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HYGARD® Laminates FAQ's

WHAT IS HYGARD?

HYGARD Laminates are the ultimate security products with an AR hard-coat technology on each side providing exceptional abrasion resistance and protects against UV degradation. These products comply with Florida's High Velocity Hurricane Zone, (HVHZ) Test Standard, UL752 ballistics and many forced entry methods,

HYGARD CG is a laminated polycarbonate sheet product with three levels of protection proven to resist the most rigorous forced entry, containment or smash and grab physical attacks. These products have been extensively tested to the toughest containment test standards and it's hard-coat surface technology resists weathering, abrasion, and graffiti.

HYGARD BR products are laminated sheet that are UL® Listed for three levels of ballistic protection. BR products have also achieved the highest levels of forced entry and containment protection for the most extreme detention applications. It's hard-coat technology resists weathering, abrasion, and graffiti. This laminated sheet has been extensively tested to ASTM F1233, ASTM F1915, and HPW TP-0500 and are UL752 Listed. See additional documentation for specifics.

IS HYGARD SUITABLE FOR STOPPING HIGH SPEED RIFLE ROUNDS?

No, HYGARD, being an all polycarbonate laminate or polycarbonate-acrylic laminate, these were developed and designed to stop handgun rated ballistics – specifically UL752 Level 1 (9 mm Full Metal Copper Jacket with lead), UL 752 Level 2 (.357 Magnum jacketed lead soft point) and UL 752 Level 3 (.44 Magnum lead semi-wadcutter gas checked). Laminates capable of stopping rifle rounds are often thicker and contain one or more layers of glass to dissipated energy and fragment and shatter incoming bullets. These specialty laminates commonly employ one or more layers of TUFFAK polycarbonate sheet to act as an energy absorbing layer and spall shield. This material is often referred to as Glass Clad Polycarbonate (GCP). It is expensive to produce and is not able to be cut to size once produced compared to Hygard that can often be cut to size on the job site.

IS HYGARD A CC1 FLAME RATED?

All polycarbonate configured HYGARD grades such as CG375, CG500, CG750, BR1000 and BR1250 are rated to a flammability resistance of CC1. HYGARD BR750 is CC2 flame rated.

WHAT OTHER CERTIFICATIONS AND METHODS DO HYGARD LAMINATED SHEETS MEET?

HYGARD laminated sheets are certified through ICC-ES ESR-2778, Florida Building Code 2017, Miami-Dade NOA and UL752 File #BP6864. In addition, the laminates are highly rated to many forced entry and containment standards, such as ASTM F1915, ASTM F1233, and HP WHITE TP 0500.03. Please refer to the product datasheet for specifics ratings.

PROBLEM SOLVING CRACKED PANELS - WHY IS THE MATERIAL FORMING SURFACE CRACKS AND EDGE CRACKS?

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Typically, the edges of HYGARD are not sealed with a protective, chemically resistant hard coating, Harmful cleaning chemicals and industrial solvents can run down the surface of the panel and pool in the steel frame. This incompatible liquid has the time and energy to crack the polycarbonate interlayers which can lead to delamination of the product. Light solvents can also penetrate through the hard coating and surface crack the panel. This can be prevented by using an approved silicone sealant along the edge of the cut edges of the sheet or capturing the panel in a watertight EPDM rubber gasket. Avoid using PVC gaskets on this product as the phthalates in the PVC can also migrate into the panels and crack them over time, Please refer to the TUFFAK Fabrication Guide for a list of chemically incompatible and compatible chemical agents. An approved disinfection guide can also be found at https://plaskolite.com/docs/msc275_disinfect.pdf

DOES HYGARD COME IN DIFFERENT COLORS?

HYGARD CG, BR and MS are offered in clear and standard tints. Consult Technical Service regarding other product offerings.

CAN HYGARD BE THERMOFORMED OR BENT TO SHAPE?

No, HYGARD cannot be thermoformed or bent as it is designed for flat, vertical applications including architectural glazing. Hygard products need to be secured with a framing system of equal performance, not to provide less than 1.0 inch edge engagement, that has been designed, fabricated, installed and cleaned in accordance to guidelines published by The Company (available at www.plaskolite.com). However, HYGARD can be fabricated using typical polycarbonate techniques. Please refer to the TUFFAK® Fabrication Guide www.plaskolite.com under Resources.

DOES HYGARD COME WITH A WARRANTY?

HYGARD sheet products are with a seven (7) year Limited Product Warranty against breakage, yellowing, loss of light transmission and coating failure. This product warranty specifically excludes sloped glazing, transportation, and recreational and off-road vehicle applications.

WHAT TYPES OF APPLICATIONS CAN BENEFIT FROM USING HYGARD?

HYGARD can be used in applications that require forced entry and ballistic rated performance. It is ideally suited as detention glazing, as it is virtually unbreakable, exceptionally durable, optically clear, and approximately 50% lighter than glass laminates of the same thickness. Wherever security is a concern; psychiatric hospitals, detention facilities, jails, courthouses, government facilities, educational buildings, drive up windows, ticket booths, banks and gas station and convenience stores, HYGARD offers a clear line of sight for maximum protection.

WHERE CAN I FIND MORE INFORMATION ON HYGARD?

Additional information and datasheets can be obtained by visiting the links below or at www.plaskolite.com

[HYGARD CG DATASHEET](#)

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[HYGARD BR DATASHEET](#)

[HYGARD MS DATASHEET](#)

[HYGARD LAMINATE SDS](#)

[HYGARD DETENTION BROCHURE](#)

[TUFFAK POLYCARBONATE FABRICATION GUIDE](#)

[TUFFAK ARCHITECTURAL BROCHURE](#)

HOW DO I CLEAN HYGARD® LAMINATED SHEETS?

The best way to clean HYGARD laminated products is to use mild dishwashing soap and warm water with a soft microfiber or cotton cloth, followed by a lukewarm water rinse. Do not scrub the panel excessively. Pat dry with a clean, soft cloth. For detailed information, please refer to the cleaning instructions for polycarbonate located at www.plaskolite.com under Resources.

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