

60 TOXIC SUBSTANCES IN COSMETICS AND PERSONAL CARE PRODUCTS



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Non-Toxic Baby Products Personal
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Harmful substances in cosmetics and personal care products are unfortunately plentiful. While this list has the most common toxic substances, it is not comprehensive.

TERMS TO KNOW:

Persistent: does not break down easily in the environment.

Bioaccumulative: builds up in our bodies over time.

Carcinogen: a chemical that increases the risk of cancer.

Endocrine Disruptor: a chemical that even at a very tiny dose may interfere with the body's endocrine system and produce adverse developmental, reproductive, neurological, and immune effects.

1. **1,4-DIOXANE:** a carcinogen, a kidney toxicant, neurotoxicant, and respiratory toxicant; pollutes drinking water, air, and soil; a by-product of ethoxylation process. It is identifiable by the prefix PEG and PPG or designations "eth" such as "myreth," "oleth," "laureth," "ceteareth;" often there is a number in the name of the surfactant, which indicates the length of a chain.
2. **2-BROMO-2-NITROPROPANE-1,3-DIOL:** a formaldehyde-releasing preservative (see FORMALDEHYDE), may break down into nitrosamines (see NITROSAMINES) in a product; gastrointestinal, immune system, skin, and liver toxicant.
3. **ACRYLAMIDE:** a carcinogenic impurity of polyacrylamide, polyquaternium-7, polyacrylic acid.
4. **ALCOHOL, DENATURED:** ethyl alcohol (ethanol) with a denaturing agent making it poisonous to drink; carcinogenic, toxic, may cause birth defects.
5. **ALUMINUM** (e.g. Aluminum Chloride, Aluminum Chlorohydrate, Aluminum Zirconium Tetrachlorohydrate GLY, Aluminum Zirconium Trichlorohydrate GLY); used in antiperspirants; linked with Alzheimer's and breast cancer.
6. **AMINOMETHYL PROPANOL:** a skin, eye, and lung irritant; may

break down into carcinogenic nitrosamines (see NITROSAMINES).

7. **AMMONIUM LAURETH SULFATE:** may be contaminated with carcinogenic ethylene oxide (see ETHYLENE OXIDE) and 1,4-dioxane (see 1,4-DIOXANE).
8. **BENZENE:** a known human carcinogen, banned in European Union and Canada, an impurity of toluene (see TOLUENE).
9. **BENZO[A]PYRENE:** a carcinogen, hormone disruptor; is persistent and bioaccumulative; may be an impurity of hydrogenated palm oil, hydrogenated palm kernel oil, and coal tar.
10. **BENZYL ALCOHOL:** often synthetically created; may cause contact allergy; subject to concentration or use limitations.
11. **BHT (BUTYLATED HYDROXYTOLUENE):** a fragrance or masking ingredient; skin, eye, and lung irritant; immune system toxicant.
12. **BUTYLENE GLYCOL:** used as a solvent and conditioning agent; a skin, eye, and lung irritant.
13. **CETEARETH-20:** an emulsifying agent; may be contaminated with carcinogenic ethylene oxide (see ETHYLENE OXIDE) and 1,4-dioxane (see 1,4-DIOXANE).
14. **CETETH-20:** a cleansing and solubilizing agent; may be contaminated with carcinogenic ethylene oxide (see ETHYLENE OXIDE) and 1,4-dioxane (see 1,4-DIOXANE).
15. **CHLOROFORM:** banned in cosmetics in the US, European Union, and Canada; carcinogenic; persistent and bioaccumulative; a possible impurity of triclosan (see TRICLOSAN).
16. **CITRUS GRANDIS (GRAPEFRUIT) SEED EXTRACT:** may be contaminated with triclosan (see TRICLOSAN) and methylparaben (see PARABENS).
17. **COAL TAR:** an antidandruff agent, a cosmetic biocide, a denaturant; obtained as a by-product in the destructive distillation of coal; a

known carcinogen; banned in European Union and Canada; may be contaminated with benzo[a]pyrene, another carcinogen.

