

PRODUCT FEATURES OF HEAT MODIFIED WOODS

MOISTURE RESISTANT	Thermal modification process removes all sugars and resins from the wood, which is partly what causes the wood to rot and decay. The resins and sugars are "cooked" off by longer term exposure to heat, 40 hours.
	During the thermal modification process the cellular structure of the wood is actually burned or fused together. This causes the wood to be impervious to any further moisture entering it. The wood, upon completion of the process, has approximately 5.5% moisture and will not absorb any more.
INSECT RESISTANT	The same process that stops rotting and decay in the wood, also makes the wood resistant to insects. With no "food source" left in the wood, the insects will not feed.
DIMENSIONALLY STABLE	Because HM Woods can not absorb more water the wood becomes very dimensionally stable. Water can cause wood to grow or shrink depending on the moisture content. HM Woods maintains its dimensions and shape even after installation.
HIGH STRENGTH	Because no chemicals are used in the processing of HM Woods, the inherent strength of the original material is relatively left intact. HM Woods is created from natural Southern Yellow Pine, one of the strongest woods available.
LIGHT WEIGHT	HM Woods is extremely light weight in comparison to other natural woods. The lack of moisture, resins, and sugars makes for a light weight material
RESISTANT TO WARPING & TWISTING	Once again, the inability of HM Woods to absorb water helps it resist the warping, twisting and cupping normally associated with natural wood.
	HM Woods is created through a thermal modification process that does not use any chemicals. Only heat and steam are applied to the wood. The natural wood is only modified, nothing is added, only removed.
CHEMICALLY FREE ENVIRONMENTALLY SAFE	Because HM Woods contains no harmful chemicals it can be disposed of in the same manner as any untreated wood, such as, disposal in landfills, use as mulch, campfires, or waste burning, etc.
WEATHER RESISTANT	HM Woods is only affected by ultraviolet light from the sun and it only changes the color of the wood. HM Woods begins as a natural warm brown color and when exposed to sunlight will turn a soft gray color. Other than changing colors the weather and causing some minor surface checking, the sun has little or no effect on the material
STAINABLE & PAINTABLE	HM Woods can be stained or painted, but only with products provided by HM Woods. Because the material will not absorb any more moisture, any water based stains or paints will not penetrate the wood.
NON HAZARDOUS TO HUMANS	Again HM Woods is chemically free and poses no potential harm to humans or animals. No protective clothing is needed. Normal safety protocols need to be used when working with any power tools.
SUPERIOR WORKABILITY SUSTAINABLE	HM Woods is a natural wood and as such can be handled and utilized in the same manner as any wood material. In fact because of the low moisture content the material cuts and works better than most wood. Normal saws, routers and other wood working equipment can be utilized with the wood without problem.
	All HM Woods is processed from U.S. grown Southern Yellow Pine. Wood grown in the U.S. is harvested from sustainable forests. Trees are harvested and replanted all of which is overseen by the U.S. government.



CHEMICALLY TREATED WOOD HEAT MODIFIED WOODS

The following statements are found in literature provided by most manufacturers of treated lumber and also can be found on the EPA website for treated lumber. Chemical treatments as listed by the EPA are Chromate Copper Arsenate (CCA), Ammoniacal Copper Arsenate (ACA)I & Ammoniacal Copper Zinc Arsenate (ACZA).

Use hot-dip galvanized or other fasteners as recommended by building codes

Treated lumber actually increases the corrosion cycle in all metal fasteners

Do not burn preserved wood.

Wear a dust mask and goggles when cutting or sanding wood

Some preservatives may migrate from the treated wood into soil/ water or may dislodge from the treated wood surface upon contact with skin. Wash exposed skin areas thoroughly.

All sawdust and construction debris should be cleaned up and disposed of after construction according to local and EPA guidelines.

Wash work clothes separately from other household clothing before reuse.

Preserved wood should not be used where it may be in direct or indirect contact with drinking water, except for uses involving incidental contact such as freshwater docks and bridges.

Do not use preserved wood under circumstances where the preservative may become a component of food, animal feed or beehives.

Do not use preserved wood as mulch due to toxic chemicals.

Only preserved wood that is visibly clean and free of surface residue should be used for patios, decks and walkways.

Aluminum contact is not recommended when treated wood products are immersed in water or are subject to frequent and prolonged wetting or other severe exposure conditions. In such cases, moisture resistant protective barriers should be placed between the aluminum products and treated wood.

Aluminum contact is not recommended when treated wood products are immersed in water or are subject to frequent and prolonged wetting or other severe exposure conditions. In such cases, moisture resistant protective barriers should be placed between the aluminum products and treated wood.

If the wood is to be used in an interior application and becomes wet during construction, it should be allowed to dry before being covered or enclosed.

Mold growth can and does occur on the surface treated lumber during prolonged surface exposure to excessive moisture conditions.

Treated lumber should not be burned in open fires or in stoves, fireplaces or residential boilers due to toxic chemical.



COMPARATIVE ANALYSIS THERMALLY MODIFIED WOODS VS. HEAT MODIFIED WOODS

The following items are the corresponding safety and general information about thermally modified wood called HM Woods. This information can be found in the literature and publications of the company.

Hot-dipped galvanized fasteners are specified by the building code because the building code has recognized the corrosive nature of the chemicals used in treated lumber. HM Woods has no such chemicals and as such will not directly cause an increase in the corrosion of the fastener.

HM Woods gives off no toxic fumes when it is burned because no chemicals have been added to it.

Dust masks and goggles are always recommended when cutting any kind of wood, but if HM Woods dust should get in the eyes or mouth there are no harmful chemicals.

There are no chemicals in HM Woods and as such nothing can or will migrate into the surrounding soil or water. Exposure to skin will have no effect unless there is specific personal allergy.

HM Woods products contain no hazardous chemicals.

Any contamination to work clothing will cause no issues and all clothing can be washed together without concern.

Direct contact with any human food or water should be of no concern except for normal environmental dust and debris. No chemicals have been used in making HM Woods.

HM Woods can be used in any application where natural wood such as cedar would be used.

HM Woods can be ground and used as mulch if desired

This is true of any wood or manufactured product, but in the case of treated lumber this is referring specifically to excess chemicals on the wood. HM Woods uses no chemicals.

HM Woods will not cause corrosion in aluminum and can be placed in direct contact with or without moisture present. Without the presence of chemicals only the water will react to metal components. HM Woods will not enhance or diminish the corrosion process.

HM Woods will not cause corrosion in aluminum and can be placed in direct contact with or without moisture present. Without the presence of chemicals only the water will react to metal components. HM Woods will not enhance or diminish the corrosion process.

All wood should be dried before being used inside or covered, but with HM Woods the chances of moisture absorption are extremely low and so less likely to cause problems.

HM Woods resists mold growth. Excessive moisture will not cause any problems with HM Woods.

HM Woods can be burned in open or closed fires and gives off no toxic fumes.