

NexGen Wood Protection LTD.

Manufacturer of Non-Toxic, Eco-Friendly Topical Protective Wood Coatings That Prevent Fire, Mould, Rot, Decay, and Insect Damage



This is a NexGen House, is yours?



NexGen Protects:

- CLT's ✓
- Glulam ✓
- Panels ✓
- Dimensional ✓
- Flooring ✓
- Cladding ✓
- Decking ✓
- Fascia ✓



Making Wood Perfect.

What is NexGen?

An Introduction To NexGen Products

- NexGen is the trade name for a revolutionary & necessary wood coating system developed by leading chemists in the United States & Canada
- NexGen Wood Protection, the global leader in the development and distribution of eco-friendly protective wood coatings since 2003, presents...



NexGen Original, NexGen **FlameShield**, & NexGen **ADVANCED**

NexGen: Making Wood Perfect

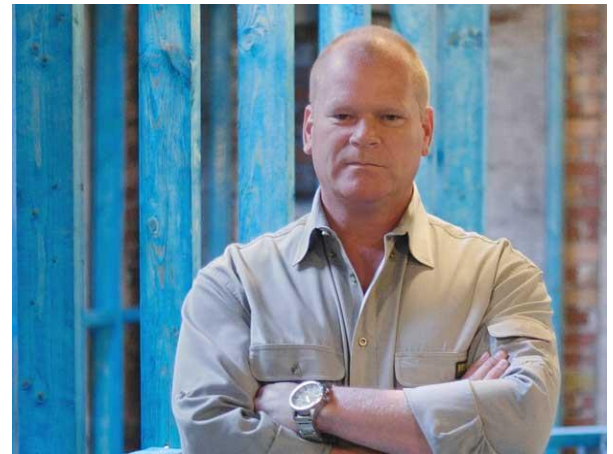
- NexGen is an Environmentally Friendly & Non-Toxic wood coating system
- Protects wood from mould, rot, mildew and fungus
- Protects wood from wood-boring insects, including all termites and carpenter ants



NexGen Original, NexGen **FlameShield**, & NexGen **ADVANCED**

NexGen: Making Wood Perfect

- Works on all species of wood and all wood products
- NexGen comes Perfectly Clear or can be tinted to any colour (blue is the most popular!)



NexGen Original, NexGen **FlameShield**, & NexGen **ADVANCED**

NexGen: Making Wood Perfect

- And after an incredible amount of R&D and audited testing, NexGen offers products with a certified Class A Fire Rating



That's the same fire rating as concrete!



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- In fact, our fire protection has been proven to be so remarkable that our NexGen FlameShield and ADVANCED products are the first wood coating products in history to come with a no-charge warranty for **fire**.



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- So, no fire, no mould or rot, no insects... no chance it is inexpensive, right? Not so!
- Proprietary Technology (MicroBarrier bonding agent) combined with simple, single application method means material and production costs are very low
- The cost? Significantly less than any alternative for fire **OR** mould **OR** rot **OR** insects – and NexGen protects wood fibre from ***ALL OF THEM!***



NexGen Original, NexGen **FlameShield**, & NexGen **ADVANCED**

NexGen: Making Wood Perfect

NexGen is available in three products:



NexGen Original, which is warranted to prevent mould, insect damage, decay, and rot;



NexGen Original, NexGen **FlameShield**, & NexGen **ADVANCED**

NexGen: Making Wood Perfect

NexGen is available in three products:



NexGen FlameShield, our stand-alone fire inhibitor which has a Class A fire rating and is warranted to prevent fire;



NexGen Original, NexGen **FlameShield**, & NexGen **ADVANCED**

NexGen: Making Wood Perfect

NexGen is available in three products:



NexGen **ADVANCED**, our total protection coating, warranted to prevent fire, mould, rot, decay, and insect infestation!



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NexGen: Making Wood Perfect

**How exactly is NexGen
able to do what it does?**



NexGen Original, NexGen **FlameShield**, & NexGen **ADVANCED**

NexGen: Making Wood Perfect

- Proprietary **MicroBarrier** Protection – the “Secret Sauce”
- Creates a semi-permeable water barrier – NexGen’s Dry Additives, which are rapidly absorbed into the wood substrate, can not leach out
- Single application process (spray, flood coat, dip, brush, roll, or pressure treat) that covers all six sides of the wood / engineered wood product – **one coat is all you need.**



NexGen Original, NexGen **FlameShield**, & NexGen **ADVANCED**

NexGen: Making Wood Perfect

Flood / Spray Coating – Just One Application Option



COATING COMPLETED!



