

Preservation COMPASS

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Research and development – the way to the future

Osmose is the company most likely to lead the timber treatment technology industry into the future based on its efforts in areas such as innovation, progressive product development, increasing market share, timber industry support and treated product advocacy.

Osmose Australia general manager, Elias Akle, has reaffirmed the priority placed on R&D and linked it to the company's future. "We see R&D as the best way to grow our business and to differentiate ourselves. It's a major focus of ours and that is why we have made a large commitment to R&D, both locally and globally."

"Osmose is able to tie its global R&D effort together. We have over 30 PhDs employed working on new technologies and new processes – all related to advancing aspects of timber preservation," he said.

It is clear that this coordinated world-wide effort is an Osmose strength. "The synergy that it is able to develop between the research effort here in Australia, New Zealand, the US, and elsewhere, has produced some real benefits."



Elias Akle, Osmose Australia General Manager - New products, alternatives to those currently available, improved product efficacy, enhancing the properties of timber and being attentive to customers, need to be addressed.

Our local R&D contribution is an integral part of the global Osmose effort advised Mr Akle. "For instance, is our Determite®, a Bifenthrin based insecticide used as an envelope treatment for framing and a glue-line treatment for LVL and plywood.

is now being developed for use in international markets.



Extensive product testing in Australia and New Zealand - part of global program.

"This is a good example of our ability to contribute to global R&D efforts. We can certainly stand on our-own-two-feet down here."

In terms of Osmose's program in Australasia, the R&D team has two centres of excellence. The New Zealand laboratory effort in Auckland, lead by Dr. Steve Crimp, and formulating chemist Brett Coombridge, has a strong focus on developing new timber preservative formulations.

The Osmose Development Centre in Queensland concentrates much of its effort on simulated and real-situation treated product trials. The centre, run by Stuart Meldrum, operates pilot plants, experimental spray units and a range of other trial equipment.

"In Queensland we continue work with our products in development, and test both application technology and efficacy in real-life situations," said Mr Akle.

Osmose has an extensive product testing program in place in Australia and New

Continued overleaf ►

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Osmose Australia

Customer Support
1 800 088 809

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Customer Support
0800 78 70 70

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Osmose - innovation and on going commitment to R&D is high on the agenda.



Zealand. "This program is part of our global testing program - so overall we have an incredible number of test stakes in the ground at key locations all over the world trialing new preservatives."

Mr Akle stressed that Osmose has two critical requirements for any new products developed for use in the Australian or New Zealand markets. They must be proven to perform in the local environment and conditions, and where possible, they must make use of the existing treatment facilities and the already high levels of capital invested by timber processors.

"Products also need to be tested for compliance with local statutory requirements, building codes and standards. To this end, it is vital that we have a vibrant research and development effort here in Australasia."

In terms of future innovations, Mr Akle said Osmose is already looking at the next generation of preservatives - beyond ACQ - both copper based and non metallic, and at a number of new developments including improved anti-sapstain formulations. "Looking at enhancing the properties of wood, such as appearance and surface characteristics is also high on the R&D agenda."

"To be able to give consumers and users of treated timber products the confidence they deserve, and to continue to meet changing legislation and other requirements is critical to our future R&D effort."

We recognise that what people now want from a piece of timber today differs from what they wanted twenty or thirty years ago," concluded Mr Akle.



Steve Crimp Ph.D, Osmose Director - Business Development in the New Zealand laboratory with formulating chemist Brett Coombridge M.Phil (Chem).

PROTIM Optimum Now registered in New Zealand and Australia

With its use now approved in New Zealand (H3.1) and Australia (H3), LOSP azole is set to revolutionise Hazard Class 3 treatment of timber products.

Osmose Director Business Development manager Dr Steve Crimp said that Osmose was pleased to be able to announce that PROTIM® Optimum has been granted full registration by the New Zealand Environmental Risk Management Authority (ERMA) and the Australian Pesticides and Veterinary Medicines Authority (APVMA).

PROTIM Optimum is an LOSP formulation that does not contain tin, but is based on azoles – tebuconazole and propiconazole. It also contains the insecticide permethrin.

Dr Crimp said PROTIM Optimum has been approved for sale in New Zealand for all H3.1 applications. "This product is now being utilised as a preservative system for Bodyguard® treated timber products. These products are being exported to the United States, with full US Environmental Protection Agency approval."

Dr Crimp advised that since APVMA approval had been received for PROTIM Optimum, approvals have also been received under the NSW Timber Marketing Act and the Queensland Timber Utilisation and Marketing Act.

It is expected that PROTIM Optimum will be of great benefit to LOSP treaters, given the issues surrounding the changing requirements for tin retention levels from 0.08 percent to 0.16 percent for structural products under the existing Australian standard.

"PROTIM Optimum offers a single formulation that covers both tin retention requirements – so suppliers won't need to store two different LOSP tin based formulations," said Dr Crimp. "That will represent a real capital expenditure saving, as most existing treatment plants are set up to carry just one LOSP H3 formulation."



