



- Lower ecotoxicity
- No dioxins, furans or heavy metals

**UltraTie™ with DCOI was developed by Viance, LLC, the leader in environmentally advanced wood protection.**

**UltraTie, like its cousin, UltraPole® NXT, provides long-term efficacy with low environmental impact. Treated with DCOI, both are the first major innovations in America's infrastructure in decades.**

### **American Wood Protection Association (AWPA) Standards for Railway Ties**

DCOI in UltraTie (P39) is standardized in the AWPA Book of Standards for:

- Coastal Douglas-fir, Western Hemlock and Western Larch
- Mixed Hardwoods
- Oak and Hickory
- Southern and Ponderosa pine

### **Environmental Impact Compared to Available Alternatives**

Compared to other materials such as galvanized steel, fiber reinforced composite or concrete, UltraTie uses less total energy, less fossil fuels and less water to manufacture while producing less acid rain, less greenhouse gases, less eutrophication, with lower ecotoxicity. DCOI is not a persistent organic pollutant.

**UltraTies are currently being evaluated by both Shortline and Class 1 railroads.**







*The only oil-borne preservative whose active ingredient is also found in residential applications.*

## Proven Effectiveness of DCOI

The Electric Power Research Institute (EPRI), the leading utility industry research group initiated tests conducted by Mississippi State University (MSU), a leader in wood preservative research. MSU compiled 28 years of field data on DCOI, the active ingredient in UltraTie, that showed DCOI (4,5-Dichloro-2n-octyl-4-isothiazolin-3-one) is extremely effective against wood decay fungi and termites.

DCOI is used in, and currently sold as:

- a marine antifoulant
- an algaecide for cooling towers
- an industrial microbicide in drywall
- an industrial microbicide in shower curtains
- an industrial microbicide in pool liners
- an industrial microbicide in brewery pasteurizing and can warmer systems
- DCOI is very effective when used as a fungicide/ bactericide for in-can paint formulations.
- a fungicide component in Ecolife®, the best performing, non-metal based, above ground residential wood preservative on the market.
- UltraPole NXT and crossarms, the first major innovation in treated wood utility pole protection in decades

## Lower Environmental Impact

- Uses less energy, fossil fuels, and water to produce; with lower ecotoxicity than other materials used for ties.
- The active ingredient, DCOI, earned the EPA's Presidential Green Chemistry Challenge Award in 1996 for its use as an alternative to tributyltin (TBTO) compounds in marine antifoulant coatings.
- DCOI is stable and leach resistant. DCOI has a high soil absorption coefficient; therefore has a low probability of migration in a soil environment.
- DCOI has very low water solubility; <5ppm

## Benefits for Railroad Companies

DCOI treated ties:

- Are low odor and effective
- Have low electrical resistance
- Low corrosion to hardware
- DCOI is very soluble in hydrocarbon solvents (carrier oils), so DCOI treaters have a broader array of solvent choices for tie production.

## Benefits for Wood Tie Manufacturers

DCOI works in wood preserving facilities using similar:

- Equipment
- Treating cycles
- Inspection equipment
- Laboratory QC instrumentation

