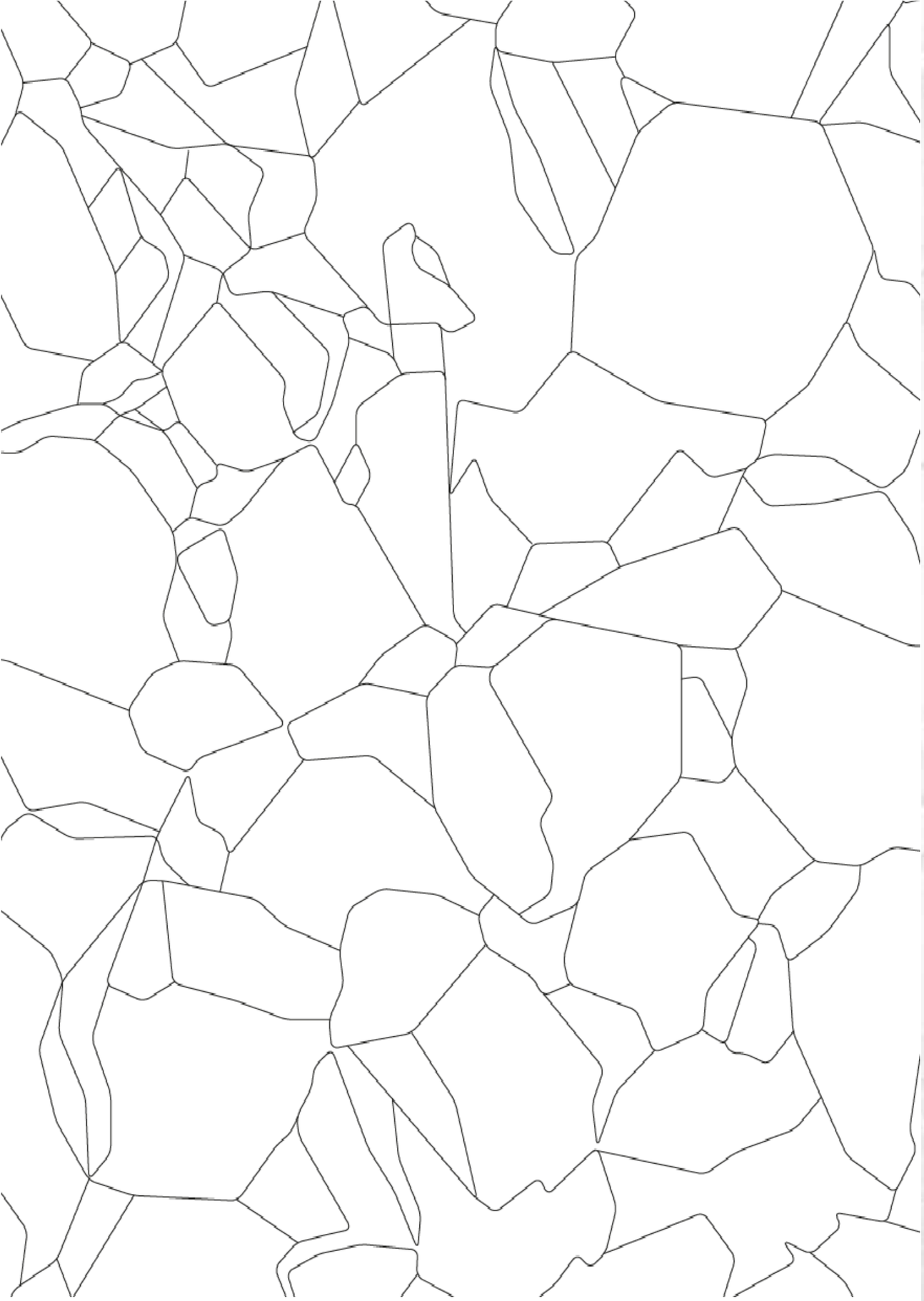
MAGNA. Glaskeramik
Straße der Einheit 18 | D – 06179 Teutschenthal
T. +49 34601 - 3970 0 | info@magna-glaskeramik.com

