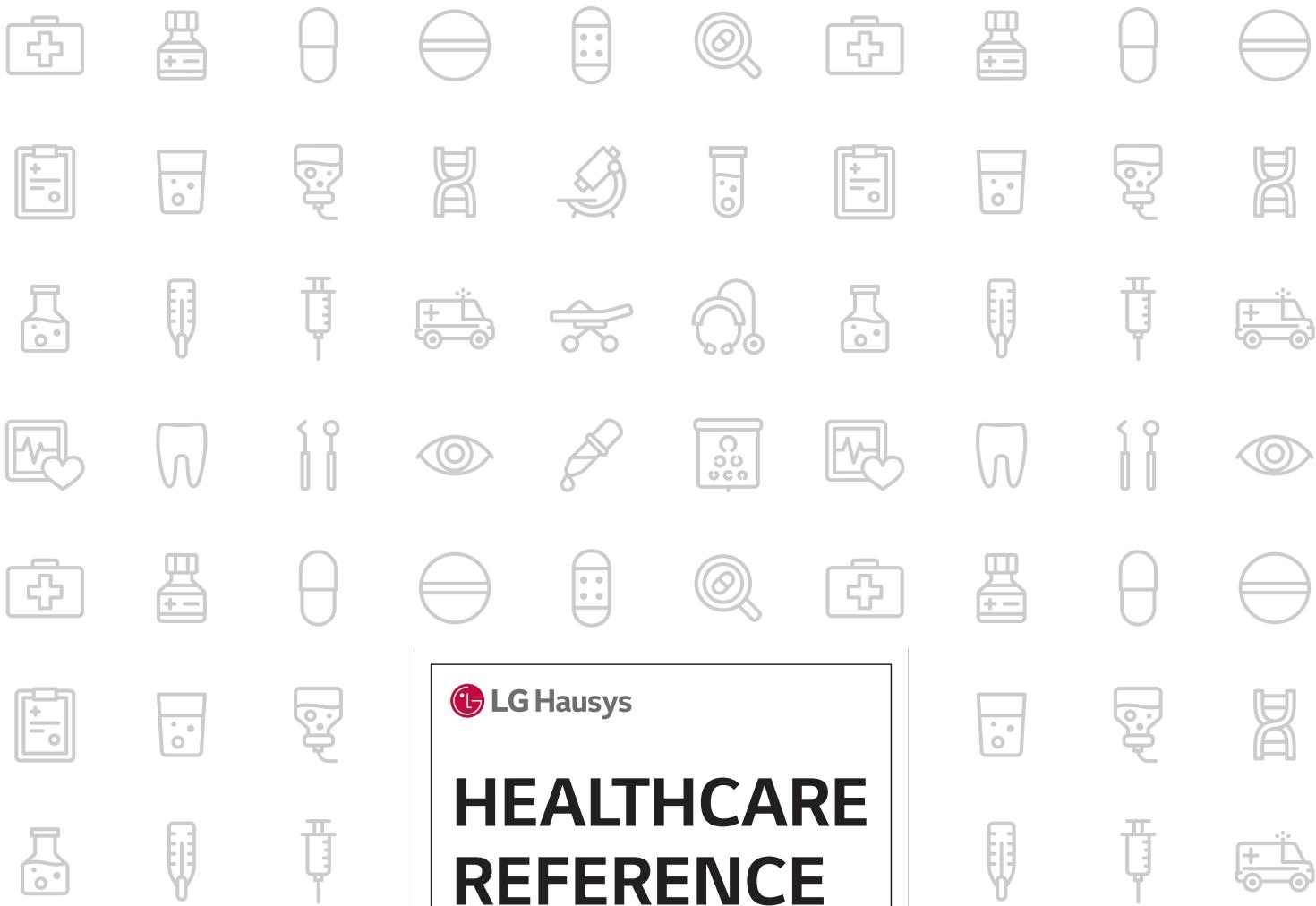


 **LG Hausys**

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SKU: 1903HCREF
Cover image credit: © bap / Wolf Birke, Wuppertal



