

Wheeler

QNAP™

COPPER NAPHTHENATE

WOOD PRESERVATIVE



INTRODUCTION

Wheeler is directed by the long-term future of pressure treated timber for engineered wood structures. The primary concern in selecting a wood preservative is its efficacy in protecting wood from insects and decay. This is balanced with impacts on the facility user and the environment. QNAP is an approved, effective, oil-borne wood preservative that is consistent with the reputation established by Wheeler over a century of providing quality timber products.

HISTORY

Developed in Scandinavian Countries at the turn of the last century, copper naphthenate has been used for over-the-counter consumer use as a brush-on treatment of wood. Non-pressure applications include canvas, rope, nets, burlap, field boxes, beehives, flats, greenhouses and veterinary (hoof) treatment.

It was standardized by the American Wood Protection Association (AWPA) in 1949 for brush-on, dip and remedial applications. In 1989 AWPA added standards for pressure treatment of utility poles, cross arms, bridge timbers, piling, industrial lumber products, agricultural and highway posts and glued-laminated beams. Railroad crossies were added by AWPA in 2004.

WHAT IS

QNAP

QNAP is prepared by reacting copper with naphthenic acid or sodium naphthenate. It is delivered to the treating facility as a concentrate containing 8% copper in an oil carrier. The concentrate is diluted with No. 2 oil to form the working solution containing approximately 1% copper depending on the product specifications.



FACILITY

Wheeler built a state-of-the-art treating facility in 2003. The computerized wood treating process combines the latest technology and high speed equipment to produce a superior product at a competitive price.

QUALITY CONTROL

Products are analyzed per strict guidelines set forth by APWA. Every charge is bored, cores taken and electronically analyzed to ensure proper treating. The testing is documented and saved in the Treating Report for future reference.



All program material is certified through the American Lumber Standards Committee (ALSC) and overseen by Timber Products Inspection (TPI). TPI inspects our product and Quality Control every 30 days to ensure our product and Quality Control Procedures meet their stringent requirements. Only after passing these requirements can a treated product be certified and tagged with the TPI check mark.



- Member of WWPI, AWPA and TWC
- All products treated to AWPA specifications
- All charges assayed to certify compliance
- Certified TPI treatment plant
- WQC, BMP, ALSC inspection available

When projects require, products are produced in accordance with the *Best Management Practices (BMP) For Treated Wood in Aquatic Environments* issued by the Western Wood Preservers' Institute (WWPI).



Wheeler QNAP WOOD PRESERVATIVE

BENEFITS

Oil-borne preservative provides added durability and waterproofing

QNAP is resistant to weathering from wet/dry cycles compared to water borne preservatives

Semi-transparent color reveals natural wood grain

Shades of light to dark brown are typical. Wood may start with green tinge and then fade to brown depending on treating cycle and specie of wood.

Cleaner handling

Steam cleaning after treatment greatly reduces surface oil residue.

Safer to work with

QNAP is not a dermal toxin and has no photo-toxicity associated with some oil-borne preservatives

Broad use

Commonly treated wood species can be treated to level of retention required by specific application.

Standard Duration of Load Factors used in design

There is no significant difference in the resiliency compared to wood treated with other oil-borne preservatives

No corrosion concerns

Multiple studies demonstrate no excessive corrosion of hardware due to contact with preservative

Efficacy

USDA Forest Service Forest Products Laboratory studies document long-term performance. AWPA Standards ensure peer review and qualify intended applications.

Formosan Subterranean Termite protection

University of Hawaii study demonstrates effective protection. Situation should be considered a severe deterioration hazard and the high retention for Use Category 4C should be specified.

General use pesticide

QNAP is the only oil-borne wood preservative classified as general use by the United States Environmental Protection Agency (EPA) under the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA) because the EPA concluded it has relatively low toxicity.

Waste disposal

QNAP treated wood waste is neither a listed nor a characteristic hazardous waste according to the current EPA regulations under the Resources Conservation and Recovery Act (RCRA). It may be disposed of in landfills or burned in industrial or commercial incinerators or boilers in accordance with federal, state and local regulations.

100% domestic

The primary constituents of the treating solution are derived and/or manufactured from domestic sources by US owned companies. All timber is sourced from domestic mills.

Documentation and studies can be found at www.wheeler-con.com or www.nisus.com

HIGHWAY

QNAP is increasingly used in highway applications. Long recognized as the preferred field treatment, now installations include pressure treated timber for bridge super- and substructures, railing, retaining walls, salt storage facilities, etc.

