From the EPA Site

Lignon removal from paper pulp

Lignon: contaminated with Dioxin 2,3,7,8-TETRACHLORODIBENZO-P-DIOXIN (2,3,7,8-TCDD) **as a byproduct.**

The term processed chlorine-free refers to recycled paper which is not bleached using chlorine, but the original processing method of the virgin product cannot be determined.

Why is paper bleached?
In the production of paper, paper pulp is bleached to remove lignon, the natural tree coloring, to make paper white.

What is the harm?
Chlorine or chlorine derivatives release toxic chemicals including dioxins and furans during the paper bleaching process. These toxic chemicals are discharged into the air and water, contaminating the surrounding environment. Humans can be exposed to these chemicals by breathing, drinking the water, or consuming fish or wildlife from the surrounding environment.

What are dioxins?
Dioxins are chlorine related compounds. The term dioxin usually refers to the chemical compound, 2,3,7,8-TETRACHLORODIBENZO-P-DIOXIN (2,3,7,8-TCDD), which is a known carcinogen. When exposed to humans through the environment, dioxin can cause cancer, reproductive effects, immune response and skin disorders. The Clean Air Act and the Clean Water Act sets standards for the release of dioxin into the environment by the pulp and paper industry. New rules and regulations have reduced the amount of dioxin emitted into the environment. Unfortunately, since dioxin decomposes slowly in the environment, it has built up in plants, soil, water, and sediments. When ingested by animals, dioxin accumulates in fat. For this reason, dioxin has been called a persistent bioaccumulative toxin. For more Q&A about dioxin go to http://www.epa.gov/ncea/dioxinqa.htm#g1

What are the alternatives?
Less harmful alternatives to chlorine exist. A popular alternative to chlorine is hydrogen peroxide, which is relatively benign.

More Information:

- Inform Inc.
- EPA Pulp & Paper Rulemaking Actions
- Chlorine Free Products Association