 **LG Hausys**

HEALTHCARE REFERENCE

HI-MACS® | *Viatera*®

 Surface Materials

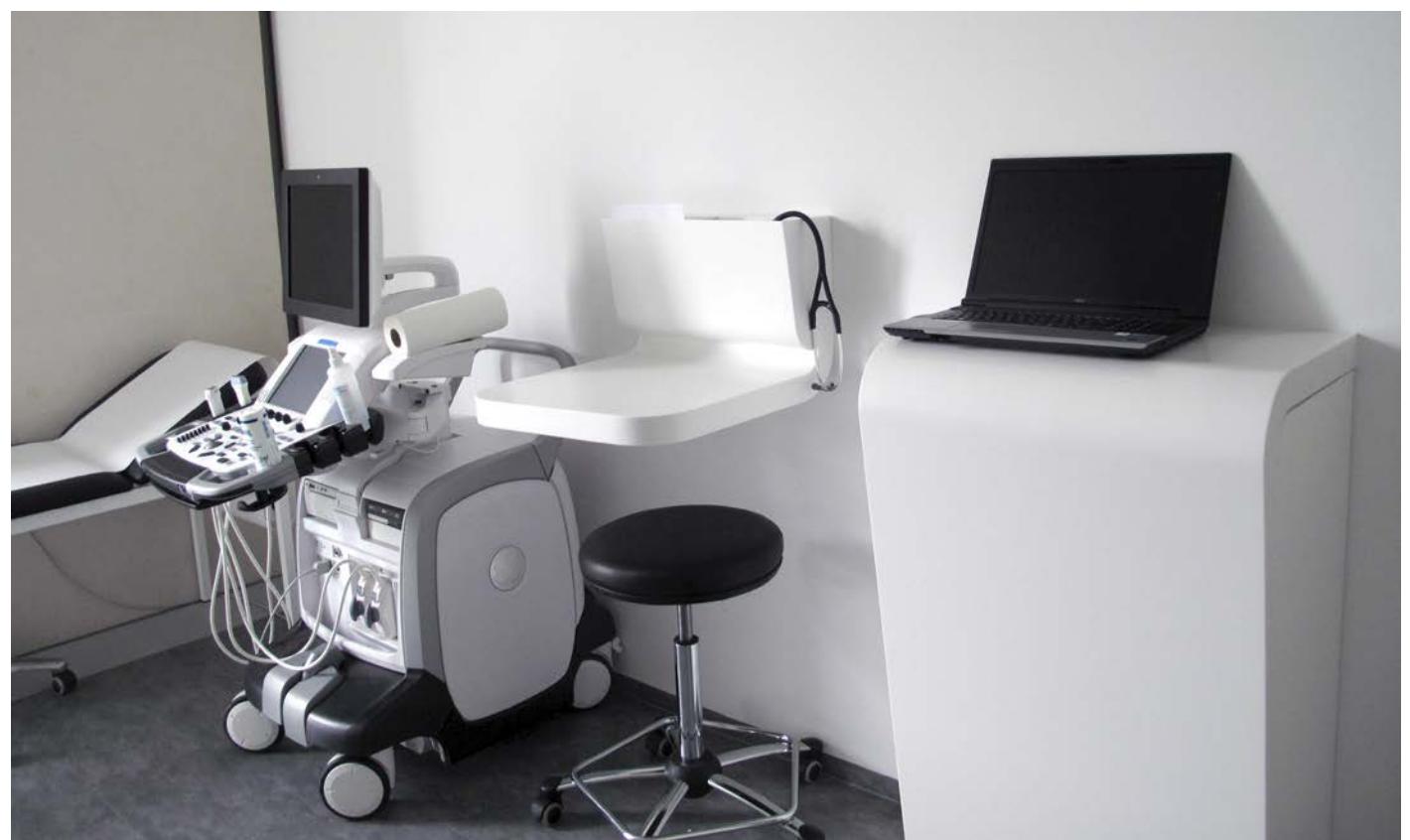


INSPIRATION LIVES AT THE INTERSECTION OF BEAUTY & FUNCTION.

Bring new ideas and possibilities to life with the most versatile, durable and hygienic solid surface solutions that are ideal for healthcare. LG Hausys HI-MACS®.

Cardio Centrum Dusseldorf

Location: Dusseldorf, Germany
Design: büger albrecht partner (bap), Wuppertal
Fabrication: Tischlerei Woodstar, Odenthal
Photo: © bap / Wolf Birke, Wuppertal



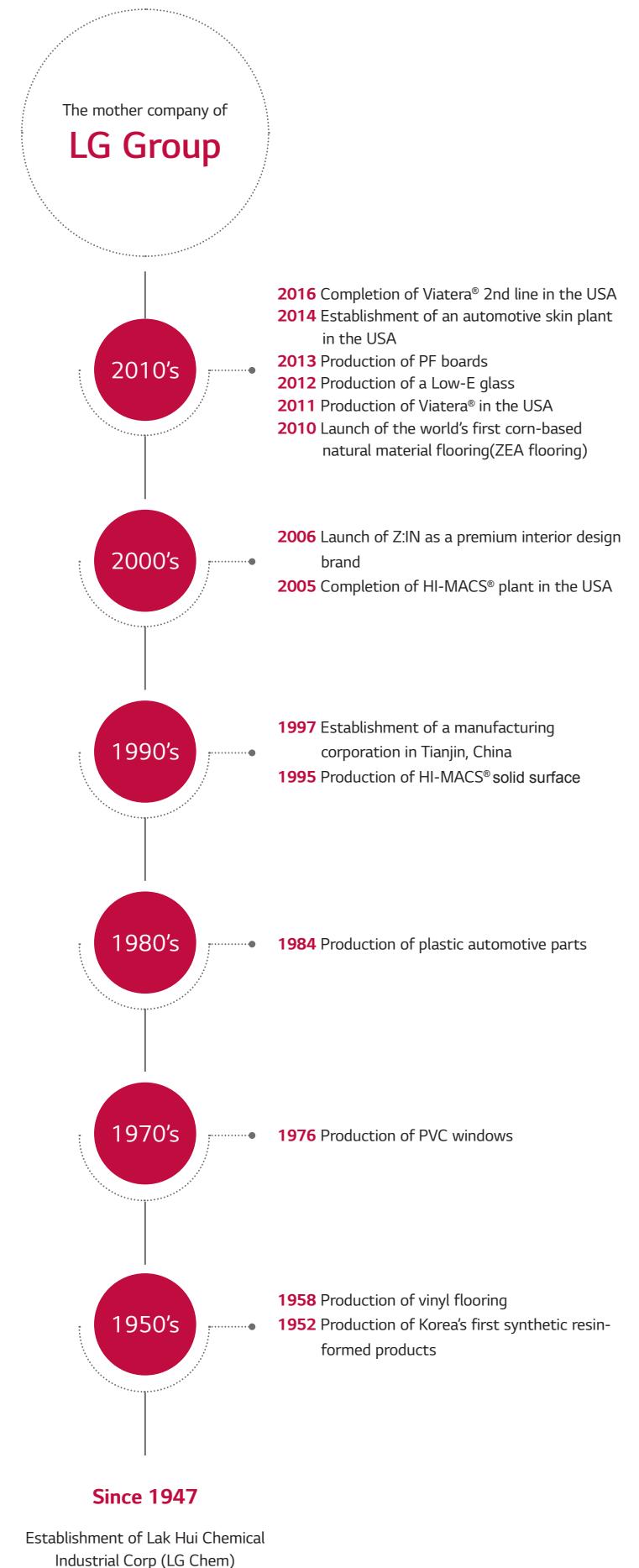
COMPANY OVERVIEW

Headquartered in Atlanta, Georgia, LG Hausys America, Inc., is the U.S.-based materials division of the globally recognized LG brand.

