

MicroPro® for Sensitive Outdoor Environments and Public Spaces



Wood as a Sustainable and Renewable Resource

Wood is part of the bio economy, can be sourced responsibly, is replanted or harvested sustainably¹ and is a flexible and adaptable material that can be used efficiently and minimises the use of a natural resource and the creation of waste, pollution and carbon emissions.

At the end of its life wood can be reused in a cascading process of uses, recycling or in some cases recovery of energy.

Wood is consequently a truly renewable construction material.

Using wood offers a simple way to reduce the CO₂ emissions that are understood to be the main cause of climate change through:

- The carbon sink effect of forests;
- The carbon storage effect of wood products;
- Substitution for carbon-intensive materials
- Wood as a sustainable and renewable resource

In New Zealand and many parts of the world forests are certified for their forest management. In New Zealand forests may be certified through the Responsible Wood Certification Scheme or the Forest Stewardship Council (FSC)



ADVANCED
COLOUR



BORERS and
TERMITES



FUNGAL
DECAY

Preservative Treated Timber

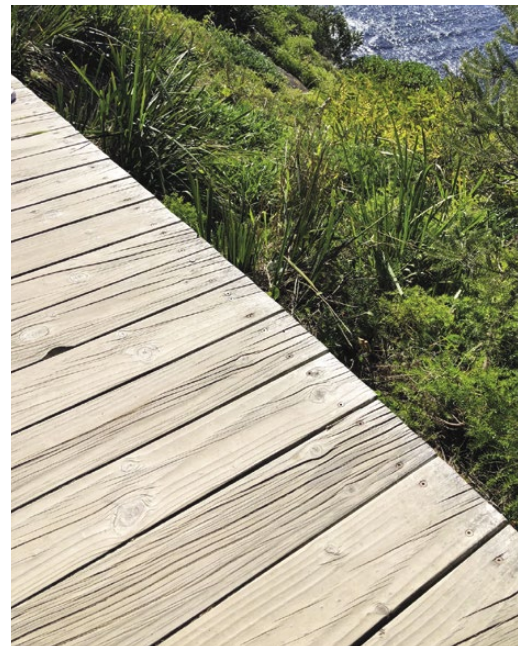
Preservative treated timber is the material of choice where its characteristics make it suitable, generally to improve the durability of timber but also to impart other characteristics such as colour and fire resistance.

Preservative treatment allows designers the choice of the foremost renewable and sustainable material in situations where it would otherwise not be suitable, thus, considerably extending its possible uses particularly for timber species which have poor natural durability such as many plantation pinus species.

When structures come to the end of their life, treated preservative timber may be segregated for recycling to extend the useful life of the material.

Even when disposal eventually becomes the only option, energy generation by burning ¹ may be possible returning carbon to the atmosphere where it is turned back into wood by trees using the energy of sunlight. As the amount of CO₂ emitted from combustion is generally similar to the amount previously stored, burning wood is essentially carbon neutral.

Note ¹ Preserved timber may be disposed of in landfills or burned in commercial or industrial incinerators or boilers in accordance with national and local regulations. It is recommended not to burn any treated wood product at home or construction sites.







MicroPro[®] Timber Preservation Process

MicroPro is a latest generation timber preservative process that delivers the active components in a different form to conventional timber preservative treatments.

MicroPro is a patented waterborne micronized copper-based wood treatment technology. MicroPro technology offers many benefits, including significantly improved corrosion performance to metal fasteners. In addition, the MicroPro timber treatment process has received several independently evaluated environmental certifications.

MicroShades coloured timber products utilise micronized iron oxide pigments that are applied along with the micronized preservative to impart an attractive red brown colour for your outdoor living areas.

Long term field testing has shown that MicroPro is a very effective timber preservative while featuring low levels of release of actives into the environment.

Further, releases of volatile organic compounds (VOC's) are substantially reduced and the MicroPro treatment process has achieved UL GreenGuard Gold certification and is recognized as a low VOC treated timber product.

Note ² Koppers PC maintains trials of its products in high fungal decay and insect attack test facilities around the world to confirm the long-term performance of its products and to test new products and preservative systems.

The process of creating MicroPro has less environmental impacts when compared to producing traditional soluble copper-based wood preservatives.

The MicroPro process, which includes the use of recycled copper as the primary raw material, reduces total energy use by approximately 80%, and reduces the release of greenhouse gases by an estimated 20,000 tons or more a year.

These figures have been validated by SCS Global Services, which awarded the MicroPro treatment process its Environmentally Preferable Product (EPP) designation, the first and only treated wood process to be so recognized.





Why Use MicroPro in your Sensitive or Public Space Projects?