NexGen Original, NexGen **FlameShield**, & NexGen **ADVANCED**

NexGen: Making Wood Perfect

- After the application process, NexGen products are wet-stacked and hard-packed
- No kiln drying necessary, no stickers needed between rows in bundle
- Kept under cover for 1 - 3 hours for curing
- Stored outside – no plastic covers needed
- Process is simple, keeping costs low



NexGen Original, NexGen **FlameShield**, & NexGen **ADVANCED**

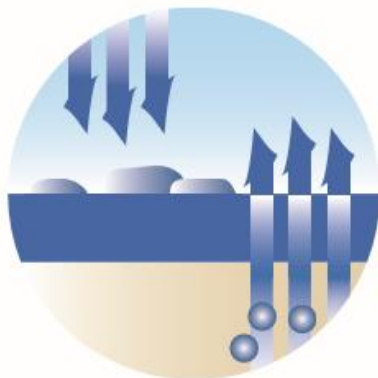
NexGen: Making Wood Perfect

Topical single-application coating applied to all six sides of wood.

MicroBarrier Protection, the “Secret Sauce”.



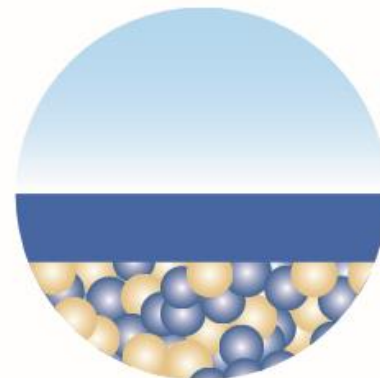
MicroBarrier creates a semi-permeable water barrier; NexGen Dry Additives (NGDA) cannot leach out.



NGDA like water so they continually migrate deeper into the wood, thus over time NexGen will provide even greater protection.



MicroBarrier in NexGen bonds with wood fibre at the cellular level trapping NGDA so they can't escape.



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NexGen: Making Wood Perfect

- The MicroBarrier also protects wood from uncontrolled moisture absorption or loss
- Now post-construction shrinkage of wood after is no longer an issue
- Also minimizes the damage that untreated exposed lumber sustains (warping, cupping, etc.) – up to 25% more usable wood per bundle!
- End product is a healthier, stronger, well-conditioned piece of wood



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NexGen: Making Wood Perfect

- Wood can be painted or stained after NexGen products are applied - no effect on protection or warranty
- NexGen products can be custom tinted to meet the customer's need
- Factory application allows for Quality Control and consistent application



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NexGen: Making Wood Perfect

- Works on any wood product (stick, panels, CLT, glulam, I-Beams/I-Joists, EWP, etc.) as long as there is a wood fiber component
- No issues with species, from SYP to Eucalyptus
- Non-corrosive to plates and fasteners



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NexGen: Making Wood Perfect

- NexGen products do not off-gas, leach, or in any way contaminate a job site
- Do not add VOC's to wood
- Same toxicity as a water-based paint
- Waste material discarded with regular waste, no special handling required



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“It sounds too good to be true”



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Don't just take our word for it

- BM TRADA
- Louisiana State University Forestry Department
- Alberta Innovates Tech Futures (formerly Alberta Research Council)
- Intertek Laboratories
- Realtime Laboratories
- Galbraith Laboratories
- SGS Testing Company
- Bodycote (Bombardier), and more



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Sample Testing Data – Fire Resistance

Compliance:	Agency:	Date:	Substrate:	Results:
ASTM E84	Intertek	12 Feb 08	Doug Fir 2x4	FS < 25 (Class A) SD = 15
ASTM E84	Intertek	24 June 08	Hem/Fir 1x6	FS < 25 (Class A) SD = 20
			Hem/Fir 2x4	FS < 25 (Class A) SD = 125
			SYP 2x4	FS < 25 (Class A) SD = 200
ASTM E84	Intertek	12 Feb 08	Hem/Fir 2x4	FS < 25 (Class A) SD = 70
ASTM E84	SGS	24 Aug 07	Doug Fir 2x4	FS < 25 (Class A) SD = 50