Our diverse product offerings include materials specifically designed for interiors, including Surfaces, Floors, VCM (Vinyl Coated Material) and Deco Foil.

For more than 60 years, we have been committed to creating better living spaces. By leveraging the industry's most advanced technology, we are able to design and produce beautiful, functional and hygienic spaces using eco-friendly products that promote health and well-being. We believe a surface is more than a design element — it's where we gather to heal both physically and emotionally. That's why we strive to create stunning, durable surfaces to withstand the demands of the medical environment.

Because HI-MACS® Acrylic Solid Surface and Viatera® Quartz Surface are entirely non-porous and prevent bacterial and fungal growth, they are a superior solution for healthcare facilities focused on battling sources of infection. As a result, its use is approved across a variety of healthcare applications, including operating rooms, nurse stations, patient and waiting rooms, reception areas, rehabilitation centers and nursing homes. At LG Hausys, we are committed to providing a safe and soothing working environment for patient-centered and evidence-based healing.



INDUSTRY OVERVIEW

Healing environments

Designing for healthcare is about creating a sense of harmony and comfort, while ensuring optimal safety and hygiene. LG Hausys' hygienic surfaces offer a full range of product choices, colors and styles that allow designers to create atmospheres that help promote a sense of well-being for patients and staff alike. With an industry-leading 15-year warranty, LG Hausys surface products assure longevity of usage and are even able to stay looking like the day they were installed.

Combating infection

When it comes to patient care and safety, hygiene is paramount in hospitals and laboratories. All materials and products used should meet the highest level of hygiene standards.



Up to 40%

of difficult to treat healthcare-associated infections (HAIs) are attributed to infection by caregivers who have become contaminated from direct contact with a patient or indirectly by touching contaminated environmental surfaces. These disease-causing pathogens remain a major, yet preventable, threat to patient safety.

HEALTHCARE APPLICATIONS

Our products can be used in a variety of healthcare settings.

1 Cafeteria

Location: Sweden
Design: PEN Interior

2 Main Lobby Sofa

Location: Istanbul, Turkey
Design: Zoom Mimarlik
Fabricator: Gulsan Mobilya



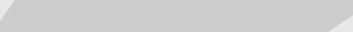
3 Operating Room Wall

Location: Sukhumvit, Thailand

Design: Rafa Interior

4 Restroom Vanity & Sinks

Location: LCCA @ Hospital Expo
Design & Fabricator: LCCA

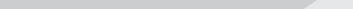


5 Pediatric Facade

Location: Madrid, Spain
Design: Elisa Valero
Fabricator: Muebles Maderama s.l.

6 Nurse Station

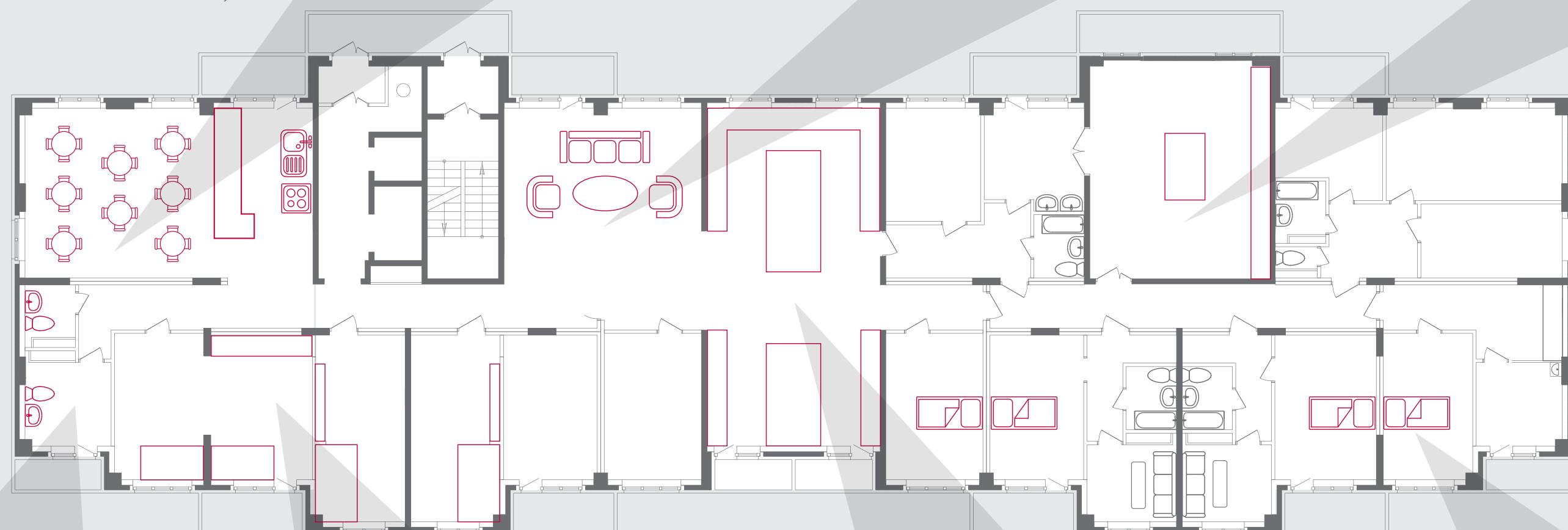
Location: Newnan, GA USA
Design: Perkins+Will
Fabricator: Commercial Cabinetry of GA



