

BECAUSE  
**QUALITY**  
WINS



[www.himacs.eu](http://www.himacs.eu)

# HI-MACS®

The sustainable quality  
of HI-MACS®



Natural Acrylic Stone™



# Quality is thinking about tomorrow today.

Translucent wall with backlit pattern, made in HI-MACS®, Pavia.



Sustainable construction is an essential part of design around the world today. The demand for environmentally friendly and healthy building materials is rising accordingly.

LG Hausys makes continuous efforts to provide a sustainable value chain, which meets the highest ecological standards.

HI-MACS® durability, combined with its intrinsic properties, means that any off-cuts can be utilized elsewhere, thus allowing for any fabrication using HI-MACS® to contribute virtually no waste to landfill. Numerous international certificates award HI-MACS® top marks for its hygienic performance and high standards of indoor air quality, due to its classification as an emission-free product. The company also provides environmental product verifications and international certifications which can contribute to green building projects.

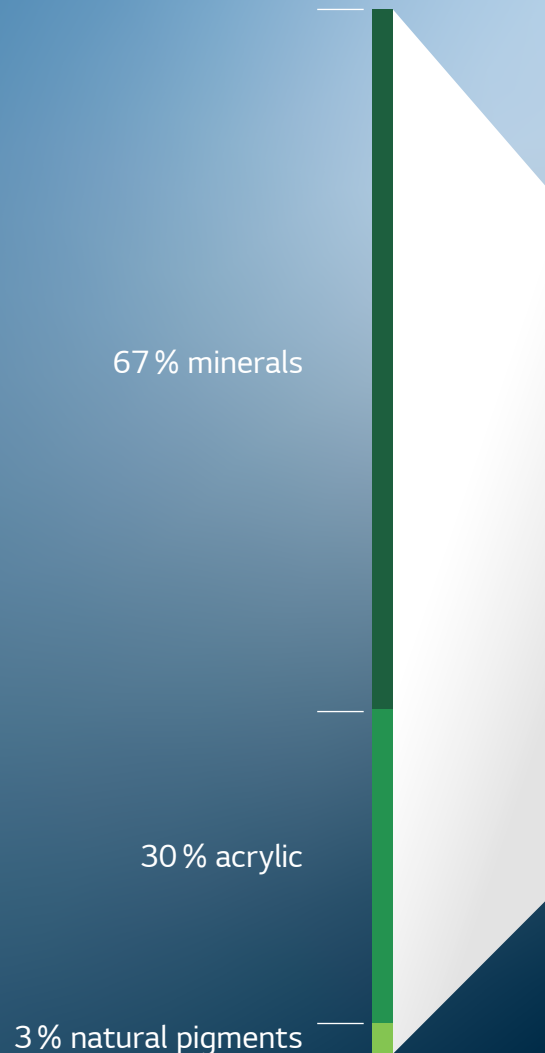
HI-MACS® Natural Acrylic Stone pre-consumer waste is recycled into new products, minimising landfill. A selection of colours contain up to 16% recycled material and are certified by the Scientific Certification Systems (SCS) for stated recycled content.

All HI-MACS® products are manufactured in accordance with the environmental standard ISO 14001. What's more, the company undergoes regular environmental and energy consumption analyses and publishes the results. It incorporates them in its sustainability strategy and takes them into consideration when formulating its reduction targets.



The ISO 14000 family concerns the management of environmental quality. The most popular certificate in this group is ISO 14001. It encourages the minimisation of damage caused by our own activity to the environment and the continuous improvement of environmental performance. The objective is to contribute to protecting and stabilising our planet's environment. This test certifies that the environment management system of HI-MACS® conforms to ISO 14001 standards.

# It's what's inside that counts.



## Material composition

- HI-MACS® is composed of minerals, acrylic and natural pigments.
- The solid surface material HI-MACS® is composed of minerals (67%), the finest acrylic (30%) and natural pigments (3%).

## Recycling

LG Hausys continuously aims to make its products increasingly sustainable and more environmentally friendly. HI-MACS® pre-consumer waste is recycled into new products from the different HI-MACS® ranges which contain up to 16% recycled material, certified by SCS Global Services (formerly named Scientific Certification Systems).

# Healthy indoor air guaranteed

## Pharmacy Domenech

**Location:** Valencia, Spain

**Design:** Inside Pharmacy & A4 Studio, Spain, inside-pharmacy.com

**Fabrication:** Inside Pharmacy, Spain, inside-pharmacy.com

**Material:** HI-MACS®, Alpine White

## HI-MACS® holds the following certifications:



Greenguard certification guarantees that products for indoor use do not exceed the upper limits for chemical emissions.



The Environmental Product Declaration (EPD) marks and documents the ecological assessment of the entire life cycle of a product.



The Finnish M1 classification presents emission requirements for building materials used in office and residential buildings with respect to good indoor air quality\*\*\*.

