

# Homex 300 Concrete Forming

## HOMASOTE

Homex 300 is a treated wood fiber strip made from 98% PCR paper. It is tough, strong, and flexible. Homex 300 is used as forming for walkways, patios, pool aprons, and driveways and as an expansion joint.



Homex is produced in the United States. It is made of 98% PCR material. A major source of Homasote's waste paper comes from curbside collection of all 53 New Jersey municipalities.



Homasote reclaims 65,000,000 pounds of waste paper each year. Water, dust, scrap, and product rejects are all recycled in a closed-loop system. Homasote decreases air pollution emissions up to 73%.



VOCs are emitted during production and use, but within regulated limits. Homex 300 contains no known carcinogens. 1-2% non-formaldehyde based paraffin wax, CAS 8002-74-2, and less than 0.1% copper based pesticide CAS 39290-85-2 are the only known toxic materials in Homex 300. An MSDS can be found online.



Homasote employs local members of the West Trenton, New Jersey community.

# Myco Foam

## ECOVATIVE DESIGN, LLC

Bio-based packaging grown from agricultural byproducts and mushroom root structures. Can be fully composted in backyard gardens, is available in a range of densities, and provides impact protection, fire resistance, thermal insulation, and buoyancy. Packaging, product design, insulation, structural biocomposites, surf, and automotive applications.



Ecovative uses local agriculture crop waste such as plant stalks or hulls and mushroom mycelium.



Myco Foam is made of rapidly renewable resources that uses crop wastes. It is produced and manufactured with low energy. Myco Foam has been certified by the Biodegradable Products Institute.



Ultra low VOCs, Class A fire rating.



Ecovative does not provide any information regarding Social Equity.



# FireSpan 90 Thermafiber

## OWENS CORNING

FireSpan 90 Thermafiber products are insulations designed to provide fire protection, thermal insulation, acoustical and vapor control. They are used in commercial applications.



FireSpan 90 Thermafiber is made from a minimum of 70% slag, a steel industry waste product that would otherwise be landfilled, and is bonded with less than 5% (by weight) phenolic resin. Thermafiber uses 75,000 tons of slag annually.



Owens Corning limits the amount of product cutoff to less than 5% of the cumulative mass of a model. There is no recycling or reclaim system setup for end of life, therefore the material usually ends up in landfills. Thermafiber also has an Environmental Product Declaration (EPD).



Mineral wool dust is a mechanical irritant, but is otherwise harmless. Thermafiber is noncarcinogenic and VOC emissions meet air quality standards. An MSDS is available online.



Owens Corning donates building supplies to revitalization, disaster relief, and homelessness projects and supports international charities. Half of Owens Corning locations volunteer in local or international initiatives.

# Baltek

## 3A COMPOSITES

Baltek is a high-strength balsa wood composite material and is known for good stiffness to weight ratio. It has strong resistance to moisture, temperature changes, fire, and chemicals. Baltek can be molded to create a variety of interior and exterior products such as rotor blades for wind energy, boat decks, doors, wall panels, and containers.



Baltek is made from 100% plantation wood. 3A Composites retrieve their balsa wood from FSC certified balsa plantations in Ecuador. Baltek explains that there are several thousand of these plantations where their production methods are carefully monitored.



Balsa wood is a natural and renewable resource. The balsa tree is the fastest growing tree in the world, requiring very little energy to process natural balsa wood into the Baltek material.



Baltek contains no hazardous ingredients by 29 CFR 1910.1200. However, the balsa wood dust emitted from Baltek is carcinogenic. MSDS available on website.



Special cooperation with Fundacion Chile, a non-profit foundation established in 1976 by the Government of Chile and ITT Industries. Focuses include developing innovative and renewable ways of forestry management.



# ABS Color-Full Filament

## FILABOT

ABS is one of the most commonly used materials in 3D printing and Filabot has created a filament made of recycled materials and a mix of leftover colorants.



The color filament is made from a virgin base resin (ABS) and is mixed with random colorants to produce this color. Once a user prints with the material they can recycle it in Filabot systems. The Filament is 1.75mm or 3mm in diameter and the diameter tolerance is +/-0.05mm, making it compatible with most any 3D printers.



Filabot uses the highest quality recycled plastic, colorants and base ABS from suppliers in the US. Filabot's manufacturing practices are very conservative. They do not like to waste and look at many options for the best possible solution when they are produce filament for their machines.



A MSDS is not available for this product yet. There are no known carcinogens for the filament.



Filabot has a upcycling system in which they collect plastic utensils from their partner's, Ben and Jerry's and Citi Market (a co-op foodstore), and turn them into materials. Filabot produces all ABS Filaments in house, in the United States.

