

16 Black Rubber Mix – Patient Information

Your T.R.U.E. TEST results indicate that you have a contact allergy to black rubber mix chemicals. Black rubber mix chemicals in contact with your skin may result in dermatitis. Brief or occasional contact may not pose a problem. 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.

Black rubber mix contains the following three substances:

- N-isopropyl-N'-phenyl paraphenylenediamine
- N, N'-diphenyl paraphenylenediamine
- N-cyclohexyl-N'-phenyl paraphenylenediamine

These allergens are rubber additives known as antioxidants, and since they discolor the rubber, these additives are used primarily to produce black rubber.

Where is black rubber mix or one of its components found?



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

- **Manufacturing of black rubber products** such as tires, belts, masks, hoses, cables, aprons, gaskets, flanges, stoppers, shoes and boots, sheeting and flooring
- **Black rubber components** on health care and laboratory equipment
- **Office products** made with black rubber components such as feet and wheels on equipment

The black rubber mix ingredients are used less often in products for home use, but they may be found in certain types of rubber articles.



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

- **Household products** made with black rubber such as masks and goggles, shoes, and tires, watchbands, underwear elastic, stockings, dental tips
- **Sports equipment** made with black rubber - such as boots, masks, squash balls, racquet and club handles

The black rubber mix ingredients are not usually used in the manufacture of rubber gloves for domestic or hospital use.

Hair dyes and textile dyes may cross react with the black rubber mix chemicals.

16 Black Rubber Mix

How can you avoid black rubber mix or one of its components?

- Avoid skin contact with black and dark gray rubber. If an object looks like it is made of rubber and it is black, it probably will be a problem. Avoid black rubber sports equipment. Carry vinyl gloves, in your car, in case of a tire change. Use caution when handling other parts that may contain rubber.
- Workers with allergy may experience a problem handling rubber hoses, seals and cables. If you suspect that you are being exposed to this allergen at work, consult your employer regarding Material Safety Data Sheet.
- Only use products that do not list black rubber mix or one of its components or related chemicals on the label, ingredients list or Material Safety Data Sheet (MSDS). If there is no information, contact the product manufacturer.
- Tell your physician, pharmacist, dentist, veterinarian, beautician and hairdresser that you are allergic to black rubber mix or one of its components.
- If you must handle black rubber products, wear protective gloves. Utility or disposable gloves made of fabric, natural or synthetic rubber, or vinyl, are good for working with products made with black rubber mix or one of its components.
- If you think that you contact black rubber mix or one of its components 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 black rubber mix or any of the following names in the ingredients, MSDS or package insert.

- **N-Isopropyl-N'-phenyl-paraphenylenediamine** or N-phenyl-N'-isopropyl-p-phenylenediamine
- **N-Cyclohexyl-N'-phenyl-paraphenylenediamine** or N-cyclohexyl-N'-phenyl-1,4-benzenediamine
- **N,N'-Diphenyl-paraphenylenediamine** or diphenyl-p-phenylenediamine; 1,4-dianilinobenzene; p-phenylaminodiphenylamine; p-bis(phenylamino)benzene; 4,4'-diphenyl-p-phenylenediamine

Common trade names:

N-Phenyl-N'-cyclohexyl-p-phenylenediamine (CPPD)

Phenylcyclohexyl PPD

Flexzone™ GH

N-Isopropyl-N'-phenyl-p-phenylenediamine (IPPD)

Akrochem®

Flexzone 3-C

Antioxidant

IPPD

ANTO "H"™

Permanex™

IP

PD1

Isopropyl 0 PPD

Santoflex®

N,N'-Diphenyl-p-phenylenediamine (DPPD)

Diphenyl® PPD

16 Black Rubber Mix

What are some products that may contain black rubber mix or one of its components?*

- Products made with black rubber such as tires and wheels, industrial belts, masks and goggles, boots and shoes, sports equipment, plugs and stoppers.

What products do NOT contain black rubber mix or one of its components?*

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

*For additional information about products that might contain black rubber mix 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.