It provides an attractive appearance without masking the natural wood grain. Because it is waterproof, it stands up to harsh environments including road salt.

- Approved under AASHTO M133
- First choice for brush-on field application of preservative
- Listed in AWP Standards: UC3B, UC4A, UC4B & UC4C



RECREATION

As a pressure preservative, QNAP is preferred for main structural members of treated timber bridges and structures. The waterproofing qualities are essential for large glued laminated components. It can be used for decking and railing where intimate skin contact is minimal.



COPPER NAPHTHENATE SPECIFICATION

PRESERVATIVE TREATMENT

- A. This section covers the wood preservatives and the preservative treatment of lumber and timber conforming to the Specifications as referenced or otherwise specified in the plans or special provisions. Temporary bracing shall not require preservative treatment.
- B. Preservative treatment of lumber and timber shall be by the pressure process, and unless otherwise provided in the contract special provisions, be in accordance with AWP Standards and AASHTO M133.
- C. Lumber and timber specified in the plans or special provisions to be treated with copper naphthenate in AWP P9 Type A Hydrocarbon Solvent.
- D. Unless otherwise directed by the Engineer the material shall be graded prior to treatment. Material shall be accepted after treatment on the basis of its condition prior to treatment, on the basis of inspection of the treatment procedure substantiated by plant records, on the condition of the material after treatment and on absorption, penetration and visual inspection.
- E. So far as practicable all adazing, boring, chamfering, framing, gaining, mortising, surfacing and general framing, etc., shall be done prior to treatment. If cut after treatment, coat cut surfaces according to AWP M4.
- F. All Douglas Fir and other species that are difficult to penetrate shall be incised prior to treatment.

UTILITY

With more than one million poles in service, utility and communication companies are specifying and installing QNAP treated poles in their systems.

Building on historic usage as a dip-treatment of poles and remedial ground-line treatment for poles in service, QNAP is a proven pressure treatment option for new poles.



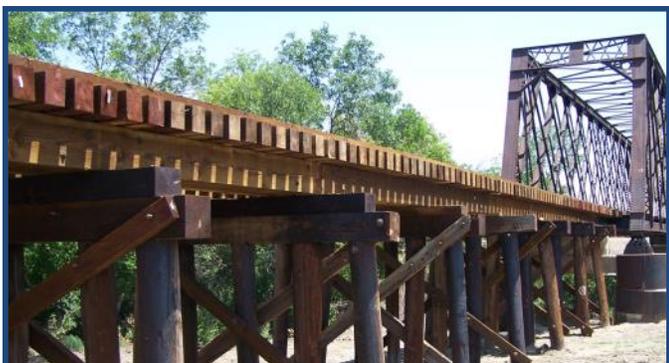
- Electric Power Research Institute study compared copper naphthenate with pentachlorophenol. Results rated copper naphthenate slightly better on average than pentachlorophenol.
- Good gaff penetration
- Electrical conductivity (or electrical insulating ability) is similar to other oil-borne preservatives with minimal afterglow.
- Recycling and disposal options available
- Listed in AWPA Standards: UC4A, UC4B & UC4C

AGRICULTURE

QNAP has become a popular option for:

- Fence Posts
- Specialty Fencing
- Railing
- Squares, Poles





RAILROAD

QNAP is AWP and AREMA approved for treating crossties, switch ties, timbers, lumber and piling.

- Listed in AWP Standards: UC4A, UC4B & UC4C
- Approved in AREMA Chapter 30, Section 3.7.4
- Study of crossties in service for 15 years on a heavily-trafficked Class 1 line demonstrated comparable performance to creosote.
- Webb and Brient study of hardwood crossties showed no significant difference in efficacy between copper naphthenate and creosote.
- Oak and Mixed Hardwood crossties unanimously adopted by AWP Subcommittee T-3 (Piles and Ties) in 2004

SPECIALIZING IN FABRICATION

Wheeler supplies treated West Coast Douglas Fir and Southern Yellow Pine timbers and piling.

- Bridge Timbers, Piling
- Tapered Ties
- Crossties
- Drilling, Dapping, Planing
- Engineering Services
- Treating Service Only (TSO)
- Facility accessible by main-line rail
- Members of RTA, AREMA, REMSA

Wheeler

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