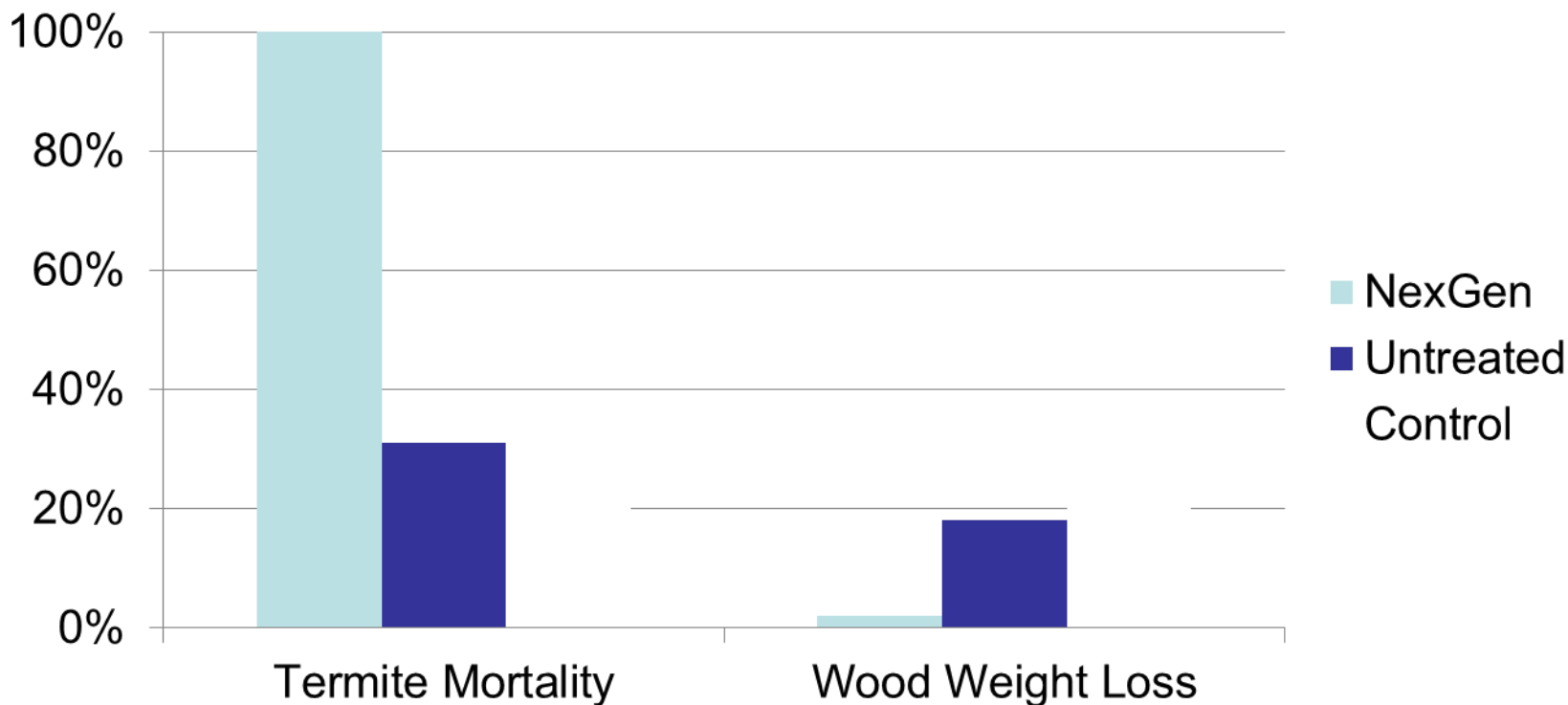
Compliance:	Agency:	Date:	Substrate:	Results:
ASTM E84	Intertek	29 Aug 08	Red Cedar 2x4	FS < 25 (Class A) SD = 50
ASTM E84	Intertek	13 Feb 14	½" Plywood	FS < 25 (Class A) SD = 35
ULC S102	Intertek	18 Dec 13	½" Plywood	FS < 25 (Class A) SD = 25
ASTM E1623	WFCi	30 Jun 15	½" OSB	> 19 Minutes
			¾" OSB	> 34 Minutes
ASTM E1623	WFCi	7 Jan 16	½" OSB	> 95 Minutes *
			½" OSB	> 95 Minutes *
ASTM E84 (30 Min)	Intertek	17 Nov 17	Weathered ¾" Plywood w/ ExBlock	FS <10 (Class A)