magna-glaskeramik.com



WELCOME

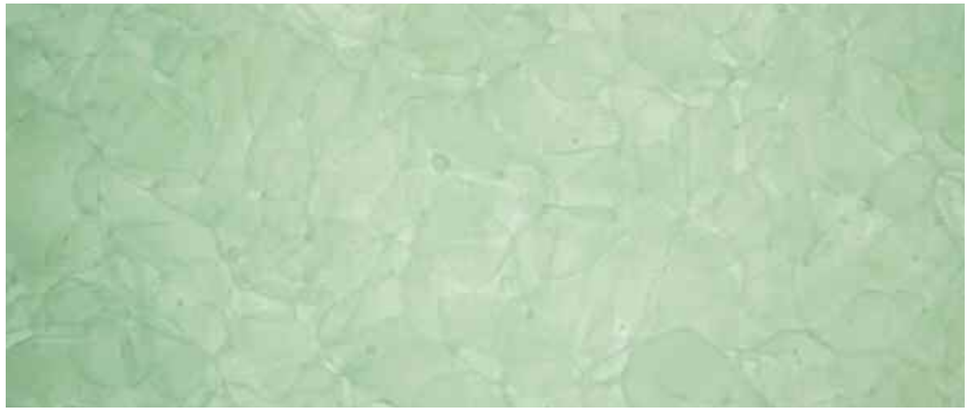
There is more to discover!
Please check our latest products
online. All up to date!