7 Patient Room Headwall

Location: San Diego, CA USA
Design: Cannon Design

Fabricator: Shield Casework



Public Restrooms

Surfaces stand up to every day humidity, due to **water-resistant** design



Pediatrics

Brightens and adds warmth to children's hospitals or waiting rooms



Main Lobby/ Admittance

Thermoformed and three-dimensional shaped products create memorable visuals



Operating Rooms

Supports patient and physician safety - **minimize surface irregularities** where harmful bacteria and mold can grow



Nurse Stations

Incredible durability and certified hygienic benefits products are easy to clean and to decontaminate



Patient Rooms

Highly resistant to viruses, bacteria and numerous chemicals

INTRODUCING HI-MACS®

The modern medical facility is an environment where high standards are set not only for comfort and function but also for aesthetics. Materials and surfaces with outstanding hygienic properties and a high resistance to pathogens and chemicals are indispensable.

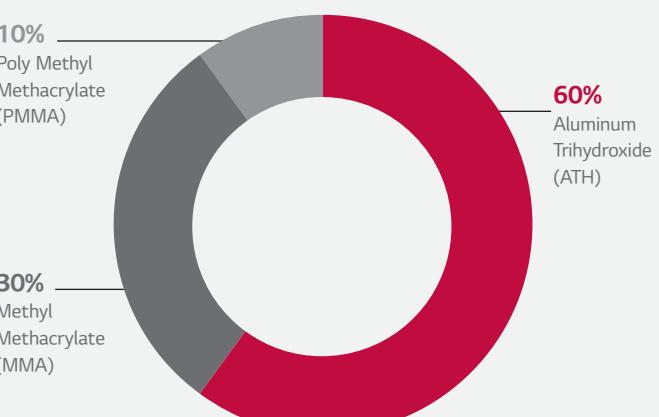
HI-MACS® is a solid surface that meets all these criteria perfectly. Additionally, it provides creative designers with endless possibilities for creating sanitary spaces that are appealing from a functionality and design perspective.



HI-MACS®

WHAT EXACTLY IS HI-MACS®

HI-MACS® Acrylic Solid Surface is manufactured from



HI-MACS® Acrylic Solid Surface

An acrylic solid surface product, HI-MACS® has a variety of applications limited only by imagination. Acrylic is produced by combining three materials—aluminum trihydroxide, methyl methacrylate and polymethyl methacrylate — creating a beautiful solid surface.

Together, these surfaces bring together beauty, durability and easy maintenance. Available in more than 100 colors and particulate choices, HI-MACS® is an environmentally-friendly choice. Manufactured using leading edge technology, HI-MACS® is produced in sheets that can be shaped to fit any design. Advanced polymer resin technology makes HI-MACS® easy to fabricate, less expensive to produce and highly durable. It's also easy to cut, sand, install and maintain.



HI-MACS® offers colors that contain SCS certified pre-consumer recycled content. (Minimum 6% or 10% of SCS certified pre-consumed recycled content.)

HI-MACS® FEATURES & BENEFITS

What distinguishes HI-MACS®?

With its diverse color palette, translucency, sleek finish and nearly limitless formability, HI-MACS® allows for highly unique and extraordinary design possibilities.



Hygienic

Not only do objects made from this solid surface material appear to be works of art cast from a single mold, the material's seamless manipulation and non-porous nature create extremely hygienic, easy-to-clean surface that is ideally suited for use in hospitals and laboratories.



Cost effective

Relatively low installation costs combined with the natural renewable nature of HI-MACS® offer tremendous value throughout its lifecycle.



Sustainable

LG Hausys is steadfast in its pledge to not only limit the impact we have on the environment, but also to better it through eco-conscious product design, energy and water efficiencies, and well-planned by-product management.



Certified

We conduct independent third party evaluations to certify our products provide the highest level of health and environmental assurance to our customers. All LG Hausys surfaces are GREENGUARD Certified for Indoor Air Quality and NSF certified for food preparation areas.



Incredible versatility

Due to its high level of versatility, this material can be used in laboratories, doctors' practices, reception areas, bathrooms and operating theaters, and on varied installations such as laboratory worktops, bathroom vanities and showers, laboratory furniture and other numerous applications.



Seamless perfection

HI-MACS® allows for visually seamless manipulation. Smooth integration enables large areas without joints or edges as well as flush mounting of sinks or bowls. Without grouts or visible seams, the finished HI-MACS® product has the look and feel as if it were made from a single source – making it ideal for both beauty and cleanliness.

**Unlimited color spectrum**

Colors are key in design. HI-MACS® offers a virtually limitless range of colors in all conceivable shades. In addition to a wide spectrum of colors, new textures and effects are added regularly. From lucent and solids to granite, quartz, sand and pearl, we can enhance any environment.

**Dramatic translucency**

Certain colors and thicknesses of HI-MACS® exhibit a special translucency when exposed to light. Various textures and patterns can be built into the material to intensify the HI-MACS® translucency effect. Depending on the light source, pattern and design, spectacular cut-out effects can add visual interest and create a completely new sense of space.

**Thermoformable**

HI-MACS® can be heated and bent to tight radii—significantly reducing waste while also enabling the product to meet the most challenging 3D designs. HI-MACS® surfaces undergo considerable testing to ensure optimal performance.