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NexGen: Making Wood Perfect

Sample Testing Data – Formosan Subterranean Termites



Mortality and weight loss tests demonstrate NexGen's resistance to Formosan subterranean termites. 100% mortality = 0% survival.

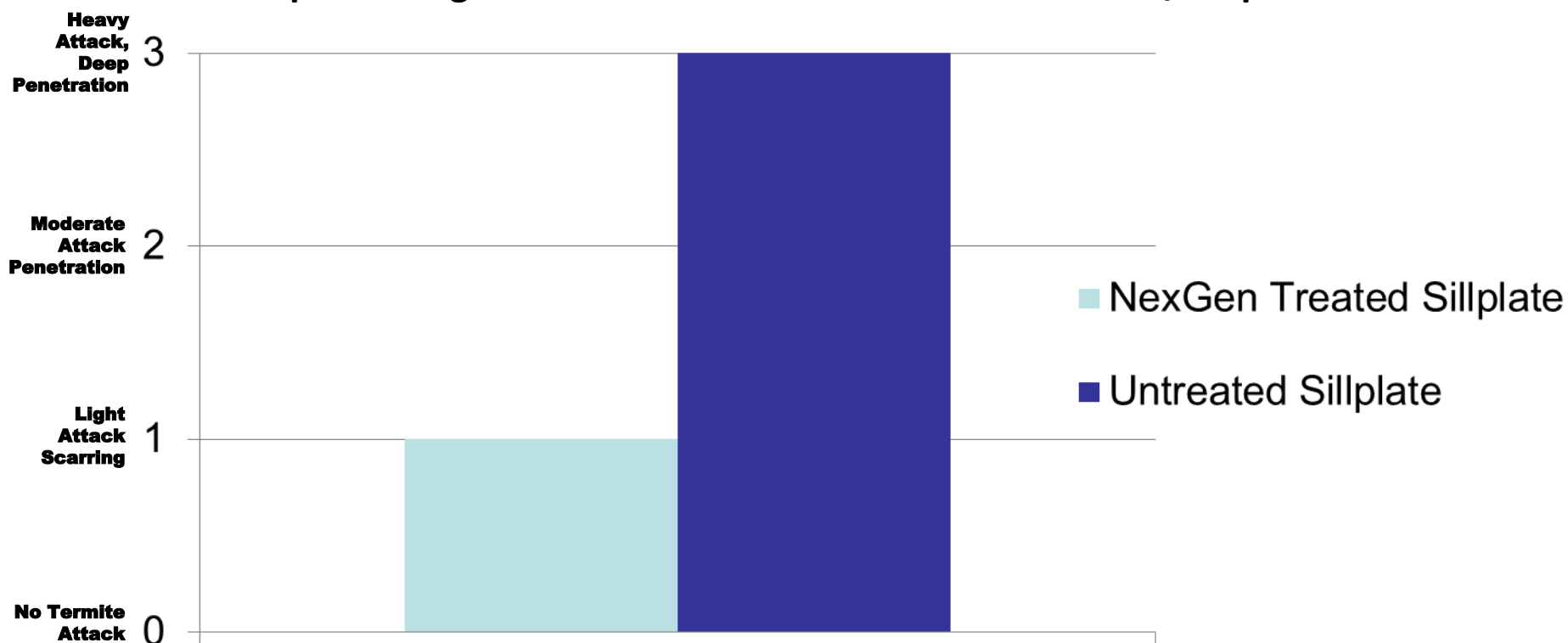
NexGen shows the best resistance compared to untreated lumber and the control (southern yellow pine sapwood).



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Sample Testing Data – Formosan Subterranean Termites / Sillplates



Formosan subterranean termite attack is strongly resisted on NexGen treated sill plates while untreated sill plates show no resistance.

