Ink Sonics
The Art of sound

Hemp: Planet Friendly, Truly Renewable, Better Chemistry

HEMP

In terms of quality and performance, hemp fiber stands out as probably the strongest and most durable fiber in nature. In addition to being 10 times stronger than wood fiber, hemp is four times stronger than cotton.

PLANET FRIENDLY

Hemp is lighter and less expensive to process than wood. One acre of hemp planted for 40 years has 400% more usable fiber than one acre of trees through their 40-year lifecycle. Hemp is the most efficient biomass source in the world. In less than 91 days, the plant can generate stalk to the stage where its fibers have contained their full CO2 content and are ready to be properly processed.

Hemp's other important characteristics: high absorption properties, IR and UV radiation protection capacity and natural low flammability. In addition, hemp posseses natural anti-bacterial properties, believed to result from the alkaloids, cannabinoids and other bioactive or phenolic compounds.

Hemp plants have an exceptionally high capacity to draw out and contain CO2, which is much higher than trees. One acre of a common hemp can absorb 8.88 tons of CO2 annually, whereas an acre of forest sequesters roughly 2.5 tons – only about 30% as much.

TRULY RENEWABLE

Considering that less than 5% of the United States' virgin forest remains, it only makes sense to plan for the future and protect what is left of this once naturally balanced resource by growing hemp. We can help to regain that balance by planting, harvesting and processing hemp into the many cellulosic applications for which trees have been predominantly used since wood-based paper replaced paper made from hemp in the 1930s across North America.

Cellulose is the main chemical that adds strength to paper and other composite products such as chipboard and particleboard. With a concentration of 72%, hemp bast has a higher concentration of cellulose than wood, which provides only 42%. Essentially, the more cellulose a plant contains, the fewer chemicals are needed to make paper. Hemp bast has the highest cellulose content of all plants.

Not only does hemp grow at a much faster rate than trees, but its high cellulose content allows for a faster, lower conversion cost and doesn't require the significant quantities of toxic chemicals required for wood processing.

BETTER CHEMISTRY

Making paper from wood requires polluting agents such as sulphuric acid, bleach and chlorine to remove its non-cellulose fiber mass during the pulping process. Hemp fibers, on the other hand, can be whitened using hydrogen peroxide, which doesn't chemically damage water. In addition, compared to its wood pulp counterpart, paper made from hemp fibers resists decomposition and does not yellow or brown with age.