**Stain resistant**

HI-MACS® is stain resistant due to its non-porous nature. Even the toughest chemicals and test fluids commonly found in healthcare environments are unable to penetrate its surface. In the event of a spill, the materials are designed so simple scrubbing techniques can eliminate any potential stains or discolorations.

**Superior strength****• Fire resistant**

Backed with numerous certificates that attest to its fire resistance, HI-MACS® is ideal for places where security is the No. 1 criteria of choice. HI-MACS® is rated a "Class A" (also called "Class '1'") material under the industry standard testing protocol ASTM E-84.

• Water resistant

Thanks to its non-porous surface, HI-MACS® is suitable for humid areas where moisture can form such as showers and bathrooms.

• Renewable

HI-MACS® is homogenous throughout its sheet thickness. That means, no matter the nick, scratch or stain, it can be restored to its original state by a certified professional.

Three Dimensional Design Process

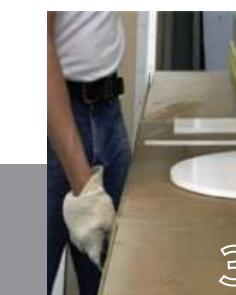
HI-MACS® is almost as robust as stone, yet it can be worked in the same way as wood. Using conventional carpenters' tools, this solid surface material can be sawed, routed or drilled.

HI-MACS® is manufactured using a new generation technology, the thermal cure. The temperature reached during the manufacturing process sets HI-MACS® apart from other solid surfaces and creates a denser, even more homogeneous, sturdy, durable surface—with better resistance and superior thermoforming performance. This allows for greater forming flexibility compared with other conventional materials so that spectacular ideas can quickly take on a concrete shape.

The logical conclusion? A material that moulds to your idea and designs—not the other way around. Exactly as it should be.

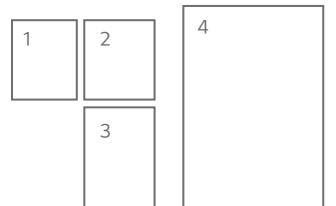
How is HI-MACS® fabricated?**A 5-step process**

HI-MACS® is produced in an ultra-modern manufacturing process that complies with the most exact quality certification standards.