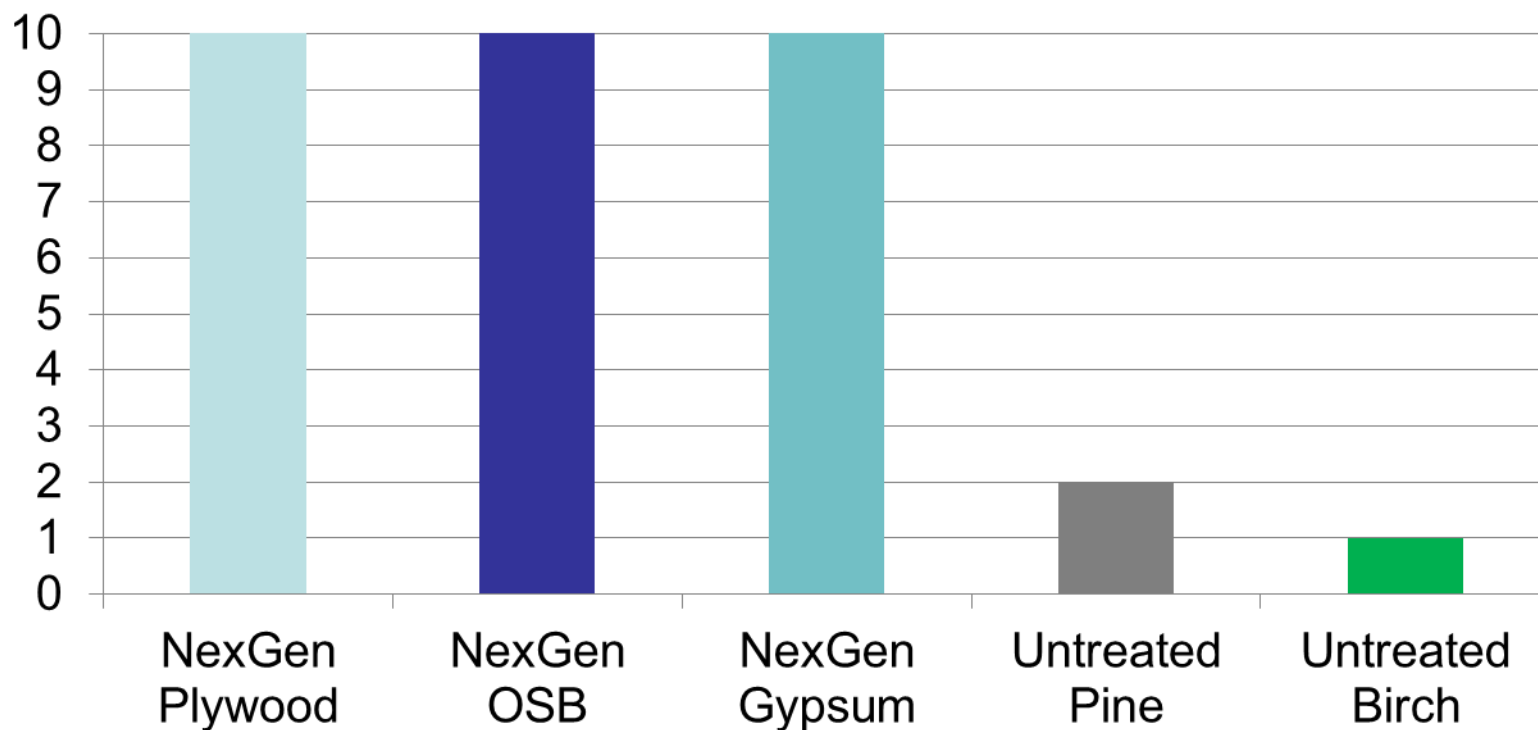
Re: Louisiana Forest Products Development Center, LSU, Baton Rouge, LA (2005)



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Sample Testing Data – Mould Growth



Inoculated with fungi and exposed over a 5 week incubation period, NexGen treated samples show no fungus growth (10 = No Mould Growth, 1 = Total Mould Growth).