## Material safety

- HI-MACS® has no VOC emissions\* and is formaldehyde free.
- HI-MACS® is free from nanoparticles.
- HI-MACS® comes in well below the minimum occupational health and safety LCI\*\* levels.
- Renowned institutes confirm that the material provides a high indoor air quality.

## Free of emissions

Extensive studies – within LG Hausys' own laboratories as well as tests carried out by other renowned independent institutions – have shown that the HI-MACS® material itself, as well as the cured adhesive, are completely free from formaldehyde and emissions.

## Free of nanoparticles

While the benefits of nanotechnology are widely publicised, the discussion of the potential ill-effect of their use in consumer and industrial products is beginning to emerge. Prolonged exposure to nanoparticles can have an adverse affect on human health and the environment.

**HI-MACS® is totally free of nanoparticles, making it the safe choice for industry today.**

HI-MACS® has been awarded the Greenguard Gold Indoor Air Quality Certificate. Emission testing under EN ISO 16000-9 also indicated that there were no traces of harmful substances.

\* Volatile organic compounds

\*\* Lowest Concentration of Interest (LCI value):

LCI value = a benchmark for the health-related evaluation of building product emissions

\*\*\* HI-MACS®: Solids, Lucent, Sand & Pearl, Granite, Sparkle, Lucia, Marmo and Aster.



# Behind the façade lies an extremely positive eco-balance.



## **Les Olivades Marrakech**

**Location:** Marakesh, Morocco

**Design:** Gérard Iffrig, France

**Fabrication:** Plan Design, Morocco

**Material:** HI-MACS®, Alpine White

## **Manufacture and transport**

- HI-MACS® is manufactured in an energy-efficient process that is economical with its use of resources.
- The plants in Korea and the USA meet all local and international standards.
- The material is transported from the USA to Europe exclusively by ship. LG Hausys selects its freight forwarders very carefully and makes sure all of them have a clear environmental standard engagement.

The production of this solid surface material is marked by an excellent energy balance. In recent years, the company has been very successful in achieving ambitious goals in terms of waste reduction and water conservation. In addition, HI-MACS® plants in Cheongju (Korea) and Atlanta (USA) meet all environmental standards.

In terms of logistics, overseas transport takes place wherever possible by ship. Within Europe, LG Hausys observes the Euro-5 standards for reduced particulate emissions. The partner-network of LG Hausys Europe consists of carefully selected partners with the highest environmental standards: for example, the State-of-the-Art logistics centre in the Netherlands is one of the first buildings to have been constructed in accordance with the WELL Building Standards and awarded the BREEAM Certificate. This means that it meets the highest requirements for environmentally friendly and healthy construction.



The benefits flow  
together seamlessly.

## Processing

- Since HI-MACS® can be seamlessly joined, any off-cuts can be used in other projects, meaning there is virtually no wastage of the material
- HI-MACS® installations are extremely strong and durable, with a limited warranty of 15 years.
- It's long-life cycle means reduced waste over the years as a result.

As durable as stone, more flexible than wood – and available in around 100 colours: HI-MACS® facilitates a visually seamless production and can be machined in virtually any way. Any off-cuts can be reused for new projects. Plus, HI-MACS® installations are extremely durable and retain their original condition for a long time with very little repair required. As a result, there is very little waste. Additionally, products that last a long time do not need to be replaced, which saves resources and energy and has a positive effect on the eco-balance.





Ecological quality:  
tested, certified and  
awarded.

**Panelwork's  
HI-MACS® Showroom**

**Location:** Manacor, Mallorca, Spain

**Design:** Alejandra Company

**Material:** HI-MACS®, Alpine White

**The most important product verifications,  
classifications and certificates.**

**DGNB**

• **German Sustainable Building Council (DGNB)**

HI-MACS® has achieved quality level 4 of 4 – the best rating – for the local environmental impact of the overall product (2018). The DGNB system is a holistic and unique certification system for sustainable construction.

**BREEAM®**  
delivered by bre

• **Building Research Establishment Environmental Assessment Method (BREEAM)**

Among other ratings, the material complies with “Hea 02 Indoor Air Quality” for particularly good air quality. BREEAM is one of the world’s most important global rating methods for sustainable architecture.



• **Leadership in Energy and Environmental Design (LEED)**

Is a standard voluntary system to certify high performance of buildings, from the US Green Building Council (USGBC). LEED certifies buildings using a credit system. Architects and planners using HI-MACS® for their project can claim EQ Credit for Low-Emitting Materials with the category Indoor Environmental Quality (EQ).



• **Environmental Building Certificate – Grade “outstanding”**

The Korean Air Cleaning Association certifies that HI-MACS® complies with the Korean regulations for environmental building materials.