# Hempcrete

## AMERICAN LIME TECHNOLOGY

Hempcrete is a biocomposite made of a mixture of limestone, sand, and hemp. It is used as an insulating material weighing about a seventh or an eighth of the weight of concrete. The material is fireproof, waterproof, acts as a good insulator, does not rot when used above ground, and is 100% recyclable.



North American hemp must be imported from the UK because it is illegal to grow in the US.



This material cuts down the use of concrete and is lightweight, lowering the impact of shipping. The hemp will also absorb CO2 and release oxygen during its growth. Because of a higher thermal resistance, less energy is needed to heat and cool structures insulated with Hempcrete.



Hemp itself is a fast-growing, beneficial crop requiring no fertilizer, weed killer, pesticide or fungicide.



Hempcrete is a fairly new business and only has a few employees.



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<http://www.americanlimetechnology.com/>

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# Homex 300 Concrete Forming

## HOMASOTE

Homex 300 is a premolded, treated wood fiber strip used in concrete and masonry joints, made from 98% PCR paper. It is a tough, strong, and flexible building material.



Homex is produced in the United States. It is made of 98% PCR material. A major source of Homasote's waste paper comes from curbside collection of all 53 New Jersey municipalities



Homasote reclaims 65,000,000 pounds of waste paper each year. The FSC confirms that Homex 300's materials are derived from a renewable source. Water, dust, scrap, and product rejects are all recycled in a closed-loop system. Homasote decreases air pollution emissions up to 73%.



VOCs are emitted during production and use, but within regulated limits. Homex 300 contains no known carcinogens. 1-2% non-formaldehyde based paraffin wax, CAS 8002-74-2, and less than 0.1% copper base pesticide CAS 39290-85-2 are the only known toxic materials in Homex 300. A public MSDS can be found online.



Homasote employs local members of the West Trenton, New Jersey community.



# Dune Tegular Ceiling Panel

## ARMSTRONG

Durable, wet-formed mineral fiber panels with standard acoustical absorption and light reflective characteristics. It can be applied as a commercial interior finish and acoustical suspended ceiling system.



Tegular panels are made from 56% PCR material including mineral fibers, ceiling panels, paper, and renewable plant starch.



Waste products are reincorporated into the product. All wastewater is treated. Manufacturing takes place in the US and each facility has annual environmental plans for energy, water and waste reduction. Armstrong will reclaim the product after use and recycle it into new panels. Armstrong has a public LCA online.



The mineral fibers used are non-carcinogenic. Meets 2010 California standards for VOC emissions in manufacture and use. The product produces CO<sub>2</sub>, CFC-11 and smog during manufacture. Dune Tegular Panels are anti-mold and anti-mildew. An MSDS is online.



Armstrong World Industries employs local members of the community and has a CSR policy to ensure that all employees receive fair living wages.

# Alkemi Copper

## RENEWED MATERIALS, INC

Alkemi Copper is a clear, polyester-based composite that incorporates 60% (by volume) PIR scrap waste. It is a durable and strong surface. The product is commonly used for horizontal and vertical decorative surfaces, counter-tops, and furniture tabletops.



Alkemi Copper scraps consist of 84% recycled copper and are covered with virgin polymeric resin. They plan to create a recycled polymeric resin.



Renewed Materials packages samples in kraft paper and ships orders on recyclable wood pallets. Post industrial collection of aluminum diverts the scrap from entering the waste stream in which it would be burned, emitting pollutants. They reclaim broken pieces or cut-offs from installation and any unused products for samples.



VOC emissions for Alkemi Copper are negligible. Alkemi does not contain fire retardant. Toxic resin dust from sanding is captured and used to form the opaque resin in Alkemi counter-tops.



Alkemi supports The Starfish Programme, which provides scholarships for youth in Uganda. Alkemi is also a lender in Kiva, an online microlending program that assists entrepreneurs globally.



# FlexForm LD

## FLEXFORM TECHNOLOGIES

Flexform's Low Density board is a natural fiber composite sheet made from polypropylene and natural fibers. It acts as a lightweight substitute for fiberglass reinforced plastics. FlexForm is advertised for automotive purposes and office products.



The natural fibers include jute, kenaf, hemp, and flax. Natural fibers, that make up half of FlexForm LD, are renewable resources cultivated on a number of continents included North America.



FlexForm's natural fiber composites (NFCs) are recyclable in-house and after use. The composite fibers do not decompose once joined with polypropylene, though the final boards do not have negative effects on recycling streams. The lightweight materials consume less energy to manufacture than their alternative glass-fiber sheets.



Natural fiber composites emit zero VOCs, carcinogens, or toxins in manufacturing and in use. In addition, they do not off-gas formaldehyde, benzene or styrene in their lifetime.