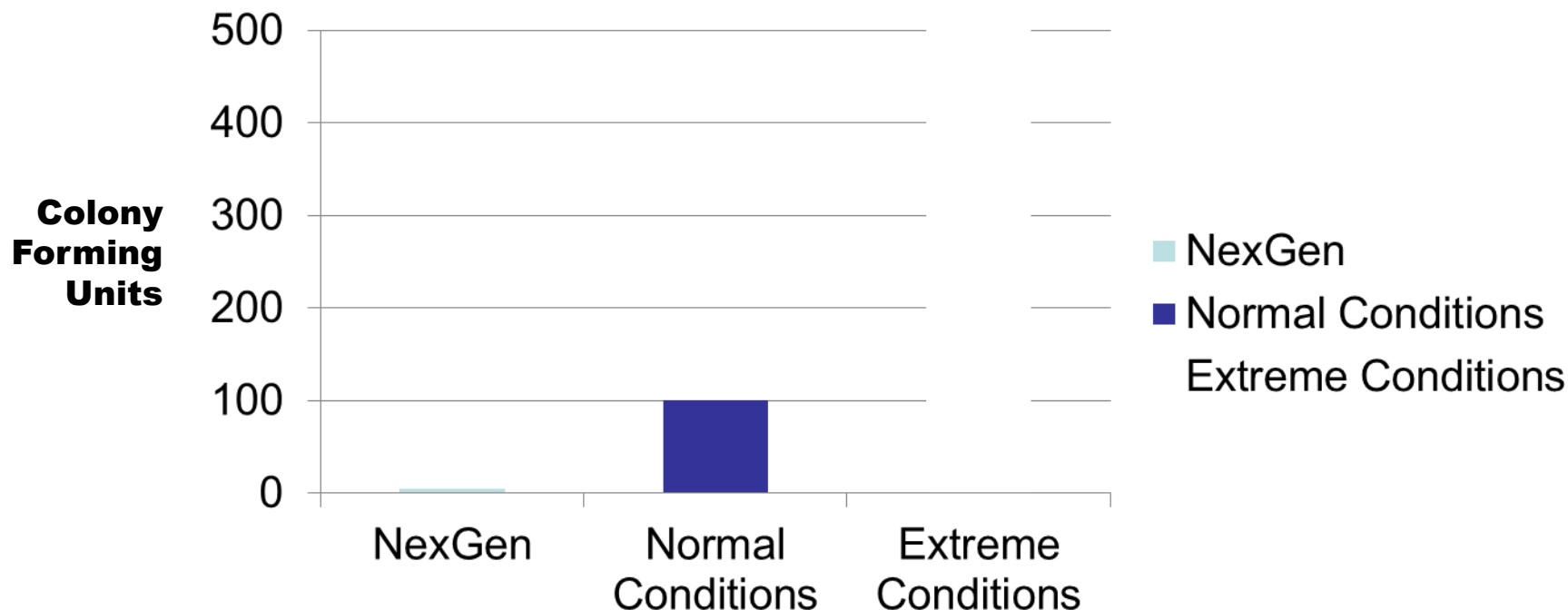
Re: SGS U.S. Testing Company, Fairfield, NJ (2004)



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Sample Testing Data – Mould Resistance



Viability analysis of samples produced *Trichoderma*, a common species of mould. Samples had visible mould growth prior to NexGen treatment.

NexGen provides 10-fold protection against mould versus untreated lumber.