1
Disassemble drawing
for mould production2
Mould production3
Pre-heating
HI-MACS®4
Vacuum pressing5
Gluing and sanding

5-STEP PROCESS

HI-MACS® APPLICATIONS



1 Aesthetic Medical Centre Imaderm

Location: Switzerland

Architects: Patrice Reynaud Architectes

Fabrication: RS Agencement Steiner SA, kläuser acrylstein ag

Material: HI-MACS® Grey

Photo: Blaise Lambert

2, 3, 4 Liv Hospital

Location: Istanbul, Turkey

Design: Zoom Mimarlik

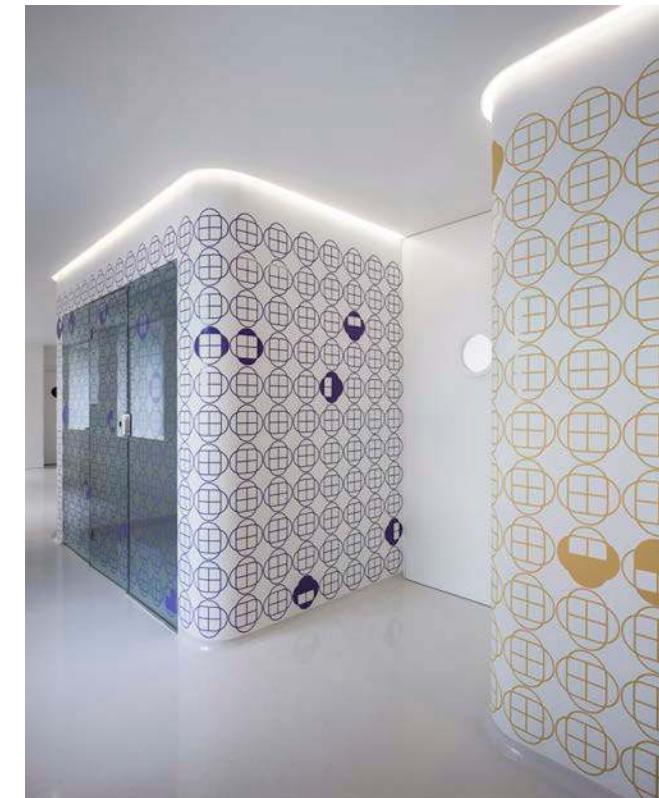
Fabrication: Gulsan Mobilya



HI-MACS® APPLICATIONS

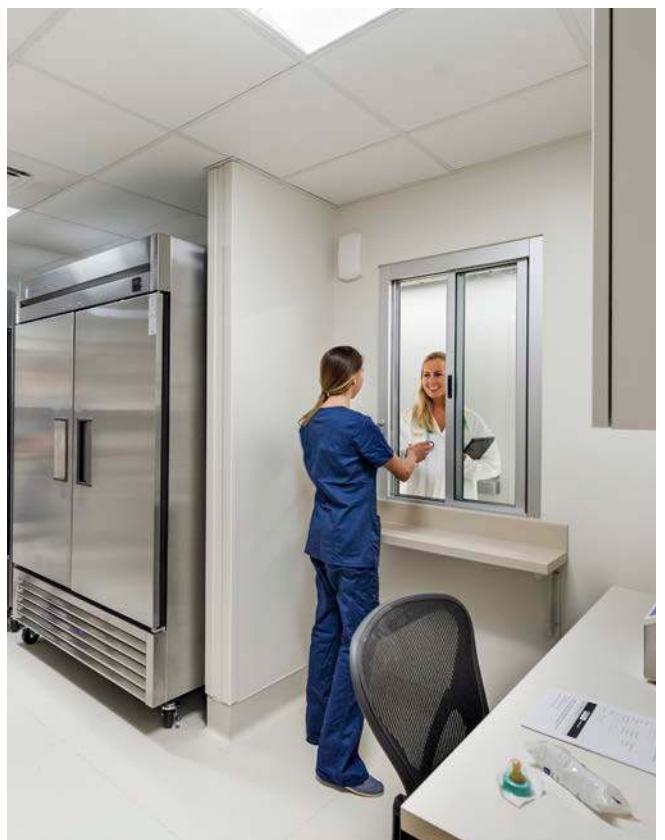


HI-MACS® APPLICATIONS



1, 2 Niño Jesús Hospital

Project: Maktub Centre, bone marrow transplant ward, Niño Jesús Hospital
Location: Madrid, Spain
Design: Elisa Valero
Fabricator: Muebles Maderama s.l.
Material: HI-MACS® Alpine White
Photo: Fernando Alda

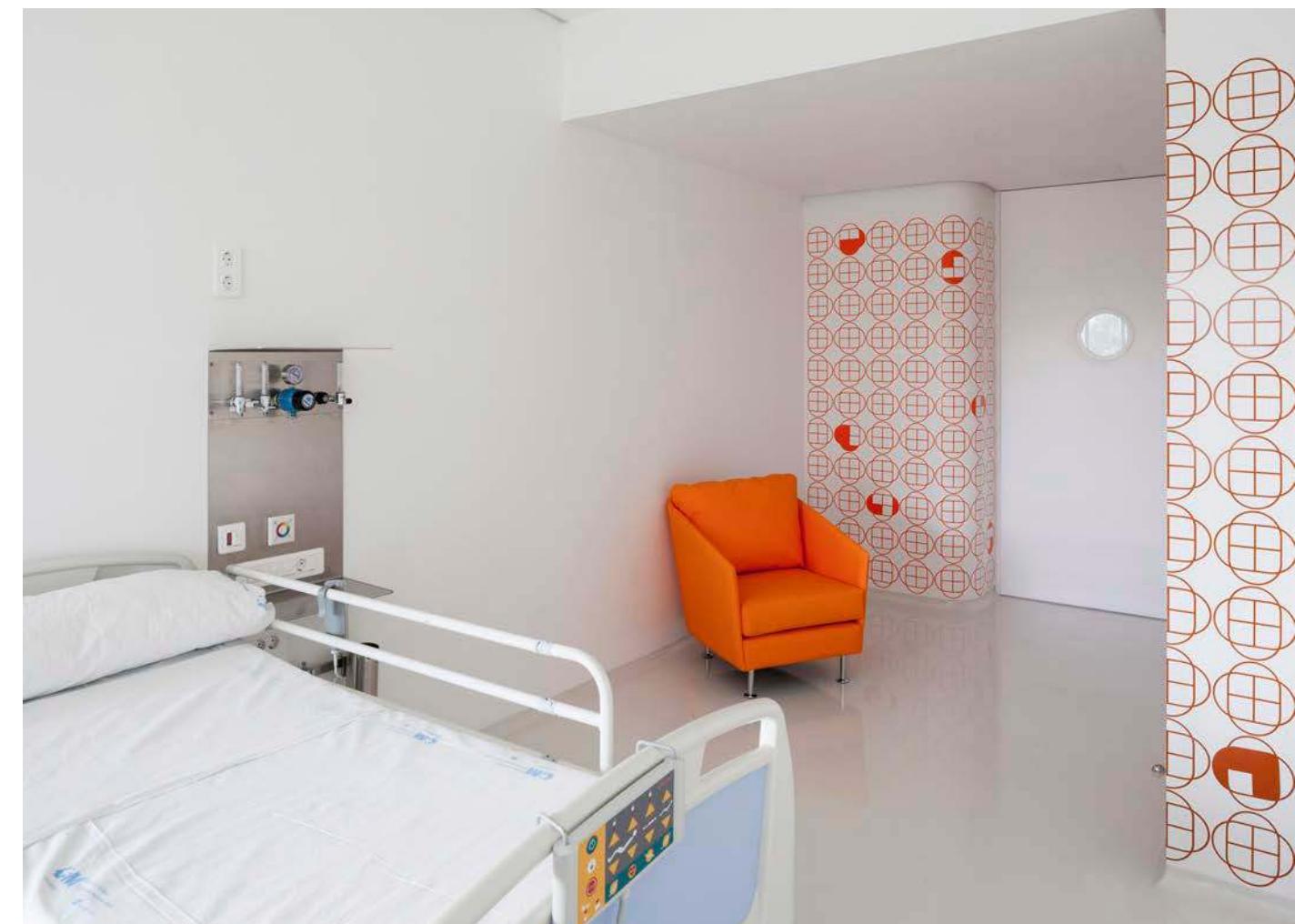


HI-MACS® FOR BOSTON HOSPITAL'S NICU UNIT

To be included in the hospital's list of approved products, materials must meet the highest standards of cleanliness and functionality. Cleanliness and sanitation issues that are so critical in any healthcare facility are doubly important around these young patients.

Brigham and Women's Hospital of Boston Hospital has a set of approved project materials, which includes HI-MACS®.

1, 2 Boston Hospital's NICU Unit
Architecture: TRO JUNG
Product Manager: Andrew Brumbach
Material: HI-MACS® Oatmeal



INTRODUCING VIATERA®

Viatera® quartz surface is designed and created around the idea that a countertop should be as beautiful as it is functional.