PROTIM Optimum is able to treat the full range of structural and non structural products presently treated to H3.

PROTIM Optimum is able to treat the full range of structural and non structural products presently treated to H3 in Australia (H3.1 in New Zealand). That is the requirement of 0.08 percent tin for products that are used vertically and will continue to be painted, and 0.16 percent tin for products that are structural, in a horizontal position and unpainted, such as beams, bearers, joists and decking.

Osmose offers a 25-year limited warranty on all timber products treated with PROTIM Optimum and properly installed in any H3 situation in Australia or H3.1 situations in New Zealand. This guarantee will not require the timber to be further protected with a paint coating, as did some previous formulations. Please refer to the separate guarantee document or details.

The new LOSP azole treatment gives the Australian market another alternative for treating products such as decking, handrails and structural lines where treatment options have been restricted because of the APVMA decision on future use of CCA products.



**New PROTIM Optimum
brochure
NOW AVAILABLE**
Contact Customer Service
see cover for details



Wooden posts best answer for vineyards

Treated wooden posts have been used in the vineyard industry for over 30 years. These posts have proven to be durable and strong and have coped well with the weight of grape crops and the battering associated with modern grape harvesting machines. Vineyard posts are normally CCA treated and backed by a 50 year limited guarantee.

Wooden posts also add to the visual appeal, which continues the 'romance' of the wine industry. Much has been made of the natural synergy between plantation-grown, renewable posts and the production of wine from environmentally sustainable vineyard production.

In New Zealand and Australia wooden posts used in vineyards are generally sourced from radiata pine plantations yielding medium to high density wood. In New Zealand these plantations are

A company at the forefront of New Zealand's wine industry, Allied Domecq Wines (NZ) Ltd has been developing Hawkes Bay as a premium wine region, purchasing additional vineyards, expanding existing and developing new sites. Vineyard manager for Allied Domecq Wines in the region is Max Bixley.

"Wooden posts are stable and reliable," he says. "This is a critical issue in vineyard establishment. At this stage, steel posts can fail the test in windy situations, partly because of their much smaller surface area. Toppling and blow down can cause a domino effect that can have serious consequences for vineyard management."

"In the Hawkes Bay region, we do not have any intention of using anything other than CCA treated posts."

The Nobilos Wine Group is New Zealand's second largest wine producer. The Group's North Island viticultural manager Gus Struthers mirrors the thoughts of Max Bixley.

Putting it simply, he indicates that treated wooden posts are economical & easy to work with.

Grantham Vineyard is one of the larger privately-owned vineyards at the forefront of the phenomenal expansion of Marlborough's vineyard industry. Director David Bryce, says the company's new vineyard has been established using treated wooden posts.

"These posts have worked well. With a large surface area they are very stable in-the-ground. All we use here are CCA treated posts. We have had no problems with these posts – none at all."

Throughout New Zealand and Australia, wooden posts hold up most of the premier vineyards. Wooden posts have a natural style and solid performance that has it all over the alternatives.

Radiata pine posts are the most attractive and proven choice available for vineyard development and have stood the test of time. "Many growers who were tempted to move to alternatives to wood are moving back because of the strength and reliability of wooden posts," concludes Mr Bryce.



Radiata pine posts - the most attractive and proven choice for vineyard development.

typically found in the northern regions of the South Island and from the Northern Bay of Plenty on up through Northland in the North Island and from plantations throughout Australia.

There are some alternatives to treated wooden posts, the main one being steel. However, trials with steel posts have had their problems. Added to this, steel posts are generally more expensive than treated wooden posts.



PacPine dual plant eyes future markets

PacPine is a progressive Timber Processor and specialist Timber Treatment company. Located at Burruga on the Central Tablelands of NSW, PacPine produces 25 000 cubic metres of treated product each year from local radiata pine plantations. The major product lines are sleepers and perfect rounds for landscape use, and posts for the Agricultural and Viticulture industries.



PacPine came on board with Osmose earlier in 2005 and has already made some significant changes to their operation. Working closely with Paul Downey, Osmose Regional Manager, PacPine has upgraded their preservation facility and adopted Osmose's Dual Preservation processing technology.

"Having the capacity to treat product with either Lifewood® CCA or NatureWood® ACQ® means PacPine can offer their clients a choice to meet the needs of various government and project specifiers."

"They are filling that gap - doing it responsibly and wisely. They are able to promote the appropriate use of ACQ, but not to the detriment of CCA treatment," said Mr Akle. "Osmose supports this flexible approach in the market place."

PacPine director Phil Burke, said that in conjunction with the new dual treatment facility, the company had installed a moulder and now produces 90mm x 22mm ribbed ACQ treated decking.

"This line was a bit slower than we would have liked first off - but we recognised that we were getting into a new market. Sales of this decking are now at a reasonable level, and we are pleased about that."

Mr Burke confirmed that the new dual treatment facility was operating well. "The back-up and technical support we have received from Osmose has been great. I have no complaints."



