



Madera Products, LLC.

TimberSIL®: The Future of Wood Cross Arms

- ◆ **100% Environmentally Friendly!** – see MSDS
- ◆ **Direct Replacement for Penta or CCA Treatments**
- ◆ **Permanent Process resulting in a “Dry” Timber**
- ◆ **No Toxic Chemicals to leach or dissipate**
- ◆ **No Disposal Issues**
- ◆ **Certified ‘Green’ Product**



How do we do it?

We use the TimberSIL® process that permanently encapsulates the wood fibers in a glass matrix. This patented process is non toxic, odorless, non-volatile and EPA approved. See MSDS.



Benefits:

- **100% Environmentally Friendly, TimberSIL®** wood portion, glass portion and fusion combination is completely non-toxic and non-carcinogenic to adults and children. The amorphous form of TimberSIL® glassy matrix, if cut or sawn simply crumbles to harmless flakes.
- **TimberSIL®’s cross arm is more than non-polluting and non-toxic**, it is also a Class A Fire Retardant. TimberSIL® processed wood does not support combustion. Penta treated arms typically use a flammable diesel fuel 'carrier' in the treatment process.

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Benefits continued:

- **No special hardware** - use the same hardware that is required for wood cross arms. No oversized washers, no special center mounts, no torque requirements, no special coatings and future re-coatings issues.
- **Permanent Process** - TimberSIL® does not evaporate or leach into the ground water like treated wood. The glassy portion is locked inside the wood by the shape of interior fibers and by the insolubility of glass, therefore it is unable to be removed. So the protection, which ends in treated wood when the chemicals leach out, will outlast 'treated' arms today.
- **DRY product** - the infusion process results in a kiln dry 16% (moisture content) wood cross arm. Unlike treated arms that are saturated where chemicals can bleed or leach in the storage facility. We do not 'dry out' and warp, we approach ambient humidity, and swell 2-4% which only will assist in keeping all hardware tight.
- **Dimensionally Stable**, The TimberSIL® process increases the Modulus of Elasticity of SYP by 29%. This 'stiffening' reduces the common twisting and warping that 'treated' Southern Yellow Pine (SYP) typically experiences.
- **Same weight or lighter than treated wood**. This is accomplished by the cross arm being at KD 16% moisture content after the TimberSIL® process.
- **Safe for Human Contact and Handling**. No more issues with MSDS requirements on contaminated workers or clothing when handling or installing cross arms.
- **Non Corrosive**, being comprised of glass and wood, TimberSIL® will not corrode traditional utility hardware, bolts, pins, washers, etc..
- **EPA has determined TimberSIL® to be 'NOT a Pesticide'**, a Non-Toxic Barrier Product, EXEMPT from all Pesticide Regulations. This wood cross arm can be recycled into other usable products, and still retain the protection provided by the TimberSIL® process. Environmental Disposals Issues over time do not exist, because there never were any initially.
- **No VOC's** (volatile organic compounds) produced by TimberSIL®, making it essentially an inert material. No smell of chemicals, odor free except for the natural wood aroma.
- **More RELIABLE** than treated wood. SYP arms were tested AFTER the TimberSIL® process and the Modulus of Rupture increased 12%, thus providing more strength than untreated wood. This increase in strength provides a higher reliability against failure.

Other Applications:



Decking/Play Areas



Railroad Ties



Marine Piling



Madera Products, LLC.

Ph: (814) 310-2047

E-Mail: sales@MaderaProducts.com

www.MaderaProducts.com