Composed of 93% natural quartz with technologically advanced polymers, Viatera® surfaces are an amazing and beautiful, non-porous material. It's more hygienic and stain-resistant than other countertop materials such as granite and does not need to be sealed to maintain its non-porous properties.



Material: Viatera® Aura

Viatera®



Enduring Strength

Viatera® is comprised of quartz, one of the hardest minerals on earth, and technologically advanced polymers for an extremely hard, scratch- and heat-resistant surface that's superior to stone.



Sustainable

Viatera® is NSF(National Sanitation Foundation) and Greenguard certified.



Hygienic

Viatera® is non-porous, so there are no crevices or surface irregularities where harmful bacteria or mold may reside. Viatera® is suitable for use throughout healthcare facilities, including hospital lobbies and nursing station.



Jumbo

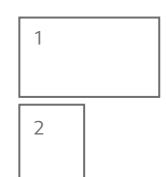
Measuring 24% larger than a standard slab (119"x55"), Viatera® can accommodate larger layouts with fewer seams. The largest jumbo size slabs are available in 130"x63".



Affordable Luxury

Viatera® offers greater value at a lower price. In other words, guaranteed quality with a price tag that won't break your budget. As new technologies and products continue to emerge in the healthcare sector, organizations want the best product for the best price and affordability is key.

VIATERA® APPLICATIONS



1 Reception Desk
Material: Viatera® Aria

2 Reception Desk
Material: Viatera® Soprano

CASE STUDY

CURVE APPEAL

UC San Diego Medical Center

UC San Diego Health System was planning to expand its facility with a 10-story multi-specialty hospital called Jacobs Medical Center. Cannon Design created an innovative design that could turn an institutional medical product - the patient headwall - into an architectural element that is as functional as it is beautiful. Needing a material that is as durable and flexible as it is hygienic, Cannon Design and Shield Casework chose HI-MACS®.

With its solid surface thermoformability, Shield Casework was able to fabricate the material to fit the complex requirements and preserved the headwall's design. Shield Casework simplified utility connections and worked through the complex build to meet the budget and design intent. In addition, UCSD Medical Center's headwall is non-porous, making it easy to sanitize and resistant to the spread of pathogens. The team then designed and made custom outlet covers to meet the gentle slope of the headwall for a completely non-porous finish.



UCSD Medical Center Headwall
City : San Diego, CA USA
Fabrication: Shield Casework, www.shieldcasework.com
Design : Cannon Design, Shield Casework, Modular Services
Material : HI-MACS® Alpine White

CASE STUDY

RESTORING SMILES

Children's Mercy Hospital

The dental clinic cabinetry at Children's Mercy Hospital in Kansas City was experiencing aggressive wear and tear due to high traffic in a wet environment. Peeling laminate, damaged bases and discoloration from heavy usage of the sanitation equipment was not only unappealing but created conditions in which bacteria could thrive, all of which underscored the immediate need for a renovation.

The HI-MACS® solid surface casework includes both overhead and storage cabinets, countertops and backsplashes that stand up to the toughest conditions - disinfectants, standing water and high traffic. HI-MACS® casework is non-porous, microbial resistant and low maintenance, making it the ideal choice for healthcare applications.

Thanks to new solid surface casework in both its dental clinic and cafeteria, Children's Mercy Hospital no longer has to worry about repairs or safety concerns.



Children's Mercy Hospital
Location: Kansas City, MO USA
Fabrication: Shield Casework, www.shieldcasework.com
Materials: HI-MACS® Alpine White

CASE STUDY

HYGIENIC SOLUTION

UT Medical Branch Operating Rooms

Officials at the University of Texas Medical Branch had to consider important qualifications when selecting wall cladding for their hospital. Hospital walls must be made of a material that is easy to clean and resists the growth of bacteria, mold and mildew. The walls also have to be strong enough to avoid damage if hit with hospital equipment.

The University of Texas Medical Branch found the perfect material with HI-MACS®.

Although hospitals have many choices for the wall cladding, HI-MACS® offers an excellent solution. Solid surface walls are made of natural and synthetic ingredients: mineral, resin, color and other additives. The mix is cast into shapes or sheets. Most solid surfaces contain alumina trihydrate or ATH, which is refined from a type of clay. It is not only a natural fire retardant but also a material that is hard enough to withstand the impact from carts and machines yet soft enough to be formed by machines.

The two main resins used in solid surface materials are acrylic and poly methyl methacrylate. Acrylic-based resin creates a sheet that can be heated, bent into a shape and cooled without loss of performance. The non-porous material does not require sealing and resists the growth of mold and mildew. The two-part adhesive used at the joints creates a solid surface with inconspicuous seams. Solid surfaces are also easy to repair with a patch if they become damaged.

Unlike PVC, solid surfaces such as HI-MACS® are low-volatile organic compounds and have been proven safe in several third-party tests. HI-MACS® hit all of the key performance criteria outlined by the Guidelines for Design and Construction of Healthcare Facilities, making them the perfect choice for hospital wall cladding.



The University of Texas Medical Branch
Architect: David Morton, HDR Architecture Inc.
Photo: Dan Schwaram, HDR Architecture Inc.
Material : HI-MACS® Arctic White

SOLID SURFACE SINKS

LG Hausys offers a variety of solid surface sinks to complement HI-MACS®. These highly functional sinks offer the same great benefits as our other surfaces, providing a seamless look along with easy maintenance, cleaning and repair.

We put our sinks through rigorous testing to ensure they meet the highest standards for quality. Our sinks are resistant to fire, heat and impact and they won't discolor when exposed to light — so you can count on beauty that stands the test of time.