DGNB: Deutsche Gesellschaft für Nachhaltiges Bauen [German Sustainable Building Council]

BREEAM: Building Research Establishment Environmental Assessment Method

LEED: Leadership in Energy and Environmental Design



# Committed sustainably.

## Activities and Awards of LG Hausys

- LG Hausys does not produce any ozone-depleting substances as defined in the Montreal Protocol nor does it use harmful substances in the manufacturing process of HI-MACS®.
- LG Hausys is subject to the GHG emissions trading scheme, and endeavours to reduce the GHG emissions in multiple ways, including the adoption of renewable energy and external heat sources.
- LG Hausys voluntarily subjects its products to regular environmental audits and energy consumption analyses and systematically publishes the results in its "LG Hausys Sustainability Report".

### Promoting joint growth through green partnerships

LG Hausys has supported improvement activities since 2015 to reduce greenhouse gas emissions and energy costs by minimizing and removing risk factors related to carbon emissions by the production activities of suppliers using "Conglomerate/Small and Medium-sized Business Energy Accompanying Project" and drawn up plans for reasonable energy utilization.

### Winner of the CDP Award 2012

The CDP (Carbon Disclosure Project) is an organization which collects the environmental data of companies, cities and countries once a year on a voluntary basis and awards the results of the sustainability assessments.

Beside of this award LG Hausys received 2017 honours in the Carbon Management Sector ("industrial materials" category).

### Goals

- Reduce the ratio of fossil fuel energy use, by increasing the use of renewable energy.
- Introduce co-generation and photovoltaic energy to increase the ratio of renewable energy.
- Establish sustainable partnerships to reduce the GHG emissions and the energy use.





High impact in aesthetics,  
yet low-impact in  
environmental cost.

## Explore sustainable design with HI-MACS® Recycled Colours

- HI-MACS® recycled colours are durable, colourfast, and easy to maintain. They offer the same outstanding properties and green credentials as our standard HI-MACS®, but in addition contains up to 16 % of pre-consumer recycled material and are certified by the Scientific Certification Systems (SCS) for stated recycled content.
- HI-MACS® recycled colours are also GREENGUARD Certified for Indoor Air Quality
- HI-MACS® recycled colours can provide LEED® credits in sustainable design.

# HI-MACS® Recycled colours

## Volcanics Collection



Gemini  
VV01 [12 mm]  
**Minimum 14% Recycled Content**

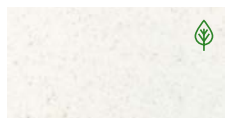


Tambora  
VE01 [12 mm]  
**Minimum 16% Recycled Content**

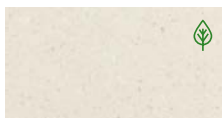


Santa Ana  
VA01 [12 mm]  
**Minimum 13% Recycled Content**

## Granite Collection



Cotton Field  
G180 [12 mm]  
**Minimum 14% Recycled Content**



Windy Hill  
G181 [12 mm]  
**Minimum 13% Recycled Content**



Highland  
G183 [12 mm]  
**Minimum 12% Recycled Content**

## Eden Plus Collection



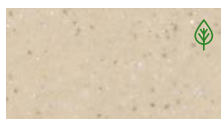
Pause  
R009 [12 mm]  
**6% Recycled Content**



Ripe Cotton  
G518R [12 mm]  
**10% Recycled Content**



Simplicity  
R943 [12 mm]  
**6% Recycled Content**



Lemongrass  
G503R [12 mm]  
**10% Recycled Content**



Honeysuckle  
G504R [12 mm]  
**10% Recycled Content**



Portland  
GT945 [12 mm]  
**6% Recycled Content**

The Eden Plus collection is available upon request. Minimum quantity orders apply.

## Obtain eco-credits with Eden Plus

- **Leadership in Energy and Environmental Design (LEED)** is a widely used, voluntary system for certifying the high performance of buildings from the US Green Building Council (USGBC). LEED certifies buildings using a credit system.

HI-MACS® Eden Plus helps your project score points in the following categories:

- MR BPDO – Environmental Product Declaration – Option 1: Environmental Product Declaration.
- MR BPDO – Sourcing of Raw Materials – Option 1: Raw Material Source and Extraction Reporting
- MR BPDO – Material Ingredients – Option 2: Material Ingredient Optimization
- MR BPDO – Material Ingredients – Option 3: Supply Chain Optimization
- EQ Credit: Low-Emitting Materials



MINIMUM 6% RECYCLED CONTENT  
PRE-CONSUMER



MINIMUM 10% RECYCLED CONTENT  
PRE-CONSUMER



MINIMUM 12% RECYCLED CONTENT  
PRE-CONSUMER



MINIMUM 13% RECYCLED CONTENT  
PRE-CONSUMER



MINIMUM 14% RECYCLED CONTENT  
PRE-CONSUMER



MINIMUM 16% RECYCLED CONTENT  
PRE-CONSUMER



## Questions? Let us answer them!

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