18. **COCAMIDE DEA:** a chemically modified form of coconut oil, a foaming agent; carcinogen; may break down into Nitrosamines (see NITROSAMINES).
19. **COCAMIDOPROPYL BETAINE:** a synthetic surfactant; a contact allergen; may break down into Nitrosamines (see NITROSAMINES).
20. **COLORANTS:** FD&C and D&C colors are coal tar derivatives, tested on animals due to their carcinogenic properties.
21. **DIAZOLIDINYL UREA:** a formaldehyde-releasing preservative (see FORMALDEHYDE).
22. **DIBUTYL PHTHALATES (DBP):** used in nail polish or a part of "fragrance"; a reproductive and developmental toxicant; banned in European Union; endocrine disruptor; increases risk of birth defects and infertility.
23. **DIOXINS:** a carcinogenic impurity of triclosan and chlorine bleach; a hormone disruptor; persistent and bioaccumulative; a priority pollutant on the EPA Clean Water Act list.
24. **DISODIUM LAURETH SULFOSUCCINATE:** a foam booster; may be contaminated with ethylene oxide (see ETHYLENE OXIDE) and 1,4-dioxane (see 1,4-DIOXANE).
25. **DMDM HYDANTOIN:** a formaldehyde-releasing preservative (see FORMALDEHYDE).
26. **ETHYLENE OXIDE:** a known human carcinogen; banned in Canada and European Union; EWG rates it 10 on a scale from 0 to 10 (10 being the most harmful); associated with cancer, reproductive effects, mutagenic changes, neurotoxicity, and sensitization; not an ingredient but a contaminant of ingredients such as Polysorbate-20, Sodium Laureth Sulfate, PEG-100 Stearate, Cetearth-20, Ceteth-20, Polysorbate-60, Laureth-7, PEG-40 Hydrogenated Castor Oil, Steareth-21 and others.

27. **FERRIC AMMONIUM FERROCYANIDE:** a synthetic colorant; restricted by FDA, an environmental toxin.
28. **FORMALDEHYDE:** a carcinogenic impurity released by cosmetic preservatives, such as Diazolidinyl Urea, Imidazolidinyl Urea, DMDM Hydantoin, Quaternium-15, 2-Bromo-2-Nitropropane-1,3-Diol, and others; may cause dermatitis; banned in Japan and Sweden; in the U.S., 20% of cosmetics and personal care products contain a formaldehyde-releaser.
29. **FRAGRANCE:** an undisclosed mixture of various scent chemicals and ingredients containing allergens and hormone-disrupting phthalates.
30. **HYDROGENATED PALM OIL:** a skin conditioning agent; may be contaminated with benzo[a]pyrene (see BENZO[A]PYRENE).
31. **HYDROQUINONE:** a skin bleaching agent, a hair colorant; banned in European Union and Canada; may cause a bluish black discoloration of certain tissues; a skin and respiratory organ toxicity; an allergen; may also be an impurity found in "tocophe" group of chemicals (e.g. Tocopheryl Acetate).
32. **IMIDAZOLIDINYL UREA:** a formaldehyde-releasing preservative (see FORMALDEHYDE).
33. **LAURAMIDE DEA:** a foam booster; may break down into Nitrosamines (see NITROSAMINES).
34. **LEAD:** may be a contaminant in petroleum- or mineral-based dyes; persistent and bioaccumulative; neurotoxic; endocrine disruptor; increases risk of birth defects.
35. **METHYLISOTHIAZOLINONE:** a preservative causing allergic reactions; a pesticide; skin, lung, and eye irritant; may be neurotoxic; restricted in Canada and Japan.
36. **NITROMETHANE:** an anticorrosive agent found in aerosol hair sprays; a carcinogen; persistent and bioaccumulative.
37. **NITROSAMINES:** this is not an ingredient, but a carcinogenic

contaminant; they are unregulated in the U.S., so there are no repercussions for U.S. manufacturers contaminating their products with nitrosamines; very common, nearly every kind of personal care product and cosmetic can contain nitrosamines as various compounds break down over time and recombine into nitrosamines.

