

SPHERA 3D & 2D Laminates

Product Information Sheet

SURTECO



Any Space Can Be Refined with Elegance and Superior Performance

SPHERA 3D and 2D Laminates offer peace of mind with lasting durability. Featuring an elevated matte finish and soft-to-touch experience, they also bring superior scratch resistance and stain resistance to the surfaces where they're applied.

3D Laminates can be membrane-pressed or vacuum-formed, enabling a seamless contoured design and eliminating the need for T-molding and edgebanding.

2D Laminates can be flat laminated, profile-wrapped, or miter-folded to wood substrates.

Benefits

- Defensive against scratches, impacts, and abrasions
- Resistant to spills and stains
- Super matte finish with soft-glide surface feel
- In most cases, no protective masking is required when using 3D Laminates like SPHERA, but this should be verified by user
- Stock products are available for immediate shipment

Care & Cleaning

Easy clean-up. Acceptable household name brand cleaners include Windex® Original Glass Cleaner (S.C. Johnson), Fantastik® (S.C. Johnson) and Simple Green® (Sunshine Makers). Persistent stains can be removed using a cleaner such as Clorox® Clean-Up®. In lab settings, stains exposed to Clorox® Clean-Up® for 5 minutes were successfully wiped clean with a paper towel. Avoid abrasive cleaning agents, such as scouring pads, Comet® Cleanser, Bar Keepers Friend® or cleaners containing baking soda.

Additionally, avoid using the following when cleaning as they can soften and remove a laminate's coating:

- Ketones (methyl ethyl ketone (MEK), acetone)
- Chlorinated Hydrocarbons (methylene chloride)
- Aromatic Hydrocarbons (toluene, xylene)
- Lacquer thinners

KCMA Chemical Resistance (9.4)

Staining Agent	Typical Test Results*
Vinegar	No Effect
Lemon Juice	No Effect
Grape Juice	No Effect
Orange Juice	No Effect
Tomato Ketchup	No Effect
Coffee	No Effect
Olive Oil	No Effect
Alcohol, 100 Proof	No Effect
Detergent Solution	No Effect
Mustard	No Effect

*Results

No effect = no discoloration or stain after cleaning immediately with water.

Stock Product Information

Specification	2D	3D
Usable Film Width*	50" (± 0.05")	53" (± 0.05")
Film Thickness	10 mil	12 mil
Roll Lengths	550 ly	50, 250 ly

*Custom widths available

Properties

Test Method

Hoffman Scratch	1200g
NEMA Wear (Final)	2750 cycles
NEMA Ball Impact	3000mm
Erichsen Scratch	7.0 - 8.5 N

Fabrication Recommendations

Board preparation is essential to achieve the best look and feel. A well-sanded, smooth surface that is free from defects, bumps and divots minimizes the potential for telegraphing. SURTECO recommends using a double-refined or ultrarefined MDF board for best results. The use of polycrystalline diamond (PCD) tipped tooling may yield better consistency, throughput and overall economics. The tooling manufacturer can provide the optimal RPM range to use for a given tool, essential to achieve the desired cut quality.

A uniform coating of adhesive is important to prevent glue unevenness or telegraphing. Proper mixing is required if using a two-part adhesive system. Prior to applying adhesive, the board should be blown clean to ensure no dust or contaminants are sealed in by the adhesive. For edges and routed areas, SURTECO recommends two or more coats. For specific details on mixing or spraying (fan, nozzle, pressure or atomization) conditions, contact the adhesive supplier.

SPHERA 3D Laminates have been successfully pressed using standard membrane press operating conditions. SURTECO recommends using 100% silicone membranes when membrane pressing SPHERA 3D Laminates. In lab settings, some natural rubber membranes have been shown to discolor SPHERA 3D Laminates and should therefore be avoided. If you have questions on membrane selection, SURTECO can test membrane compatibility.

Each customer should complete its own independent trials to determine the optimum processing conditions to meet its needs. As with all membrane pressed parts, it is imperative to have a clean, dust- and dirt-free environment. It is also important to achieve the required activation temperature of the adhesive at the very bottom edge of the part.

Storage & Handling

SURTECO 3D Laminates are susceptible to heat and pressure. Extreme temperature and pressures can affect the product characteristics and performance. Due to shipping and storage variations, shelf life cannot be guaranteed. However, the following storage guidelines help to ensure optimal performance:

- Keep the product in its original packaging, partial rolls included.
- Storage conditions should maintain a temperature range of 55 to 75 °F and a relative humidity of approximately 50%.
 - Laminates with or without a protective film should be used within 12 months.
 - Product should be acclimated 48 hours prior to processing.
 - Extreme cold may cause brittleness and extreme heat may soften the film and cause shrinkage.
 - High humidity can cause moisture which can weaken the bond and possibly cause blocking within the roll.

Though SURTECO Laminates can be used in many applications, all laminates are sold with the understanding that customers will make their own independent determination whether a particular laminate has the durability and other performance attributes required for the specific end use laminate application – not all laminates are suited for all applications.

For the latest designs, more information, or to place an order, contact SURTECO:
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Revision Date: 31-July-2025

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