

FORMALDEHYDE

_____ Name

_____ Date

also called... formalin, formic aldehyde, methanal, methyl aldehyde, methylene oxide, oxomethane, oxymethylene, morbidic acid. Formaldehyde is released by these common preservatives: **quaternium-15** (Dowicil or 1-(3-chloroallyl)-3,5,7-triaza-1-azonia-adamantane-chloride), **DMDM hydantoin** (Glydant or 1,3-dimethylol-5,5-dimethylhydantoin), **diazolidinyl urea** (Germall II), **imidazolidinyl urea** (Germall, imidurea), **2-bromo-2-nitropropane-1,3-diol** (Bronopol), and in industry **tris nitromethane** (Tris Nitro).

What is it?

Formaldehyde is a disinfectant and preservative.

Where might it be found?

Make-up remover, toner
Moisturizing cream, lotion
Make-up, concealer, powder
Blush, bronzer
Mascara, eye pencil, shadow
Shampoo, body cleanser
Hair conditioner, tonic, spray
Hair styling gel, mousse
Sunscreen, sunless tanner
Body powder, talcum powder
Mouthwash
Aftershave, antiperspirant
Bubble bath, liquid soap
Feminine hygiene spray, rinse
Nail polish, cuticle remover
Fingernail hardener
Dishwashing liquid, cleaner
Laundry starch, anti-static
Facial tissue
Moistened tissue, baby wipes
Paper, paper products, pulp
Newsprint, cardboard
Magazines, glazed paper
Grocery sacks, plastic bags
Wet-strength paper towels
Currency, paper money
Photocopier toner
Root canal disinfectant
Orthopedic casts
Foam insulation
Bonded leather
Fire-resistant clothing
Fertilizer
Pet care products

Photographic developer
Mildew resistant finish, preservative
Embalming fluid, tissue fixative
Waterproof glue, adhesive, rubber cement
Latex emulsions, ink solutions, etching material
Water-based paint, paint primer, paint stripper
Wax, polish, wood cleaner, waterproof finish
Plywood, masonite, particle board, MDF
Asphalt shingles, flooring, filling agents
Smoke from wood, coal, kerosene, charcoal
Natural gas combustion, cigar & cigarette smoke

How to avoid it:

To eliminate exposure to formaldehyde, check the complete ingredient list of each product you use. Check prescription medicines and creams too. Look for any of the names above. For products already at home with no ingredient list, go to the store and inspect the original box or package. Some product ingredient lists are available on the internet website of the manufacturer or store, or at websites like <http://householdproducts.nlm.nih.gov>, <http://www.cosmeticsdatabase.com>, or <http://www.drugstore.com>.

Ask your hairdresser, manicurist, physician, nurse, and others to avoid using products containing formaldehyde-related ingredients in your care.

To identify possible workplace exposure, check the complete ingredient list of each product you encounter. It may be necessary to contact the manufacturer to learn if some form of formaldehyde is present. (continued)

Additional possible sources:

Foods: Some formaldehyde allergic persons experience flares when they eat or drink these items: aspartame (NutraSweet, Equal), coffee (especially instant), maple syrup, cod fish, smoked ham, dried bean curd, shitake mushrooms, and caviar. Formaldehyde may remain on vegetables and fruits treated for mildew prevention.

Skin products: Herbal or botanical extracts and essential oils may contain traces of formaldehyde left over from the extraction process. It will *not* be named as an ingredient.

Clothing: It is possible to come in contact with formaldehyde in phenolic resins and urea plastics in jewelry, buttons, and footwear. Skin friction and sweating may leach formaldehyde from certain fabrics. Ask your doctor if you should also avoid clothing and bed linens made of such fabrics.

Paper and textiles: Formaldehyde is used in many paper products to improve resistance to water, grease, and shrinkage. Additionally, some non-woven fibers carry residual formaldehyde from their production. These may be found in disposable diapers, sanitary napkins, and tampons; sterile gowns, caps, drapes, and masks; household and personal wipes; dryer

sheets; interlining; upholstery and carpet fabric, padding, backing; wall fabric; agricultural coverings and seed storage; filters, envelopes, tags, labels; insulation; roofing products; and geotextiles.

Wood: Building materials such as particle board, MDF, and plywood contain urea-formaldehyde glues. Sawdust from these materials may produce dermatitis.

Formaldehyde-releasing preservatives may be present in some prescription skin products:

Atopiclair
Benzoyl peroxide wash
Calcipotriene cream
Clobetasol propionate emollient cream
Crotamiton lotion
Fluticasone cream and lotion
Halobetasol propionate cream
Hydrocortisone 2.5% lotion
Ketoconazole shampoo
Permethrin cream
Tretinoin emollient cream
Unna's boot

Some safe alternatives:

There are many preservatives that are not related to formaldehyde. Unless you have also tested allergic to them, these should be safe: phenoxyethanol, iodopropynyl butylcarbamate, paraben, methylchloroisothiazolinone and methylisothiazolinone, and methyl dibromoglutaronitrile.

Formaldehyde-free products include Marcal paper goods, Grumbacher art paper, and Boncour acrylic paint. Organic cotton free of formaldehyde is available from many sources.

[*Quaternium compounds other than quaternium-15, such as quaternium-18, do not release formaldehyde and do not cross-react. Recently the formaldehyde releaser **sodium hydroxymethylglycinate** did react.*]