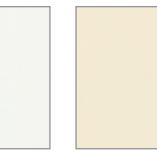
Our classics including the single and double sinks are practical for every day use in a variety of healthcare settings. Our solid surface sinks come in the following colors:



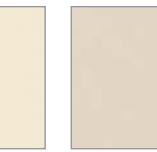
Arctic White



Ivory White



Cream



Almond



HI-MACS® PERFORMANCE PROPERTIES

HI-MACS® DIMENSION & WEIGHT

SIZE	WEIGHT	THICK.
12T	30" x 145"	126 lbs
9T	30" x 145"	94 lbs
6T	30" x 98"	44 lbs
		1/2"
		3/8"
		1/4"

All colors are available in 1/2" thickness. Please contact the LG Hausys representative for other thickness availability.

VIATERA® PERFORMANCE PROPERTIES

VIATERA® DIMENSION & WEIGHT

SIZE	WEIGHT	THICK.
STANDARD 2T	55"x119"	467 lbs
STANDARD 3T	55"x119"	697 lbs
JUMBO I. 2T	63"x126"	564 lbs
JUMBO I. 3T	63"x126"	833 lbs
JUMBO II. 2T	63"x130"	585 lbs
JUMBO II. 3T	63"x130"	870 lbs
		2cm
		3cm
		2cm
		3cm
		2cm
		3cm

PROPERTY	TYPICAL RESULT	TEST
Tensile Strength	6,000 psi	ASTM D 638
Tensile Modulus	1.35×10^6 / sq inch (850 kg / sq mm)	ASTM D 638 Nominal
Tensile Elongation	0.5% min	ASTM D 638
Flexural Strength	57.96 Mpa (8,407 PSI)	ASTM D 790
Flexural Modulus	1.34×10^6 / sq inch	ASTM D 790
Hardness	60 Pass	ASTM D 2583
Thermal Expansion	0.000018 inch / inch / °F	ASTM D 696
Deflection Temperature (under load)	90 °C (194 °F)	ASTM D 648
Approximate Weight	4.20 lbs per sq ft (20.5 kg / sq m)	
Light Resistance	No Effect - Pass	NEMA LD 3-3.03
		ISSFA SST 7.1
Wear and Cleanability	Pass	ANSI Z-124.3
		ISSFA SST 3.1-00
Stain Resistance	No Effect - Pass	ANSI Z-124.3 Modified; 3.4 & 11
Fungus and Bacterial Resistance	No Effect - Pass	ASTM G 21 / ASTM G 22
	Approved for use in all food zones	ANSI / NSF Standard 51
Boiling Water Resistance	No Effect - Pass	NEMA LD 3-3.05
		ISSFA SST 8.1-00
High Temperature Resistance	No Effect - Pass	NEMA LD 3-3.06
		ISSFA SST 9.1-00
Radiant Heat Resistance	No Effect - Pass	NEMA LD 3-3.10
Izod Impact	0.3 foot lbs per inch (0.016 joules / mm)	ASTM D 256, Method A
Ball Impact Resistance	0.5 lbs (0.23 kg) ball 1/4" slab - 36" drop 1/2" slab - 144" drop	NEMA LD 3-3.08
Weatherability	Pass (1000 hr test)	ASTM D 2565 / ASTM D-1499
Specific Gravity	1.60 grams per cubic centimeter (0.06 lb / inch ³)	ASTM D792 (Density)
Water Absorption	1/4" slab - 0.07% 1/2" slab - 0.04%	ISO 4586-2 / ASTM D570
Toxicity	66.9 grams (2.36 oz)	Pittsburgh Protocol
Flammability*	<25	ASTM E84: Class I or A
Flame Spread Index	<25	
Smoke Development Index	<25	
Consistency of Color	Pass	ISSFA SST 2.10 Pass
Visual Defects	Pass	ISSFA SST 5.1 Pass
Flatness of Sheets	Pass	ISSFA SST 4.1

PROPERTY	TYPICAL RESULT	TEST
Point Impact	Pass	ANSI Z124.6.4.2.1
Colorfastness	Pass	ANSI Z124.6.5.1
Stain Resistance	Pass	ANSI Z124.6.4.2
Wear & Cleanability	Pass	ANSI Z124.6.4.3
Cigarette Test	Pass	ANSI Z124.6.4.4
Chemical Resistance	Pass	ANSI Z124.6.4.5
Freeze / Thaw Cycling	No Loss / Damage	ASTM C1026
Coefficient of Friction	Dry: 0.86, Wet: 0.51	ASTM C1028
Compressive Strength	42,230 psi	ASTM C170
Water Absorption	0.0004	ASTM C97
Bulk Specific Gravity	152.07 lb / ft ³	ASTM C97
Izod Impact Resistance	0.3468 ft-lb / inch	ASTM D256
Barcol Hardness	94	ASTM D2583
Abrasion Resistance	40 mg (weight loss)	ASTM D4060
Bond Strength	164.9 psi	ASTM D482
Tensile Strength	1,007.25 psi	ASTM D638
Deflection Temperature	279 °C	ASTM D648
Thermal Expansion	1.55 - 1.83 (unit: 10 ⁻⁵ inch / inch / °C)	ASTM D696
Flexural Strength	4,114 psi	ASTM D790
Surface Burning Characteristic	Class A	ASTM E84
Fungal & Bacteria Resistance	No Growth	ASTM G21
Boiling Water Resistance	No Effect	NEMA LD3 3.5
High Temperature Resistance	No Effect	NEMA LD3 3.6

CONTACT US

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