); tetramethylthiocarbamoyldisulphide
- Disulfiram or 1,1'-dithiobis(N,N-diethylthioformamide); bis(N,N-diethylthiocarbamoyl) disulfide; tetraethylthiuram disulfide; tetraethylthioperoxydicarbonic diamide
- Dipentamethylenethiuramdisulfide or disulfide, bis(1-piperidinylthioxomethyl); bis(pentamethylene)thiuram disulfide; 1,1'-(dithiodicarbonothioyl)bis(piperidine)

If your skin is regularly exposed to rubber, you may develop reactions to other substances commonly used in the manufacture of rubber such as mercapto-benzothiazoles, mercapto mix and thioureas.

WHAT ARE SOME PRODUCTS THAT MAY CONTAIN THIURAM MIX OR RELATED SUBSTANCES?*

- Antabuse[®] medication for alcoholism
- Gloves, condoms, bottle nipples and other products made of natural rubber, butyl rubber, nitrile, or neoprene

WHAT PRODUCTS MAY NOT CONTAIN THIURAM MIX OR RELATED SUBSTANCES?*

- Products made entirely of vinyl, plastic, silicone, polyurethane, polyethylene or acrylates

*These lists are brief and provide just a few examples. Read product labels carefully and talk to your doctor if you have any questions. Product formulations may change from time to time without notice. Talk to your doctor for specific instructions. For additional information about products that might contain **thiuram mix** or a related substance, go to the Household Products Database online (householdproducts.nlm.nih.gov) at the United States National Library of Medicine.