

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

Carba mix contains the following three allergens:

- Diphenylguanidine
- Zinc dibutyldithiocarbamate
- Zinc diethyldithiocarbamate

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

WHERE IS CARBA MIX OR ONE OF ITS COMPONENTS FOUND?

At work, you may find carba mix or one of its components in the manufacturing or use of:

- 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 as fungicides or to prevent mildew or mold

At home, you may find carba 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
- Fungicides and pesticides used in the garden

Carba mix chemicals also can be found in some soaps, shampoos, disinfectants and adhesives as well as in anti-rust products.

HOW CAN YOU AVOID CARBA 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.

Some surgical gloves are labeled “hypoallergenic and rubber free” and are made of synthetic materials free of latex and all rubber accelerators. Examples are some gloves made of a synthetic co-polymer of styrene and butadiene, polyvinyl (PVC) or nitrile. Articles made with PVC, polyvinyl acetate or silicone are also suitable alternatives.

- Use fabric or plastic films to handle rubber products and to avoid direct skin contact.

Avoid rubber insoles, rubber boots and rubber shoes such as sneakers and tennis shoes. Wear solid leather shoes with no inner or outer soles, such as moccasins. If in doubt, wear new shoes for a few days and watch for a rash. Try insoles free of carba mix chemicals to see if insoles makes dress shoes wearable for you.

Beware of socks and stockings worn with shoes containing carba mix chemicals. The carba mix chemicals can contaminate the shoes and do not wash out.

- Only use products that do not list carba 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 carba mix, which is often used in rubber products. Ask for rubber products that do not contain carba mix or related substances.
- Wear protective gloves and clothing made of leather, fabric, plastic or rubber that is free of carba mix and related substances.
- Use heavy duty nonrubber gloves (SmartPractice[®] Heavy Duty vinyl or Silvershield[®] 4H[®] gloves) when working with chemicals that might contain carba mix or one of its components.
- If you think that you contact carba 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 carba mix or the following names in the list of ingredients, MSDS, or package insert.

- Diphenylguanidine or 1,3-Diphenylguanidine; N,N'-Diphenylguanidine
- Zinc dibutyldithiocarbamate or bis(N,N-dibutyldithiocarbamato)zinc; carbamic acid dibutyldithio-, zinc complex; zinc bis(dibutyldithiocarbamate)
- Zinc diethyldithiocarbamate or diethyldithiocarbamic acid zinc salt; zinc bis(diethyldithiocarbamate); zinc diethylcarbamodithioate

You also may react to the following substances because they are similar to carbamates:

- Tetramethylthiuram monosulfide
- Tetramethylthiuram disulfide
- Dipentamethylenethiuram disulfide
- Disulfiram
- Manganese salts of diethyl- or dibutyl-dithiocarbamates

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

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

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

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

- Products made entirely of vinyl, plastic, silicone, polyurethane, polyethylene, or acrylates
- Gloves made of vinyl, polyurethane, polyethylene, or special thermoplastic elastomers
- Nitrile or neoprene gloves manufactured without carbamates or thiurams
- Fungicides without carbamates

*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 **carba mix** or a related substance, go to the Household Products Database online (householdproducts.nlm.nih.gov) at the United States National Library of Medicine.