

# NAKAMOTO FORESTRY

Read this before using our products

## Receiving and Installation Guidelines and Protocol

The customer is responsible for receiving and proper installation of our products by following our guidelines, local building codes, and generally accepted construction practices. Installation is the most important factor in exterior siding longevity for yakisugi "shou sugi ban" as for any exterior wood product. Please reference our General Siding Installation, Layout, Furring, and Fastener Guidelines document for a thorough review of standard wood siding and paneling installation spec.

### **Offload and Break Down the Crate(s)**

We crate each shipment as standard to prevent shipping damage, and ship by common carrier box truck unless the order is large enough for a flatbed. Our standard terms are Incoterms Ex Works Portland Oregon and note that we arrange freight as a service for you but are not responsible for trucking company service inadequacies. At shipment we will send the Consignee a Bill of Lading (generally with tracking) and ETA at site, but once the shipment leaves our shop, we are at the mercy of the trucking company and the customer is responsible for final delivery & offload logistics.

The crates are 150" long and not designed for a pallet jack so cannot be lowered to the ground at site with the lift gate alone. Lumber is very heavy and if a forklift is not available at the delivery location offloading may be difficult or impossible. In that case will-call pickup at the local hub, or delivery to the contractor's shop, a local lumberyard, or logistics warehouse may be the best option. Please consult with us to minimize any hardship in delivery as some jobsites can be challenging.

If a dock is not available, offload to grade with a fork lift by dragging the crate to the back of the box truck by strap or chain, then lower to the ground with the front end of the crate on the lift gate, back end of the crate on the forks. If a lift gate is not available set the front end of the crate on the truck deck and the back end of the crate on a mocked-up A-frame (large saw horse) at approx. 48" height. Then come around to the crate side with the forklift to pick up and remove. Or pull out with one forklift and come around the side with a second forklift to remove. We have a video to show how this is done so please ask for us to send it to you as needed.

The crates are opened by first removing the Philips-head screws, T25 torx-head screws, or duplex nails holding the bottoms of the end walls to the pallet groover, then cutting the 4 steel straps with metal shears. Finally, one or two people on each end of the crate lift the entire lid/wall assembly in one piece straight up over the unit of wood. No need to break the crate down with hammer and prybar unless the lumber has shifted dramatically or the crate broken in transit. The wood is hand-bundled in 4- or 6-piece bundles for carrying easily around the job site, and each unit is factory-stickered every row for onsite acclimation without the need for scattering or re-stacking. If staged on a flat, level location, the units can be stacked up to 3 high to save space as needed.



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## **Inspect the Shipment**

Damage can occur during shipment, so always inspect the shipment before and during unloading and note any damage on the Bill of Lading and with dozens of quality photos from different angles. Inspect product specification and volume to confirm as correct. The planks are bundled face to face so make sure you are viewing the finished board face and not the backs of the boards during inspection. Contact us immediately if there are any issues.

## **Acclimate the Product to the Installation Location**

Ensuring that the moisture content of the siding is at equilibrium before it is installed will minimize dimensional movement after installation. We air and sun dry at the mill to 11~14% moisture content, and after warehousing and shipping, the wood is generally within this range. Each region has a different standard siding equilibrium moisture content range (generally 11~15% in regions with high precipitation, 6~12% in dryer regions), so the installer should confirm our wood scope is sufficiently acclimated before installation. If no moisture meter is used, we recommend acclimating yakisugi for two weeks at the jobsite before installation, ideally in nearby shade on an exterior application, or the project room at an interior installation. The longer wood is locally acclimated the less movement there will be after installation. A passable moisture meter only costs around \$30 online and is a great investment if there is any question. To acclimate, store the siding out of direct sunlight, separate the bundles for air circulation, protect from direct moisture, and make sure the area is ventilated. Do not let the lumber get wet, but if it does then the hand-bundles must immediately be broken up and slip sheeting removed. We slip sheet with renewable and breathable paper, not plastic, and it can adhere to the freshly oiled planks if allowed to dry out stacked in place.

## **Finish and Touch-up**

We recommend prefinishing before installation in order to coat the lapped male edge and for consistency. 99% of wood we ship is pre-finished with an oil stain at our shop before shipment. During installation cut surfaces such as cut ends, rips, drilled holes, or notches should be coated with touchup oil. Installer should have a can of finish and a brush next to their cut station to encourage this practice. To touch up oil stains dab the oil on locally and then immediately and gently wipe off any residue on the prefinished face as drips or overapplication can blemish the factory prefinish causing the spot to “flash”, or become glossy.

