



**TOTALLY  
CHLORINE  
FREE**

### **TOTALLY CHLORINE FREE (TCF)**

Cotton requires purification because, being completely natural, it contains around 650,000 colony-forming units (CFUs), including molds, fungi, bacteria, and more. Fresh cotton from the field is neither white nor absorbent. Barnhardt's proven TCF bleaching and purification process ensures that our cotton meets the highest safety and quality standards.

### **THE ENVIRONMENTAL COST OF BLEACHING**

Chlorine bleaching, while traditional, has intense environmental impacts concerning chemical discharge and water consumption. Extra rinsing and chlorine treatments dramatically increase the amount of water needed during chlorine bleaching, and any chlorine remaining either stays on the final product or is discharged back into the water. The presence of chlorine also comes with the risk of producing dioxins during the bleach, which are toxic compounds that affect both animals and humans. These dioxins are slow to break down and quick to accumulate, making it critical to reduce or eliminate processes that could produce them.

### **TCF PURIFICATION: A SAFER, ECO-FRIENDLY ALTERNATIVE**

Barnhardt's commitment to sustainability goes beyond the cotton we source – it's a fundamental part of our purification process. Our TCF purification process uses hydrogen peroxide instead of chlorine to whiten the cotton fibers. The hydrogen peroxide breaks down into oxygen and hydrogen, which are not toxic in any way and do not accumulate over time. Not only does this method not release harmful chemicals into the environment, but it eliminates the need for chlorine entirely. Because no chlorine is present during purification, there is no additional rinsing or chemical treatments needed, reducing the water consumed during purification. This also eliminates potential dioxin production, keeping our ecosystems healthier and our water cleaner. Barnhardt continuously strives to produce the safest, highest quality product possible while managing our environmental impact. Our time-tested TCF purification process showcases this promise and our commitment to delivering the best in purified cotton.



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