

## NA18: Carba Mix

### Patient Information

Your patch test result indicates 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.

### Where is carba mix found?

Carba mix contains the following three allergens: Diphenylguanidine, Zincdibutylthiocarbamate, and Zincdiethyldithiocarbamate.

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.

### How can you avoid contact with carba mix?

Avoid products that list any of the following names in the ingredients:

- Diphenylguanidine
- 1,3-Diphenylguanidine
- N,N'-Diphenylguanidine
- Zincdibutylthiocarbamate
- bis(N,N-dibutylthiocarbamate)zinc
- carbamic acid dibutylthio-, zinc complex
- zinc bis(dibutylthiocarbamate)
- Zincdiethyldithiocarbamate
- diethyldithiocarbamic acid zinc salt
- zinc bis(diethyldithiocarbamate)
- zinc diethylcarbomodithioate

### What are some products that may contain carba mix?

- Antabuse (medication for alcoholism)
  - Mancozeb Fungicides:
    - Dithane® M-45
    - Manoseb
    - Penncozeb®
  - Maneb Fungicides:
    - Dithane® M-22
    - Manesan
    - Manzate
  - Rubber Goods:
    - Boots
    - Condoms
    - Ear-and headphones
    - Goggles
    - Masks
    - Rubber bands
    - Swimwear
    - Tubing
    - Wetsuits
    - Other products made of natural rubber, butyl rubber, nitrile, or neoprene
  - Zineb Fungicides:
    - Dithane Z-78
    - Micide
    - Parzate
    - Polyram Z
- Mancomix
  - Marzin
  - Zinmaneb
  - Lonocol M
  - Manex
  - Polyram® M
  - Bottle nipples
  - Diaphragms
  - Elastic
  - Hoses
  - Racquet and club handles
  - Shoes
  - Toys
  - Utility gloves
  - Funjeb
  - Novosir
  - Perosin

You may also react to these substances because carbamates and thiurams are very similar:

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

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.

\*For additional information about products that might contain **carba mix**, go to the Household Product Database online ([householdproducts.nlm.nih.gov](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 any questions. These are general guidelines. Talk to your doctor for more specific instructions.

Dithane is a trademark of Dow AgroSciences, LLC. Penncozeb is a trademark of United Phosphorus, Inc. Polyram is a trademark of BASF Aktiengesellschaft Corp.