

Surface Guard® Protective Films are adhesive-coated “masking films” that provide temporary surface protection for a multitude of applications. The adhesives used by Surface Guard are variations of water-based acrylics and are pressure sensitive. They are custom-formulated for your specific application based on material evaluation, sampling, and customer trials. Our evaluation and quality processes ensure the best performing protective film for your application, however, any changes in storage or usage conditions can adversely affect this performance – please communicate any such changes with your local sales representative. *As a general rule: excessive heat/cold, UV light, and moisture can degrade the protective film product and cause it to perform poorly.* By following the guidelines below you can ensure the optimal performance of your protective film solution.

Recommended Storage

- Store protective film products in original packaging/shipping cartons until needed.
- Temperature range of 50°- 90°F
- Relative humidity range of 40% – 60%
- Keep away from exposure to temperature extremes, direct sunlight, water, solvent and other contaminants.
- Rotate protective film inventory on a first-in first-out (FIFO) basis, ensuring usage within the 6-month warranty period.

Application Guidelines

- Ambient and substrate temperature should be within 60°- 90°F for best results. Colder temperatures than listed will lessen the initial bond to the substrate.
- Surfaces should be dry and clear of any lubricants, solvents or other contamination.
- Application pressure should not vary from initial, approved trials.

After Protective Masking is Applied

- Do not store substrates for longer than 6 months with protective masking films applied.
- Maintain storage temperature of masked substrate in the range of 60°- 90°F, and do not expose to extreme temperature variations.
- Maintain masked substrates in relative humidity (Rh) range of 40% – 60%.
- Keep away from direct sunlight, water, solvents and contaminants. Exposure to these conditions may contribute to adhesive transfer.

FAQ's - Frequently "Masked" Questions

What if I Have Film That is Older Than 6-Months?

If you'd like to continue using inventory beyond the 6-month warranty, Surface Guard can provide you with a recommendation based on a sample evaluation.

What Happens if My Film is Applied and Removed in Excessive Heat?

If masked substrates or protective film rolls are stored above 90°F, adhesives become softer and their properties of tack and peel may increase. The initial bond to the substrate will be more aggressive. When removing the masking in higher heats the films will be less rigid and more prone to stretching, tearing, or adhesive transfer. Pulling slower and at a 90 degree angle rather than straight back on itself will help with cleaner removal and help avoid adhesive transfer.

What Happens if My Film is Applied and Removed in Excessive Cold?

Applying the film with temperatures below 60°F will impair proper adhesion; apply protective films when the temperature of the workplace, as well as the target surface, are both closer to 60°F. Once applied, temperature extremes are less of an issue, at least, until it's time to remove the film. When temperatures are below 32°F, getting frozen films to let go of a surface may be difficult and hazardous to the protected surface, resulting in transfer. So, for ease of removal, the film and the surface should be above 45°F if possible when the film is removed.

What Happens if My Film is Applied and Removed in Excessive Moisture?

Prolonged exposure to high Rh can lead to the weakening of the interfacial bond between the film and adhesive. Adhesive transfer could result from this. It is always best practice to allow the wet film (from morning dew, fog or rain) to completely dry off before removal. Visual indicators of excessive moisture in the adhesive are the protective film will have a bluish-white cast to it. This is called "blushing" and is a sign it is too wet. The film will turn water-clear when the excess moisture has been dried. Some maskings are more water-sensitive than others. Please consult with your Surface Guard representative to be sure you have the correct protective film for your application.

What Happens if My Film is Exposed to Excessive Sunlight?

Sunlight and UV radiation can have a dramatic effect on interior, Non UV-rated, protective films that are adhesive-coated. Non-UV protective films should not be left outside longer than 14 days. If a non-UV protective film is used outdoors longer than 14 days, there is a high risk of having the film break down

and become brittle which will lead to adhesive transfer. Our standard UV films will protect surface for up to 90 days. Other protective film options are available for longer exposures. Please notify your Surface Guard representative of how the film will be used so we can develop the product you need.

What Happens if I Have Adhesive Transfer?

There are various conditions that can lead to adhesive transfer. The primary causes are cited above. Small areas of adhesive transfer can be wiped off with rubbing alcohol, also called Isopropyl Alcohol. Take a clean cloth and pour a small amount of rubbing alcohol on it. Rub the spot of adhesive transfer briskly and it will dissolve. Other organic cleaners have also been able to remove adhesive transfer. If you notice adhesive transfer, please call your sales representative so we can gather the needed information to resolve the issue.

Protective Film Terms & Definitions

- **Peel** is the force required to remove the protective film from the substrate; this is cited as ounces/inch. To calculate the total force to remove protective film, multiply the peel x width (in inches). [Example, if you were using an 8 oz. /in. protective film and the substrates width is 24 inches, the math would be: $8 \text{ oz./in.} \times 24'' \text{ width} = 192 \text{ oz./width}$ or 12lbs. of force to remove the protective masking. ($192 \text{ oz.} \div 16 \text{ oz. /lbs.}$)]
- **Tack** is the stickiness when you put your finger directly into the adhesive and pull up; this allows quick grab onto a substrate.
- **Shear** is the ability to resist splitting and leaving residue behind when the masking is removed.
- **Spotting** is a condition where “water” rings or spots are apparent on the substrate after masking is removed. When observed, they tend to be air pockets under the masking.
- **Ghosting** is a light haze that can be spotted when looking at the substrate with oblique (at an angle) light. This condition is often an interfacial reaction where there may be outgassing of chemistries coming from the substrate. Protective film adhesive type would be incompatible with the substrate or surface was masked to soon after manufacture while there is still outgassing.
- **Interfacial Area** is the area where the adhesive surface meets the surface of the substrate.
- **Adhesive Residue (aka “Transfer”)** Adhesive left behind when protective film is removed from substrate.