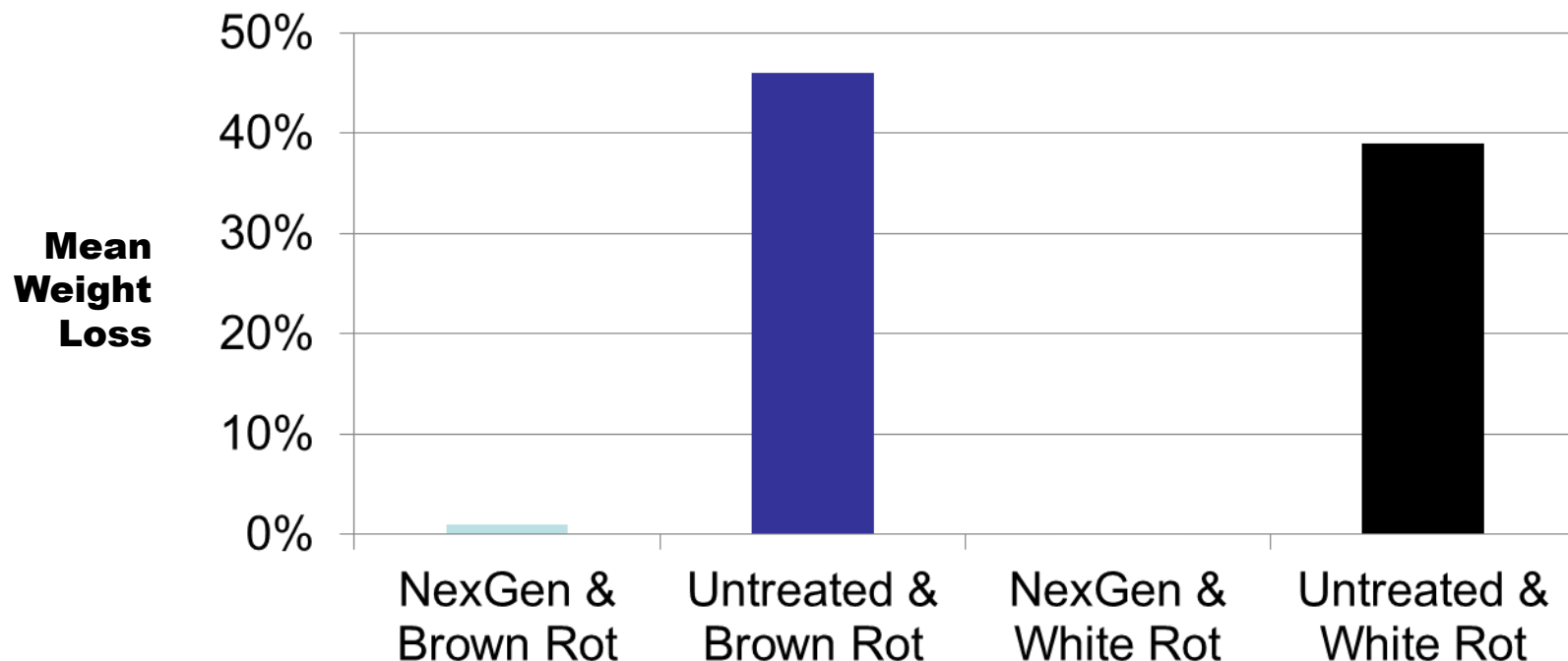
Re: F&ME Consultants, Myrtle Beach, SC (2005)



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Sample Testing Data – Decay Resistance



Weight loss due to fungal degradation of wood-based composites is an important concern for the structural integrity of the material used in the field.

NexGen provides 20 to 50 times more protection against decay versus untreated lumber.



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NexGen: Making Wood Perfect

Notable NexGen Projects



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Notable NexGen Projects



Sustainable housing development planned and coordinated by Actor Brad Pitt as a model for the rebuilding of New Orleans after Hurricane Katrina.



Europe's Tallest Wood-Clad building, Middlesbrough, UK. All the exterior wood was protected with NexGen, 2008 and looks as beautiful today as it did after its completion.



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Notable NexGen Projects



New American Hospital, Dubai. All the wood used in the interior design of the building was required to have a strong fire retardant coating, for obvious reasons.



Eco-friendly Housing Development, Hainan, China. Hainan is known for the voracious termites that inhabit the island as much as the beautiful island itself. NexGen was chosen to protect the wood from these destructive insects.



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Notable NexGen Projects



Greater Newark Conservancy. Being an eco-friendly development, the GNC searched for an eco-friendly fire retardant exterior coating. NexGen was their choice.



Panama Canal Expansion Project, completed. One of the largest construction projects in history, NexGen was used in multiple ways to protect the massive amounts of wood used in this project.



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Notable NexGen Projects



Bavarian Manor, Heyuan, China, ongoing. Bavarian Manor is the largest wood-construction project in China in a more than a century. Fear of fire and insect damage almost killed the wood industry here – but NexGen is helping to change that!



Penticton Lakeside Resort. CLT's (Cross-Laminated Timbers) are the fastest growing form of construction in the world. NexGen is the perfect treatment to keep the beauty of the wood but add the protection and peace-of-mind the clients need.



