



August 1, 2017

Subject: 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). Strictly speaking they are not dioxins, but 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 Hydrochloric Acid products are made using the HCl direct synthesis process. In this manufacturing process, Detrex Chemicals only uses high purity Hydrogen and Chlorine, and water, which we purify on-site, to produce Hydrochloric Acid. The HCl product from our process is chemically pure, with very few trace contaminants. The HCL production process used by Detrex does not manufacture Dioxin or Dioxin like Compounds as a byproduct. Dioxin or Dioxin like Compounds are not used in the production of HCl, nor are they added during the packaging processes. To the best of Detrex's knowledge our products are Dioxin free.

Sincerely,

A handwritten signature in blue ink, appearing to read "Jim Vence", is written over a blue horizontal line.

Jim Vence
Technical Director
Detrex Chemicals