Employees at FlexForm LLC are local members of the community. The company does not offer any community outreach programs. It is certified by the International Organization for Standardization (ISO) for quality of manufacturing and environmental responsibility.

# IceStone

## ICESTONE USA

IceStone Durable Surfaces are high performance concrete slabs made entirely out of recycled glass, Portland cement, and non-toxic pigments. IceStone surfaces are commonly used for backsplashes, bathroom vanities, tabletops, bar tops, interior walls, and commercial flooring applications.



IceStone's recycled glass and concrete are sourced from PIR and PCR sources in the U.S. IceStone advocates for stronger glass recycling programs in New York.



IceStone has adopted goals for energy conservation, carbon emissions, water use, and waste management. IceStone's water management principles are based on the Hannover Principles on Design for Sustainability and the water principles of WBCSD. They reuse 98% of the water used to produce IceStone surfaces.



IceStone surfaces are free of resin, non-toxic, and reusable.



IceStone provides living-wages, health benefits, educational programs, and life-skill training to employees. IceStone also provides discounted or free material to organizations with similar social and environmental goals. IceStone is a founding member of B Corp.



# Bonded Series

## PANELITE

Bonded Series is a line of structural panels created by bonding recycled resin facings directly onto an aluminum structural honeycomb core. Panels are used as partitions and reduce energy requirements for lighting.



The core of the Bonded Series is aluminum and the facing is Acrylic, PETG and polycarbonate.



Clearshade cells are energy efficient, designed to deflect solar heat at peak hours while permitting diffused light transmission. Panelite uses 70-80% less raw material than a solid resin sheet of comparable thickness. All protective films are recyclable and all adhesives include PIR content. Panels are lightweight, reducing transportation impact.



The PIR resins are non-toxic and do not emit harmful off-gasses.



Panelite donates building materials to projects including STAR Housing for the Homeless, contributes samples to schools, and provides educational initiatives including Para Los Niños. They also sponsored American Institute of Architects 2015 symposium on women in architecture.

# Marmoleum Flooring

## FORBO FLOORING SYSTEMS

Marmoleum is a flooring made of raw and recycled materials. Marmoleum is resistant to bacteria, highly durable and easy to clean, making it ideal flooring in hospitals, schools, and public spaces.



Marmoleum is made from 97% raw materials; 70% which are rapidly renewable, along with 43% recycled content. Marmoleum is produced from natural resources including rosin, wood flour, cork flour, linseed oil, limestone, and jute.



Marmoleum is entirely biodegradable. It can not be reused but has a 25-40 year life span. If it is incinerated in an energy-recycling plant, the energy produced will roughly equal the energy used in production. Forbo has had a sample take-back program since 2005. A LCA can be found online.



Emits VOCs in manufacturing but Forbo has reduced overall VOC emissions by 46%, CO2 emissions by 22%, and NOx emissions by 6.5%. Carcinogenic silica dust is produced.



Forbo offers fair wages, uses no child labor, requires major suppliers to invest in schools and never moves production for cheap labor. Forbo is active in the sustainability movement and adheres to the triple bottom line philosophy.

# Paper Stone

## PAPER STONE

Paper Stone is a sustainable composite made from 100% PCR paper, PetroFree™ phenolic (heat-cured plastic) resins, and natural pigments. It is ideal for countertops, signs, plaques, window sills, restroom partitions, cabinets, indoor and outdoor cladding.



FSC-Certified 100% PCR paper is saturated with proprietary PetroFree™ phenolic resins containing cashew nut shell derivatives. Phenolic resin is known to have high abrasion resistance, making it very durable.



PetroFree™ resins are produced from industrial by-products that would otherwise go into the waste stream. PaperStone has a class A fire and smoke rating. It is heat resistant to 350°F and is food-safe certified by the The Public Health and Safety Organization (nsf.org).



Paperstone emits no VOCs during its intended use.



Paper Stone lists on their website their core values, in terms of people and fairness, but does not have specific information.



# Northwest Series

## RICHLITE

Richlite Northwest is a paper-based composite material, made with pulp derived from certified, managed forests in North America. It is dense, durable, and heat resistant to 350°F. Northwest can be used in interior kitchen and bath, counter-tops, retail, and restaurant surfaces. It is also popular for wall caps and stair treads.



Richlite Northwest is made from 50-100% recycled content and FSC certified paper pulp from rapidly renewable eucalyptus trees.



Richlite uses a methanol/ethanol-based binder to reduce energy use during manufacturing. During production, Richlite's Waste-to-Energy system captures and recycles energy in the process. Use of a vertical drying tower reduces fuel consumption by 83%. Richlite products are manufactured in Tacoma and distributed in Brooklyn.



Richlite contains no urea formaldehyde. 99.9% of VOCs are destroyed in production.



Richlite does not provide any information regarding Social Equity.