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Notable NexGen Projects



French Language School, Beijing, China. This school was not going to be allowed to open due to fire concerns unless NexGen – and only NexGen – was used to protect all the beautiful Western Red Cedar beams you see here!



Hainan Visitor Center, Hainan, China. In one of the most termite ridden, humid, and generally difficult building environments in the world, NexGen was chosen to protect **half a million cedar shingles** plus all the glulam beams used in this mass timber masterpiece.



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Notable NexGen Projects



Taiyuan Botanical Garden & Restaurant, China. Hundreds of thousands of board feet of CLT and glulam material needed to be protected from moisture damage, fire, and insect damage. NexGen was chosen for those reasons!



Hamilton Village, British Columbia, Canada. This was a situation where wood pilings were being used and needed protection, but an eco-friendly form of protection was essential. NexGen became the first protective wood coating authorized by the BC government for water contact for this project!



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Notable NexGen Projects



Sydney Opera House

NexGen is honoured to be chosen to provide protective coatings for one of the world's most iconic buildings. The refurbishing of this beautiful landmark will be an ongoing project for the next few years!



Why Use NexGen Products?

NexGen: Making Wood Perfect

For Manufacturers, Builders & Consumers

- Environmentally Friendly & Non-Toxic
- Protects homes from Fire, Mould & Insects
- Extensive third-party testing
- Easy and cost-effective to produce & purchase



Why Use NexGen Products?

NexGen: Making Wood Perfect

NexGen Products Are Ideal For:

- Entire superstructure of wood-frame homes
- Mass timber / tall timber structures
- Siding, shakes and shingles
- Fencing, fascia and other outdoor materials
- Window & door stock,
- Moulding, wood flooring



Above is a picture of a large development using NexGen in Hainan, China, an area known for voracious termites and strict building codes for wood use due to fire concerns.



Why Use NexGen Products?

NexGen: Making Wood Perfect

- Won't affect warranties by Mitek, Alpine, Trus-Joist, Boise, I-Joist, G-P, and others
- Product has received government approval in the US, Canada, Europe, China, and Australia & New Zealand, and is being shipped to additional parts of Asia, Africa and Central & South America
- Can be tinted to be a “finished product”



Why Use NexGen Products?

NexGen: Making Wood Perfect

For Manufacturers, Builders & Consumers

	NexGen	Smart Guard	Frame Guard	Pink Wood	Standard PT
Factory Applied	Yes	Yes	Yes	Yes	Yes
Onsite / Retro Applied	Yes	No	No	No	No
Topical Application	Yes	No	Yes	Yes	No
Air Dried	Yes	No	No	Yes	No
Easy To Handle	Yes	No	No	No	No
Fire Resistant	Yes	No	No	Yes	No
3rd Party Warranty For Fire	Yes	No	No	No	No
Insect Resistant	Yes	Yes	Yes	No	Yes
3rd Party Warranty For Insects	Yes	No	No	No	No
Mould Resistant	Yes	Yes	Yes	No	Yes
3rd Party Warranty For Mould	Yes	No	No	No	No
Rot Resistant	Yes	No	No	No	Yes
3rd Party Warranty For Rot	Yes	No	No	No	No
50 Year Covered Structure Warranty	Yes	No	No	No	No
30 Year Exterior Warranty	Yes	No	No	No	No
Eco-Friendly	Yes	No	No	No	No



Why Use NexGen Products?

NexGen: Making Wood Perfect

- Our MicroBarrier technology was developed by an American coatings' specialist with over 30 years experience
- Eleven years in the marketplace and ongoing R&D and testing to keep our products leading the industry, never chasing it
- Years of saved expense: Independent testing, approval in highly regulated markets (Canada, US, EU, Australia), market acceptance and *in situ* experience



Why Use NexGen Products?

NexGen: Making Wood Perfect

- **NexGen Wood Protection** is a Canadian Company
- Began development of eco-friendly wood protection treatments in 2003
- Began production of the NexGen line of products in 2012
- Family company whose owners have 3 generations of experience in the Lumber, Treating and Chemical industries





Available Exclusively From
NexGen Wood Protection LTD.

Please visit

www.nexgenwoodprotection.com

for videos, test results, and
much more information.

