

# EarthCoat

SAFEGUARDING OUR NATURAL SURROUNDINGS

Combining capabilities in distribution and development, we aim to deliver a range of products that promise to have an undisturbed effect on our natural surroundings.



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### Formulation **One**

Industry designed for: Marine

Product name - **Non-Stick Bottom Coat Paint**

Type of Technology- Innovative coating due to absence of any toxic ingredients, and zero VOCs. (VOC =Volatile Organic Compound - Organic chemicals that form photochemical oxidants which negatively affect health. VOCs are also hazardous air pollutants.)

Rights - EarthCoat has financed the development, and been assigned full ownership of the formula.



### Formulation **Two**

Industry designed for: Marine

Product name - **Ablative Bottom Coat Paint**

Type of Technology- Innovative coating due to the absence of any biocides, and zero VOCs. (A biocide is a substance that kills living forms.) (Ablative paint is a coating that wears from the action of the water.)

Rights - EarthCoat is under a license arrangement to distribute the product exclusively in North America.



### Formulation **Three**

Industry designed for: Building/Architecture

Product name - **Interior/Exterior Fire Retardant Coating**

Type of Technology- New technology due to the coatings ability to be used on exterior surfaces. Formulation is free of VOCs.

Rights - EarthCoat has financed the development, and been assigned full ownership of the formula.



### Formulation **Four**

Industry designed for: Building/Architecture

Product name - **Waterproof Surface Sealer**

Type of Technology- Innovative coating due to the absence of toxic ingredients, zero VOCs, and the coatings ability to be used on multiple exterior surfaces.

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### Formulation **Five**

Industry designed for: Building/Architecture

Product name - **Mold and Mildew Preventative Coating**

Type of Technology- New technology, coating is absent of toxic ingredients, zero VOCs, and is currently non-existent in the marketplace.

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# Industry Alerts

## Marine and Building Protective Coatings

An estimated 79.3 million liters of anti-fouling coatings valued at \$1.3 billion USD were consumed worldwide in 2008. The global market is comprised of four major segments, 1) commercial or merchant sea-going and coastal vessels, 2) recreational boats and yachts, 3) naval vessels, and 4) stationary structures and other minor uses.

The most significant factor affecting the industry was the ban of TBT-based coatings in 2003. Tributyltin (TBT) is a registered biocide, its primary use has been as a paint additive on ship and boat hulls designed to discourage the growth of marine organisms. The conversion to alternative products, away from TBT-coatings, has registered annual growth rates in the marine coatings market of 14.4% in volume and 14.6% in dollars since 2005 through 2008, impacted primarily by the higher cost of substitutes to the banned TBT substance.

The next level of public concern is the rising level of copper in busy harbors and marinas. Copper is today's most widely used coating additive in fouling paints. As environmental concerns regarding copper intensify, manufacturers are increasingly motivated to develop improved biocide-free systems. In addition, other goals like reducing VOCs and developing high-performance water based products are gaining importance amongst coating manufacturers.

### **Brennan Research Group 2008**

There's no doubt there's an increased environmental focus amongst ship-owners and shipyard clients, we hear the words sustainability and corporate social responsibility far more frequently. These issues are right at the top of company agendas. In addition, environmental regulations will point the direction for how paint manufacturers will spend R&D resources. This will definitely lead to a 'greener' shipping industry to the benefit of all of us.



### **Coatings World, May 2009, Vol. 14, NO 5 Marine Coatings Market – Tim Wright**

Demand for protective coatings in the US is forecast to increase 4.6 percent per year to \$13.4 billion in 2009. In general, higher value coatings that provide multiple functions, exhibit favorable environmental profiles, or are used in niche applications will experience the most rapid gains. Development efforts will provide opportunities for most products to some degree, with fire resistant, anti-wear and conformal coatings posting the fastest growth. Demand for fire resistant coatings, for example, will rise due to the greater use of more expensive intumescent coatings, which allow coated metal to be used in a wide range of building designs.

### **The Freedonia Group, Inc., a Cleveland-based market research firm 2009**

# Non-Stick Bottom Coat and Ablative Bottom Coat Paint

By design, coatings in the Marine market contain toxic metals, which are responsible for environmental damage. The continuous leaching of these heavy metals from the bottom of vessels has been responsible for the destruction of shellfish populations, sex changes in invertebrates, and possible genetic defects in other marine animals. The reason these coatings exist is because all marine surfaces (aluminum, fiberglass, wood, steel) are affected by the attachment of fouling organisms. Over time, the build up of these organisms leads to the corrosion of submerged substrates and considerably reduces the efficiency (drag/fuel consumption) at which vessels travel through water. The toxicity of these metals is the primary combatant against the attached matter; it works by leaching from the coating material and either deters or kills the organisms that have attempted to collect.

EarthCoat's solutions provide two formulations for the Marine market, each designed for different segments. EarthCoat's Non-Stick Coating is applied on vessels with a higher frequency of use, meaning crafts that spend a great deal of time navigating the waters. The slippery surface of the Non-Stick coating makes it difficult for fouling organisms to attach, and once the boat is moving the turbulence through the water washes the organisms free. Our Ablative Bottom Coat is designed for vessels which spend more time in port, example being pleasure crafts. When pleasure crafts are docked they need defense against against fouling agents, because it's here in the dock where most fouling occurs. The Ablative Coating has a release system designed into the paint, this release system through the materials being released, is what makes the hull of the vessel uninhabitable for marine organisms. EarthCoat's notable difference in both of these solutions, Non-Stick and Ablative, is the absence of any heavy metals or biocides, a huge void with the coatings available today, and a necessary one to ensure the bottom paints aren't contributors to unhealthy waterways.