New Osmose customer PacPine - a major supplier of treated products for landscape use.



Ross McDonald, plant operator of new dual plant facility.

Looking forward, PacPine has been developing other new product lines. "We are already down-the-track with pergola-type NatureWood ACQ treated lines. There is also a good prospect that we will be supplying material for cubby houses and have provided some demonstration product into that market already."

"We will also be investigating the possibilities for handrails and other products that will need to be treated with a suitable alternative to CCA, such as ACQ", concluded Mr Burke.



Hazard Class Update

As many of you will be aware, the New Zealand and Australian standards (NZS3640 & AS1604) have both changed over recent times to incorporate specific requirements for each market.

These charts below are designed to highlight the difference between the hazard classes for both Australian and New Zealand markets.

If you need any more information, call our customer services number or speak to your local Osmose representative.

AUSTRALIA

H1 INSIDE, ABOVE GROUND

CONDITIONS: Completely protected from the weather and well-ventilated.
BIOLOGICAL HAZARD: Lyctid borers.
EXAMPLES: Susceptible framing, flooring, furniture and interior joinery.

H2 INSIDE, ABOVE GROUND

CONDITIONS: Protected from wetting.
BIOLOGICAL HAZARD: Borers including termites.
EXAMPLES: Framing, flooring and similar, used in dry situations.

H2 F Conditions and Biological hazard as for H2 although approved for use South of the Tropic of Capricorn only.
 Example: Framing (envelope treatment).

H2 S Conditions and Biological hazard as for H2 although approved for use South of the Tropic of Capricorn only.
 Example: LVL / Plywood (glue-line treatment).

H3 OUTSIDE, ABOVE GROUND

CONDITIONS: Subject to periodic moderate wetting.
BIOLOGICAL HAZARD: Moderate decay fungi, borers and termites.
EXAMPLES: Weatherboard, fascia, pergolas (above ground), window joinery, framing, decking and laminated verandah posts.

H3A** OUTSIDE, ABOVE GROUND

CONDITIONS: Products predominantly in vertical exposed situations and intended to have the supplementary paint coat system that is regularly maintained.
BIOLOGICAL HAZARD: Moderate decay fungi, borers and termites.
EXAMPLES: Fascia, barge boards, exterior cladding, window joinery, door joinery and non-laminated verandah posts.

H4 OUTSIDE, IN-GROUND

CONDITIONS: Subject to severe wetting.
BIOLOGICAL HAZARD: Severe decay fungi, borers and termites.
EXAMPLES: Fence posts, garden walls less than 1m high, greenhouses, posts and landscaping timbers.

H5 OUTSIDE, IN-GROUND OR IN FRESH WATER

CONDITIONS: Subject to extreme wetting and/or where the critical use requires a higher degree of protection.
BIOLOGICAL HAZARD: Very severe decay fungi, borers and termites.
EXAMPLES: Retaining walls, piling, house stumps, building poles and cooling tower fill.

H6 MARINE WATERS

CONDITIONS: Subject to prolonged immersion in sea water.
BIOLOGICAL HAZARD: Marine wood borers and decay fungi.
EXAMPLES: Boat hulls, marine piles, jetty cross-bracing, landing steps and similar.

NEW ZEALAND

H1.1 INSIDE, ABOVE GROUND

CONDITIONS: Protected from the weather, always dry.
BIOLOGICAL HAZARD: Borers.
EXAMPLES: Interior finishing timber.

H1.2 INSIDE, ABOVE GROUND

CONDITIONS: Protected from the weather, but with a risk of moisture content conducive to decay.
BIOLOGICAL HAZARD: Borers and decay fungi.
EXAMPLES: Wall framing.

H3.1 OUTSIDE, ABOVE GROUND

CONDITIONS: Periodic wetting.
BIOLOGICAL HAZARD: Decay fungi and borers.
EXAMPLES: Cladding, fascia and joinery.

H3.2 OUTSIDE, ABOVE GROUND

CONDITIONS: Periodic wetting and more critical end uses.
BIOLOGICAL HAZARD: Decay fungi and borers.
EXAMPLES: All H3.1 uses, plus structural and decking.

H4 OUTSIDE, IN-GROUND

CONDITIONS: Subject to extreme wetting and/or where the critical use requires a higher degree of protection.
BIOLOGICAL HAZARD: Decay fungi and borer.
EXAMPLES: Fence posts and landscaping timbers.

H5 OUTSIDE, IN-GROUND OR IN FRESH WATER

CONDITIONS: Subject to extreme wetting and/or where the critical use requires a higher degree of protection.
BIOLOGICAL HAZARD: Decay fungi and borers.
EXAMPLES: House piles, poles and crib walling.

H6 MARINE WATERS

CONDITIONS: Immersion in seawater or estuarine ground.
BIOLOGICAL HAZARD: Marine wood borers and decay fungi.
EXAMPLES: Marine timber and piles.

Note: Please refer to the complete standards for more detailed information. **as per AS1604 and NSW TMA.

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*For further information see separate guarantee documents.

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