



# 1,4-Dioxane

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## GET THE FACTS

### 1,4-DIOXANE AT A GLANCE

- 1,4-Dioxane is a synthetic compound that has been found in groundwater throughout the United States.
- It has been found at many manufacturing facilities because of its widespread use as a stabilizer in certain chlorinated solvents, paint strippers, greases and waxes.
- The chemical is classified by EPA as “likely to be carcinogenic to humans.”
- Short-term exposure may cause eye, nose and throat irritation; long-term exposure may cause kidney and liver damage.
- There is currently no chemical-specific Federal or New York State drinking water standard for 1,4-dioxane; however it is regulated by the New York State Department of Health (NYSDOH) at a maximum contaminant level of 50 parts per billion (ppb).
- Common treatment technologies include advanced oxidation processes and bioremediation.

### WHAT IS 1,4-DIOXANE?

- 1,4-Dioxane is a synthetic industrial chemical that is completely miscible in water. It is used as a solvent or solvent stabilizer. It is also used in many products, including paint strippers, dyes, greases, varnishes, shampoos, beauty products and waxes.
- It is also found as an impurity in antifreeze and aircraft deicing fluids, and in some consumer products (deodorants, shampoos and cosmetics).
- The occurrence of 1,4-dioxane in surface and groundwater has been reported throughout the United States and in countries such as Japan, Germany, the Netherlands, United Kingdom and Canada.
- The largest sources of 1,4-dioxane in drinking water sources are wastewater discharge, unintended spills, leaks, and historical disposal practices of its host solvent, 1,1,1-trichloroethane (TCA).

### WHERE DOES 1,4-DIOXANE COME FROM?

- 1,4-Dioxane was used as a solvent and a chlorinated solvent stabilizer for industrial chemicals
- The chemical can enter the water through unintended chemical spills, leaks or wrongful disposal practices.
- Products that contain the chemical include laundry detergent, soap, shampoo, and body wash.
- Once in the groundwater and soil, the physical and chemical properties of 1,4-dioxane make it not only persistent, but very difficult to remove.

### HOW IS 1,4-DIOXANE REGULATED?

- There is currently no chemical-specific Federal or New York State drinking water standard for 1,4-dioxane; however it is regulated as an Unspecified Organic Contaminant by the New York State Department of Health (NYSDOH) at a maximum contaminant level (standard) of 50 parts per billion (ppb).
- The New York State Drink Water Quality Council is working to determine what a reasonable MCL is for this chemical.