Proven formula for over 15 years

The MicroPro treatment process has been successfully used in New Zealand and globally for some 15 years and is supported by Koppers Performance Chemicals, the world's largest producer of timber preservative chemicals and technology.

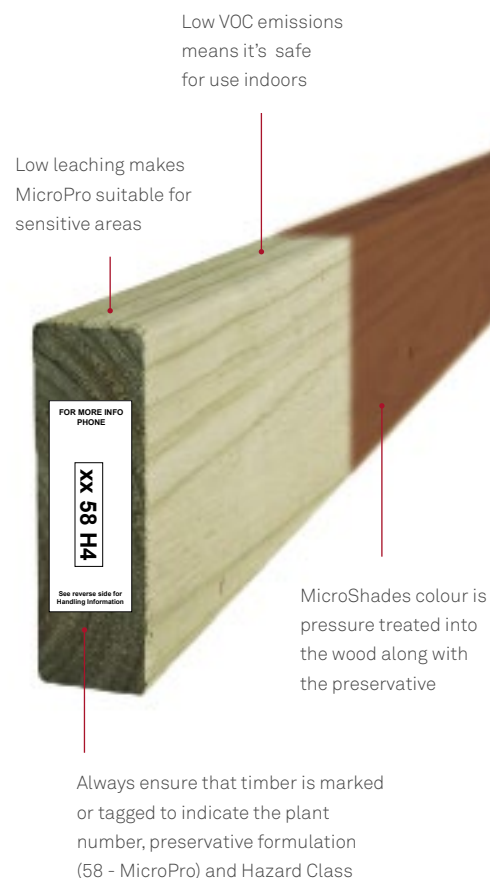
In New Zealand, MicroPro treated products typically utilise plantation-grown pine timber, a sustainable and renewable resource and are produced in preservative treating facilities around New Zealand.

While MicroPro treated timber has a lighter green colour than conventional preservative treated timber, it is also available with an attractive long-lasting red/brown colour which is marketed as MicroShades®.

MicroPro treated timber is available in a range of Hazard Classes including H5 as defined by New Zealand Standard NZS3640 series for outdoor above ground or in-ground use. MicroPro's unique preservative formulation means it can be used with conventional high quality treated timber connectors and fasteners and is also compatible with aluminium products.

Unlike some other outdoor treated timber formulations there are no restrictions on its uses which include landscaping, flower beds, decks and children's playgrounds.

Pictured Right:
H5 treated MicroPro pole stubs in North Queensland test site



Independent Environmental Certifications

MicroPro is the only timber preservative process that has received independent certifications both overseas and in New Zealand for its environmental credentials.



MicroPro® is the first treated wood process certified under Scientific Certification Systems Environmentally Preferable Product (EPP) program based on Life-Cycle Assessment.



MicroPro® has earned certification from National Green Building Standards and UL GREENGUARD Gold, two respected organizations serving the construction industry.



In New Zealand, MicroPro has been awarded Global GreenTag HealthRATE Gold as well as Global GreenTag GreenRate Level A product certification.

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MicroPro Case Study:

Cuilcagh Mountain Park Boardwalk, Northern Ireland

Cuilcagh Mountain Park in County Fermanagh, Northern Ireland, is striking in its beauty. The environment there requires special considerations, especially as development occurs.

When plans called for construction of one of the longest wooden boardwalks in the world to traverse the green hills of Cuilcagh, only one product fitted the bill – MicroPro treated wood from Koppers Performance Chemicals. The design of the 1.6-kilometer MicroPro treated timber boardwalk allows it to “float” above the terrain, protecting the rare blanket bog from erosion from walking on it.

MicroPro treated timber was used throughout the project to also protect the boardwalk from harsh weather conditions. Local officials state that it took thousands of years for nature to develop this habitat, and they take its protection very seriously.





Investment in Plant and Zero Harm[®]

Koppers Performance Chemicals have made significant investment to ensure that its preservative treatment chemicals are manufactured and distributed in a safe, efficient and environmentally responsible manner.

For example, the use of scrap and recycled copper in the production process can assist in energy efficiency or decrease in waste material, reuse of wastewater, and comprehensive recycling of paper, metal, and plastic. Koppers facilities adhere to permits and regulations issued by their respective states and local municipalities.

Zero Harm defines how Koppers conducts business every day by creating a culture of safety so that the company always places the safety and health of its employees, environment and communities first in all thoughts, plans, and actions - an aspirational, yet attainable, goal.

In addition to efforts to eliminate employee injuries, Koppers works to ensure that Zero Harm comes to the environment.

The company's approach to environmental stewardship begins with training, collaboration and preventive measures.

Koppers holds itself to full compliance with all applicable legal requirements as a minimum level of performance.



