



The Best Non-Toxic Wood Bed Frames



A NonToxU Buying Guide





Feb 19, 2024, by Karen Stein

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Upgrade Your Sleep Sanctuary:

Traditional bed frames often contain harmful chemicals, posing risks to our health and the environment. Indoor air pollution, a top environmental risk, can lead to respiratory issues, allergies, and possibly even cancer. ([source](#))

Extensive research indicates that home furnishings significantly impact indoor air quality. Materials like formaldehyde-based adhesives and flame retardants in furniture release volatile organic compounds (VOCs), especially when new and continue for some time. ([source](#))

Why Opt For A Non-Toxic Wood Bed Frame?

It's easier to find natural and safer wood furniture compared to upholstered because there are fewer components involved in making them. Components of upholstered furniture such as fabric, fabric treatments and fillings can be sources of toxic substances. Solid wood is preferred for safety over composite wood, which uses resins containing formaldehyde. This exposure can last for the lifetime of the product. As the resin wears down over time it continues to emit VOCs.

Other possible components of concern are glues, stains, paints and sealers, which can all be sources of toxic chemicals.



Materials Of Concern In Wood Bed Frames:

1. **Formaldehyde** - this is a colorless gas with a strong odor, poses health risks, and exposure can irritate the skin, throat, lungs and eyes. Regulations limit emissions, but levels from multiple sources can still add up. ([source](#))

Below are the allowable limits for formaldehyde in different types of composite wood. When solid wood is not an option choose hardwood plywood or particleboard over MDF.

- Hardwood Plywood – 0.05 ppm
- Particleboard 0.09 ppm
- Medium-Density Fiberboard (MDF) 0.11 ppm
- Thin MDF 0.13 ppm

2. **Wood Stains, Paints, and Sealers** - these can release harmful substances. Choose water-based because “Compared with the traditional solvent-borne paint, waterborne coatings could eliminate more than 80% of VOCs and other harmful substances (formaldehyde, benzene, and xylene) in the coating” ([source](#)). Natural oils and waxes are also ideal for minimizing health risks.

3. **Wood Adhesives** - Wood adhesives are used to adhere wood components to one another. Polyvinyl acetate (PVA) glues are non-toxic when cured, but low-or zero-VOC options are also available. Look for companies that use solvent-free, and low-or zero-VOC adhesives such as Titebond Wood Glue.

In summary, prioritize non-toxic materials like solid wood, opt for water-based finishes and choose adhesives wisely for a healthier sleep.



AVOID THESE MATERIALS:

⊘ Composite Wood - Composite wood is regulated to limit formaldehyde levels, but they do still emit formaldehyde and should be avoided if possible. If composite wood must be used, consider sealing the surface with a non-toxic lacquer designed to contain formaldehyde and other VOCs.

⊘ Veneered Wood - Wood veneer is a thin slice of wood adhered to a substrate such as MDF or plywood. It has both the issue of formaldehyde from the substrate as well as the chemicals used in the adhesive.

⊘ Fumigants - Wood products that are imported into the U.S. may be subject to fumigants to control for pest infestations during shipping. Composite wood and unfinished wood packaging materials may be fumigated but solid wood may not. Check with the seller to determine if fumigants are used prior to shipping.



CHOOSE THESE MATERIALS:

✓ **100% Solid Wood** - Make sure that all wood components are solid as many product descriptions can be misleading.

✓ **FSC Certified Wood** - While this certification doesn't tell you anything about chemicals in the furniture it does ensure that wood components come from responsibly managed forests.

✓ **Unfinished Wood**

✓ **Wood Finished with Natural Drying Oil and Natural Wax**

✓ **Solvent-Free, Low- or Zero-VOC Stains and Sealers**

✓ **GreenGuard Gold Certified Stains and Sealers**

✓ **Solvent-Free, Low or Zero-VOC or GreenGuard Gold Certified Adhesives**



Why we recommend these brands as:

BEST and BETTER

BEST brands have some offerings in their line that use the most natural and safe materials for each component.