- 38. **OLEAMIDE DEA**: a foam booster; may be contaminated with Nitrosamines (see NITROSAMINES).
- 39. **PAHs**: a group of chemicals occurring naturally in coal, crude oil, and gasoline; carcinogenic; banned in the European Union and Canada.
- 40. **PARABENS** (METHYLPARABEN, PROPYLPARABEN, ETHYLPARABEN, BUTYLPARABEN, ISOPROPYLPARABEN): hormone disruptors; found in 99% of breast cancer tumors.
- 41. **PETROLATUM (PETROLIUM JELLY)**: a semisolid mixture of hydrocarbons obtained from petroleum; may be contaminated with PAHs (see PAHs)
- 42. **PHENACETIN**: used as a fever-reducing drug but banned for use in drugs in 1983; stabilizing function in cosmetics; a known carcinogen.
- 43. **PHENOLPHTHALEIN**: used in hair relaxers, shampoos and conditioners; a carcinogen; a hormone disruptor.
- 44. **PHENONIP**: a mix of preservatives Phenoxyethanol (see PHENOXYETHANOL), Methylparaben (see PARABENS), Ethylparaben (see PARABENS), Butylparaben (see PARABENS), Propylparaben (see PARABENS), and Isobutylparaben (see PARABENS).
- 45. **PHENOXYETHANOL**: a preservative; restricted in Japan; in European Union considered harmful only for products used on the lips and around the mouth; skin, eye, lung irritant.
- 46. **PHTHALATES**: help fragrance last longer; endocrine disruptors; DEHP phthalate is a probable carcinogen.
- 47. **PLACENTA ENZYMES**: derived from the uterus of slaughtered animals; widely used in skin creams, shampoos, and masks; may be contaminated with progesterone and estrogen.

48. **POLYSORBATE-20**: a surfactant and emulsifier used in cleaners and personal care products; may be contaminated with carcinogenic Ethylene Oxide (see ETHYLENE OXIDE) and 1,4-Dioxane (see 1,4-DIOXANE).
49. **PROPYLENE GLYCOL**: an organic alcohol commonly used as a skin conditioning agent; may cause allergic contact dermatitis and itchiness; irritation may happen at propylene glycol concentrations as low as 2%.
50. **QUATERNIUM-15**: a formaldehyde-releasing preservative (see FORMALDEHYDE); skin, eye, and lung irritant.
51. **RETINYL PALMITATE (VITAMIN A PALMITATE)**: a synthetic vitamin A; used in sunscreens; according to FDA studies, when applied to the skin in the presence of sunlight, may speed the development of skin tumors and lesions.
52. **SELENIUM SULFIDE**: an antidandruff and hair conditioning agent; banned in European Union and Japan; a carcinogen; persistent and bioaccumulative.
53. **SODIUM HYDROXYLMETHYLGLYCINATE**: a formaldehyde-releasing preservative (see FORMALDEHYDE).
54. **SODIUM LAURETH SULFATE (SLSE)**: an emulsifying and foaming agent; may be contaminated with carcinogenic Ethylene Oxide (see ETHYLENE OXIDE) and 1,4-Dioxane (see 1,4-DIOXANE).
55. **SODIUM LAUROYL SARCOSINATE**: a foaming agent, a skin and hair conditioning agent; restricted in cosmetics in Japan; can break down into Nitrosamines (see NITROSAMINES).
56. **SODIUM LAURYL SULFATE (SLS)**: an emulsifying and foaming agent; an eye, skin (eczema), and lung irritant.
57. **SODIUM PCA**: a skin and hair conditioning agent; can break down into Nitrosamines (see NITROSAMINES).

- 58. **TALC:** may be contaminated with asbestos fibers causing respiratory toxicity and cancer; even asbestos-free talc is still toxic and carcinogenic.
- 59. **TOLUENE:** a petrochemical solvent and paint thinner; in cosmetics used in nail polish; an endocrine disruptor; may cause damage to fetus.
- 60. **TRICLOSAN:** an antibacterial agent and preservative in personal care and home-cleaning products; persistent and bioaccumulative; an endocrine disruptor; a skin, lung, and eyes irritant; may be contaminated with chloroform (see CHLOROFORM) and dioxins (see DIOXINS).

The list of harmful ingredients in cosmetics and personal care products is based on information from the Skin Deep database by the Environmental Working Group (EWG).