## Interior/Exterior Fire Retardant Coating

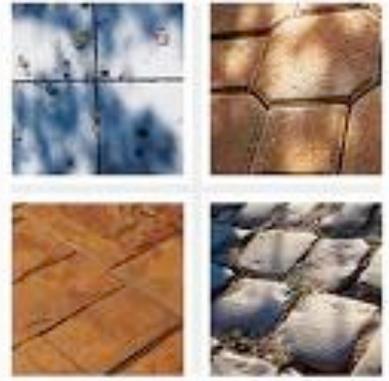
Today's fire retardant coatings offer several advantages over untreated wood and other combustible materials; they do not ignite or contribute to the spread of flame. Paint is usually thought of as "decoration", rarely as part of fire protection, and fire-fighting paints are a very special kind, costing significantly more than traditional decorative paints. Consequently, the building industry has yet to learn how well paint can function as a 24-hour fire fighter. The key word to look for in a fire retardant paint label is INTUMESCENT. That word marks a very special kind of paint, translated it means that the paint does a lot more than simply decorate - at the first lick of a flame, the properly coated surface starts to *intumesce* (to swell or bulge-up) into solid foam turning the coating into a protective blanket. The foam becomes the key component in retarding the spread of fire.



At temperatures of 1500-1700° F, today's products can stay on the job for up to an hour. This delay gives precious time to reach safety, the most important factor, along with reducing the repair cost due to the intumescent shield staying on the job. EarthCoat's product will certainly include this shield as well as provide a temperature rating higher than what is currently offered. The major advantage will come from the coating's ability to be used on exterior surfaces; a major breakthrough as today's products are solely used on interior surfaces. Therefore, EarthCoat's solution will provide: a.) A clean zero VOC formulation, b.) Safety through higher temperature ratings, and c.) Multiple surface uses – Interior and

## Waterproof Surface Sealer

This formulation is earth friendly, as it contains zero VOCs. The system is designed for use as a clear sealer for exterior or interior concrete, brick, paving stones, other masonry surfaces as well as terrazzo, ceramic, vinyl, and linoleum floors. On brick and concrete walls the coating prevents pitting and stops the penetration of moisture. The product exhibits superiority in chemical resistance, water resistance, oil resistance, and film toughness, along with high standards of durability when compared to standard emulsion sealers that have been available for several years. EarthCoat's Surface Sealer provides a rich finish on a concrete driveway or paving stones; the Sealer's penetration revitalizes surfaces, prevents the sand loss connecting paving stones, reduces weed growth between pavers, and retards oxidization. Furthermore, it enhances the color as well as protects from age, weather, and automotive fluids that potentially cause surface damage.



Key to our Sealer's performance is its flexibility; it is an excellent clear sealer for wooden decks and fences, and it protects wood from premature aging and weathering. Products available today are primarily used to shield one surface - recommended by the manufacturer for a specific surface type only . EarthCoat's one solution sealer provides for multiple

## Mold and Mildew Preventative Coating

The issue of mold and mildew in homes and office buildings is a major concern particularly in the southern United States because of the seasonal humid environment. According to a report issued in 2007 by the Environmental Protection Agency, over 100 million Americans live in toxic indoor environments, leading to depression, allergies and other inhalation diseases. Condensation in the air ducts creates environments that are hidden from view and contribute significant amounts of indoor pollution from mold or mildew. EarthCoat addresses this condition with a technology (patent pending) that incorporates uniquely developed desiccants (substances that absorb water) combined with a moisture-permeable polymeric binder, which makes possible easy application inside the ductwork. This system seizes moisture out of the air when humidity is high, and releases moisture when humidity is low, thus preventing moisture from condensing on surfaces that promote mold/mildew growth. The application has potential in areas outside of ventilation ducts, such as the back of refrigerators, underneath kitchen sinks, garages, basements, and bathrooms, locations where measurable amounts of moisture tend to collect.



# Summary

EarthCoat Technologies plans to manage this entire line of highly-developed products under its own brand name, EarthCoat, and when deemed appropriate, assign a particular formulation to a third to attain greater market presence. Having this diversified portfolio increases the opportunity for market strength and continued sustainability. Each product is under a different schedule with regards to testing and commercialization, allowing the company to better plan resources and ensure that each formulation is given the greatest opportunity for success.

Another key advantage is the location of our business. Situated in the San Francisco Bay Area of California, we're sited in the middle of an environmentally aware population. The West Coast has become a principal market for businesses associated with the "green" label, whether a product or service, the market is plentiful with early adopters. Fulfilling our vision will begin with a solid position in our local markets. We certainly see the opportunity on a larger scale and have every intention of capturing it, however, that sequence begins once our reliable base has been formed. Expansion will be the result of increased knowledge, product superiority, and fiscal strength; all operating plans reflect this strategy.



## *EarthCoat*

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