Descriptions of each brand below will identify which products use the most natural and safe materials.

They will also either have certifications to verify these materials or demonstrate a commitment to transparency about their materials by providing a full accounting on their website or a willingness to provide additional details.

BETTER brands have some, but not all the safest components but will be free of the chemicals of the greatest concern (flame retardants, PFAS chemicals, antimicrobials, and all but very low levels of formaldehyde).

Some may include wood furniture that is 100% solid wood but finishes and adhesives are unidentified.

These products may emit some VOCs but are less of a risk because once these types of finishes cure, they are inert and less toxic.

SAVVY REST

MEDLEY

AVOCADO

**TFS NATURAL HOME BY THE
FUTON SHOP**

KD FRAMES

KALON

MOSS DESIGN

THUMA

57TH STREET DESIGN

BUILT FOR KEEPS



“BEST” BRANDS

Savvy Rest - Savvy Rest offers high quality natural platform beds. They are hand-built in their Central Virginia wood shop, and feature a variety of zero-VOC finishes. They blend modern design with durable, old-school joinery. Their beds are 100% solid wood made from maple and poplar. They are all “Best” except for the adjustable base. Choose an unfinished frame, no VOC wood stain or linseed oil.

Medley - Medley offers a range of wood furniture. They are committed to transparency and list the materials used in their products on their website. They also carry several certifications including FSC for their wood. All of their wood bed frames are 100% solid wood and are finished with natural beeswax.

Avocado - These quality, American-made bed frames are all 100% solid wood except the Eco Bed Frame, which is metal. The Natural Wood Bed Frame is made with reclaimed wood but they claim they never use wood that was previously chemically treated. These beds are sealed with water-based, Ecos brand no-VOC varnish and the adhesive used is Titebond low-VOC glue, which is ultra-low VOC.

TFS Natural Home by the Futon Shop - The Futon Shop has a dedicated category of products that are flame retardant and petrochemical-free. They offer solid wood bed frames that use the “Best” materials for human health. However, many products sold by The Futon Shop are made from traditional materials that are not among the “Best” options. You must make sure that you have selected from “The Natural Bed Frames” options.

KD Frames - KD Frames manufactures platform beds and futon frames in Athens, Georgia. All of their frames are made of kiln dried Tulip Poplar hardwood, grown in responsibly managed Virginia forests. They do not apply chemicals of any kind in their factory, and the wood is smooth and unfinished. KD Frames has been in business since 1987. All of the beds are 100% solid wood, unfinished and they use no adhesives.



“BETTER” BRANDS

Kalon- Kalon Studios features high-end solid wood furniture. They are “Better” because some bed slats are made from hardwood plywood. Finishes include natural, plant-based oils and wax and a water-based lacquer that is GreenGuard certified and low VOC. The Divan Twin Bed has a base that is solid wood. The slats are hardwood plywood veneer. It is available in no finish or SCS Indoor Advantage Gold certified plant-based oil and wax finish. The adhesive used is a Titebond II equivalent, which is low VOC.

Moss Design- Moss Designs Bed Frames are contemporary & minimalist hardwood furniture designed by a designer couple. The Cassa bed is 100% solid hardwood with a water based finish.

Thuma- Thuma makes modern, minimalist beds designed in San Francisco. “The Bed” and “The Headboard”. are recommended. “The Bed” is upcycled rubberwood and the slats are upcycled plywood. The finish and adhesive are not disclosed but the total bed passes Green Gold Certification, making it low VOC. Since there is dovetail joinery, if an adhesive is used, it is minimal.

57th Street Design - These are contemporary, customizable bed frames made in Chicago. The Avers and Lock bed are a combination of solid wood and hardwood plywood. They have a natural oil and danish soap finish, but the adhesives used are unknown.

Built For Keeps - They make sustainably sourced, affordable furniture. They only have one bed available. It is solid oak but the slats and headboard are veneered hardwood plywood. They use zero-VOC plant-based stain (Rubio Monocoat) and no adhesives.



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