## **Fasteners**

On exteriors, siding should be face-nailed with minimum 2” (6d) SS-316 stainless steel ring or screw-shank headed nails, or equivalent. Coil nails should have a stainless wire web since a steel web can cause ferrous oxide streaking over time. Heads should be flush-nailed by hand whether installed by nailer or by hand. Do not drive fasteners below the surface. The shiny stainless head can be left exposed, a factory-painted nail can be used, or each nail head can be carefully dabbed with a UV-resistant paint by cotton swab after installation. A coil nailer will scuff a factory-painted nail head but paint will remain in the waffle indentations. Do not use finish or casing nails on exterior applications, and do not blind-nail. We inventory custom black-painted nails since they are not generally available from local fastener suppliers and SS316 must be etched before painting in a 2-step process.



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For interior applications finish nails can be used in combination with adhesive over a drywall or plywood substrate. Glue should not be used on yakisugi, only urethane-based or other commercial grade adhesives. For gluing to a substrate use a caulk tube product not a liquid product.

## **Installation**

Nakamoto Forestry yakisugi “shou sugi ban”, just like all wood siding, must be installed on screen walls in exterior applications for good wood longevity and dimensional stability due to the use of modern vapor barriers. Direct contact with the vapor barrier will cause any wood siding to rot, yakisugi included. We recommend 3/4”T solid-sawn softwood furring (also called “lathe”, “runners”, “purlins”, or “stripping”) over resin or engineered products. Minimum 3/8” or 1/2” thick air gap via furring suffices for many 1~2-story facades, and thicker than 3/4 is recommended when there is a layer of insulation between framing and siding. For screen walls, furring should be securely fastened to the sheathing or other substrate and be at a minimum of 16” on center layout pitch (12” pitch is recommended). Two face nails per runner are necessary, and nailing should be close (3/4~1”) to the top and bottom edges of each plank to minimize cupping over time. We recommend a screen at the top and bottom of the walls.

Interior applications do not require furring and yakisugi can be used the same as any wood paneling. It is generally glued up with a tube type construction adhesive and pinned in place while the adhesive dries.

Yakisugi can be installed vertically, horizontally, or diagonally. It is commonly installed as a cosmetic underlayment between rafter tails and roof deck in exposed roof eaves (beware of roofers using long fasteners). If installing vertically start on the left side and overlap as you move towards the right. This is because all planks are milled with rootstock right and crown left, and it is good feng shui to have the planks oriented correctly. We believe this is critical for the owner’s good fortune. In our experience the soot layer and oil finish will erode faster if installed upside down. Square edge planks can be judged crown up or down by looking at the grain pattern (see this blog: <https://nakamotoforestry.com/how-to-tell-which-end-of-the-plank-is-crown-up-and-which-end-is-roots-down-shou-sugi-ban-siding/> )

We recommend using a sharp ultra-fine finishing carbide-tipped saw blade for cutting our products. The yakisugi cypress cuts, rips, and installs the same as standard wood siding, and our millwork produces extremely straight and consistent plank stock. Wear an OSHA-approved dust mask and eye protection when cutting and installing our products.

Yakisugi is traditionally 10mm / 3/8” thick, but Nakamoto Forestry North America inventories a standard thickness of 15mm / 9/16”. 3/4” is the most common wood siding thickness in North America, but thinner is actually necessary for yakisugi products due to the flash heat treatment. Burning a thick plank at high temperature causes too much moisture content variation between the surface and center of the planks resulting in warping, crooking, etc., and heat treatment will not penetrate as well. 9/16” is sufficiently thick to act as an exterior skin and to easily install with the same methods traditional for 3/4”. Yakisugi is very rarely burned on the back side, and only for fencing applications (we do not offer this option).

Due to manufacturing process requirements we specialize in plank products and not profiles or other millwork used specifically as moulding, such as 4/4 or thicker trim stock. We offer matched surface S3S



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profiles 9/16" thick, or moulding can be ripped from our standard plank profiles. Since this trim is the same thickness as the field, it can either be installed over the field or another detail solution implemented. Un-heat-treated wood is also often used as moulding with a stained finish to match the yakisugi, and siding can be butted to it or the trim rabbeted to receive the siding field. Outside corners can be mitered and pinned. We also offer extruded aluminum outside corner profiles as an accessory.

It is common in modern architecture to use folded or extruded metal profiles on corners or other transitions instead of a wooden trim detail. The field can be run to flashing and door and window penetrations. Flashing specifications are the same as standard wood plank siding. A 1/8" or similar gap can be left open for breathing, or vertical gaps can be grouted with a color-matched high-grade urethane caulk. Never caulk horizontal gaps since they act as a weep.

Soot will be bonded into the prefinished surface, but the installers will get some soot on their hands and tools from the backsides and from cutting. After installation wipe down the wall with a moist cloth or hose it down to remove any soot that made its way to the face via the installers' hands during installation. For best color longevity either have us apply a second coat of oil stain during production, or better yet have your painting contractor apply a second coat of oil after installation. Even though the wood has increased longevity due to heat treatment, the color will still patina over time.

**FEEL FREE TO CALL US.  
WE'RE HERE TO HELP MAKE YOUR JOB EASIER AND YOUR PROJECT BEAUTIFUL.**

