



March 1, 2023

Subject: Detrex Dioxin Free Statement

To whom it may concern,

Dioxins and dioxin-like compounds (DLCs) are by-products of various industrial processes, and are commonly regarded as highly toxic compounds that are environmental pollutants and persistent organic pollutants (POPs). They include:

- Polychlorinated dibenzo-*p*-dioxins (PCDDs), or simply dioxins. PCDDs are derivatives of dibenzo-*p*-dioxin. There are 75 PCDDs, and seven of them are specifically toxic.
- Polychlorinated dibenzofurans (PCDFs), or furans. PCDFs are derivatives of dibenzofuran. There are 135 congeners (derivatives differing only in the number and location of chlorine atoms). While they are not dioxins, ten of them have "dioxin-like" properties.
- Polychlorinated biphenyls (PCBs), which also are not dioxins, but twelve of them have "dioxin-like" properties. Under certain conditions PCBs may form dibenzofurans through partial oxidation.
- Finally, dioxin may refer to dioxin proper, the basic chemical unit of the more complex dioxins. This simple compound is not persistent and has no PCDD-like toxicity.

Dioxins have no common uses. They are manufactured on a small scale for chemical and toxicological research, but mostly exist as by-products of industrial processes such as bleaching paper pulp, pesticide manufacture, and combustion processes such as waste incineration.

Detrex Chemicals hydrochloric acid products are made using a direct synthesis process using only high purity hydrogen, chlorine and DI water. The hydrochloric acid product from our process is chemically pure with very few trace contaminants or elemental impurities.

The hydrochloric acid production process used by Detrex Chemicals does not manufacture Dioxin or Dioxin Like Compounds as a byproduct. Dioxin or Dioxin Like Compounds are not used in the production of hydrochloric acid, nor are they added during the packaging processes. To the best of our knowledge our products are Dioxin free.

Sincerely,

A handwritten signature in black ink that reads "Dave Morgan". The signature is written in a cursive style.

Dave Morgan  
Global Product Manager, Hydrochloric Acid  
Detrex Chemicals