



**Biocomposite Surfacing Material**

## FREQUENTLY ASKED QUESTIONS

### **What is NUXITE?**

Nuxite is a biocomposite surfacing material unmatched in its combination of beauty, warmth, durability, versatility, and ease of fabrication. It is a naturally stain resistant, light weight, and renewable material unlike any other.

Nuxite is made from crushed walnut shells suspended in a zero VOC resin binder. Walnut shells are a sustainably grown and renewable byproduct of annual walnut food crop harvests which impart their characteristics of high density, low absorption, and light weight to Nuxite.

### **Available sizes:**

**Nuxite is available in 1" thick, 30" wide panels, in 4 and 8 foot lengths**

Custom sizes and thicknesses:

Any thickness between ¼" and 1.5" may be requested, up to 36" wide by 118" long, in either standard or ungrouted panels. Certain restrictions apply – please contact us for more information or a quote.

### **Where to use NUXITE:**

Nuxite is suitable for horizontal surface installations such as countertops, table & desk tops, flooring & stair treads, etc, and in vertical applications such as wall cladding, tiling, moldings, and cabinetry & furniture components such as door & drawer fronts and end panels.

### **How to work with NUXITE:**

Unlike acrylic or phenolic solid surfaces, anyone familiar with basic woodworking techniques will find Nuxite easy to work with. It can be cut, shaped, tooled, and fabricated in the same ways, and with the same tools, as hardwood or butcher block.

Nuxite is supplied as a one sided panel, with the top, or "A" side being sanded to a 150 grit equivalent, and with the bottom, or "B" side, being coarsely ground and generally not of an appearance grade. Custom two sided panels are also available.

Nuxite panels and components should be finish sanded after or during fabrication to the desired level. A 150 grit random orbital sander will effectively match the factory finish. Successive higher grits will provide an even richer, silky smooth and warm feel, but should be done to guarantee proper application of desired finishes.

Seams, laminations, and buildups can be made nearly invisible using widely available adhesives such as two part epoxies, urethane glues, methyl-methacrylates, or isocyanurate "super" glues. Any lippage or glue excess is simply

sanded or machined flush to create a perfectly smooth joint.

### **Finishing NUXITE:**

We recommend finishing Nuxite with oil or wax based finishes such as beeswax, carnauba, mineral oil, paste wax, etc. Nuxite used for countertop applications should be finished on both sides to create a balanced panel that will ideally expand or contract at the same rate on both sides, helping to prevent warpage. Laquers and polyurethane finishes may be used, but should be tested first by the fabricator to guarantee proper adhesion and final appearance.

### **Further Fabrication Details:**

Spans, cantilevers, & rodding:

Unsupported spans of up to 24 inches are acceptable (see disclaimer), but lengths greater than that should be supported with some form of stretcher, ledger, or apron, or by rodding. Unsupported cantilevers of 10 inches are acceptable, but greater sizes are possible with the addition of corbels, brackets, or rodding, each at 16" on center across the length of any otherwise unsupported span.

Rodding is a simple fabrication technique commonly utilized in the stone industry to strengthen stone for transportation and installation. With standard 1" Nuxite panels, a 1/2" x 1/8" thick steel bar, longer than the span, may be epoxied or otherwise adhered into a groove cut or routed into the underside of the panel to provide additional support.

Rods for spans should extend at least 1 inch beyond each supporting side of the spanned opening. Rods for cantilevers should begin 2 inches from the furthest cantilevered finished edge, and extend to twice the length of the cantilever or as great a length as is possible (ie, a 12 inch cantilever should have 24 inch rods for support).

Fastening:

Mechanical fasteners using oversized holes in the furniture piece or cabinet along with oversized flat fender washers are recommended to allow Nuxite to expand & contract with seasonal temperature & humidity changes. These fasteners should be placed approximately every 24 inches – left to right, and front to back, (for example, an eight foot long kitchen countertop should have a total of 10 fasteners) or as closely to this as is possible. Not all cabinets or furniture pieces are suitable for this type of anchoring, and suitable modifications should be accounted for in project planning.

Expansion joints:

Nuxite panels, like wood products, may expand and contract with seasonal moisture changes. Except in the case of hard glued seams, expansion joints of 1/32" per 16" of length and width must be allowed. For example, a standard 8 foot by 30 inch panel would need 5/16" total expansion gap along the length, and 1/16" across the width.

### **Physical characteristics of Nuxite:**

**Nutmeat:** an extremely small amount of walnut meat (the part you eat) inevitably makes its way into Nuxite. During manufacture, great pains are taken to identify, remove, and fill these "imperfections" on the finished panel surfaces. However, they do occasionally present themselves, and are not considered a defect in manufactured panels

**Voids:** small open pockets or voids may be visible in the cross-section of Nuxite after cutting a panel to size. Just as with nutmeats, these are not considered defects, but are an inherent part of the manufacturing process for Nuxite as it is today. If desired, they may be filled in the same ways described above.

**Texture:** atmospheric temperature and humidity changes or extremes may cause slight texturing of Nuxite panels due to aggregate (walnut shell) expansion or contraction. If Nuxite is to be used in an application that will subject it to

temperature or humidity extremes, to whatever extent is possible, panels should be acclimated as closely as possible during fabrication to the end use environmental conditions. The potential of this slight orange peel-like texture is not a manufacturing defect, but is the result of subjecting a naturally occurring wood-like material to these atmospheric changes. Over time and with use, the surface of Nuxite will wear smooth, or the surface may be lightly sanded and refinished once this acclimatization has occurred.

**Shipping & Storage:**

Nuxite panels are shipped flat on reinforced and protected pallets, and are wrapped or bagged and sealed in plastic to facilitate secure and protective crating or packaging, and to prevent unbalanced breathing of the panels.

Nuxite should be stored flat, on a stable, supported structure with spacers/stickers underneath and between stacked panels 24" on center. This is to allow for balanced breathing of both sides of the panel(s), as described previously. Stickers/spacers will be provided with stocking orders.