magna-glaskeramik.com

OUR UPCYCLED WASTE GLASS

x 5

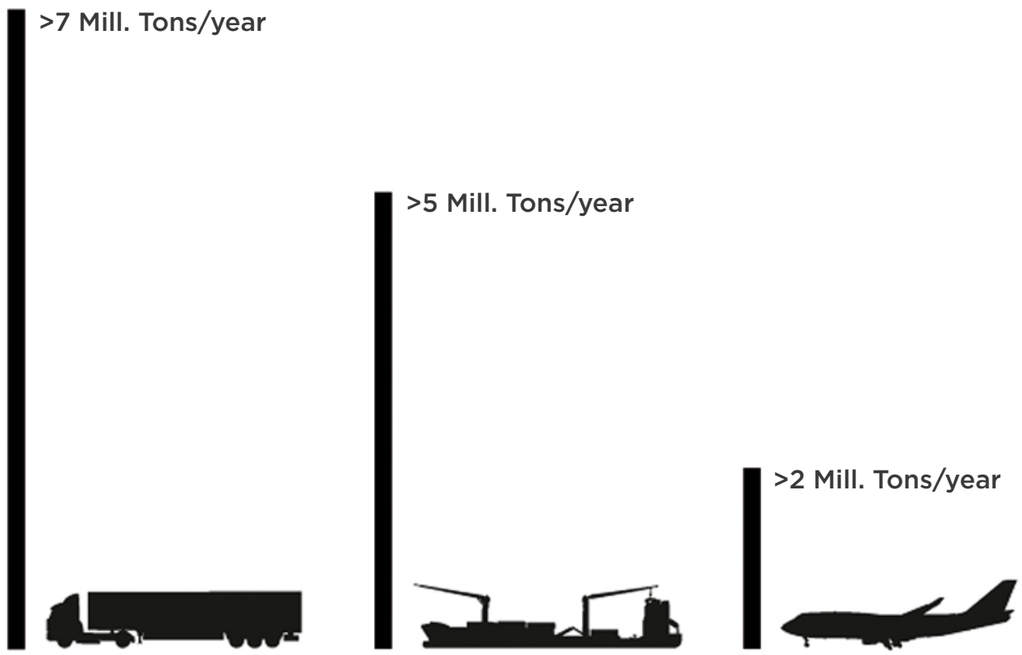
= 1 m² Glaskeramik



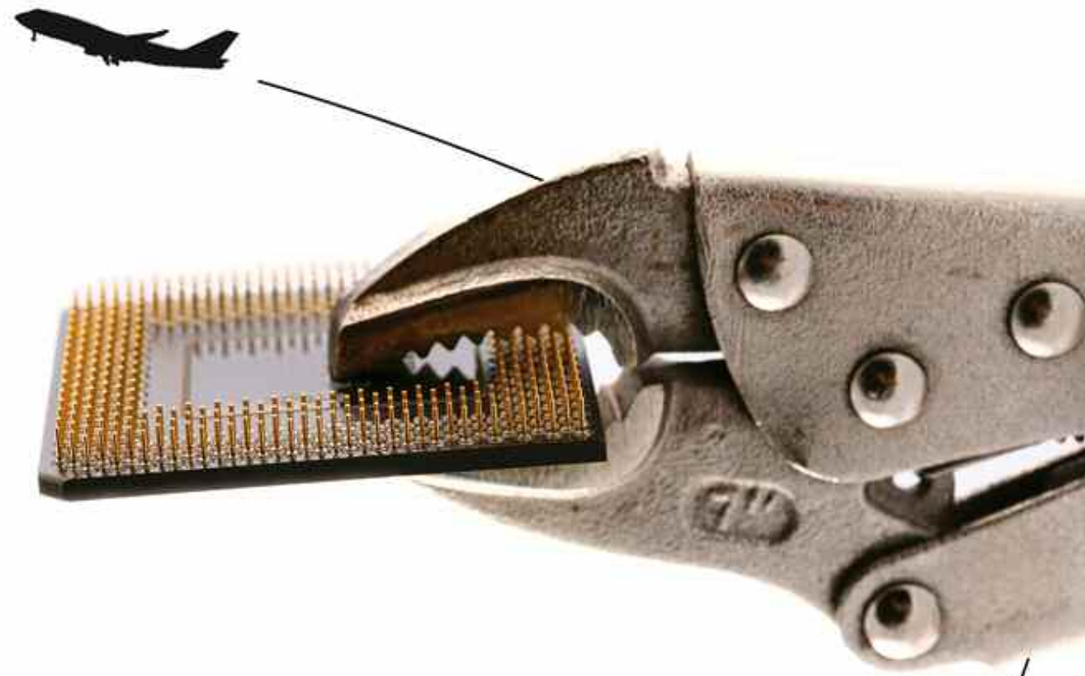
OUR VALUES

Our Glaskeramik is sustainable - thanks to 100 % recycled glass. Handmade in Germany.

OUR MANUFACTURING MEETS HIGH-TECH



OUR VALUES



Manufacturing meets High-Tech.
Distributed worldwide.

VARIETIES OF OUR GLASKERAMIK

Anything is possible!
Check out the variety of our plain Glaskeramik slabs online:

www.magna-glaskeramik.com

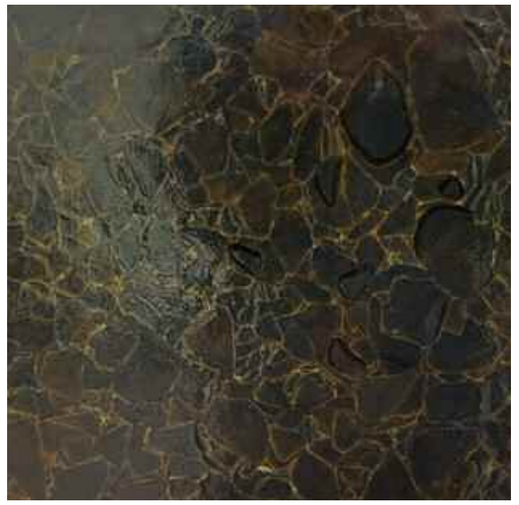
Talbot Gateway, Blackpool

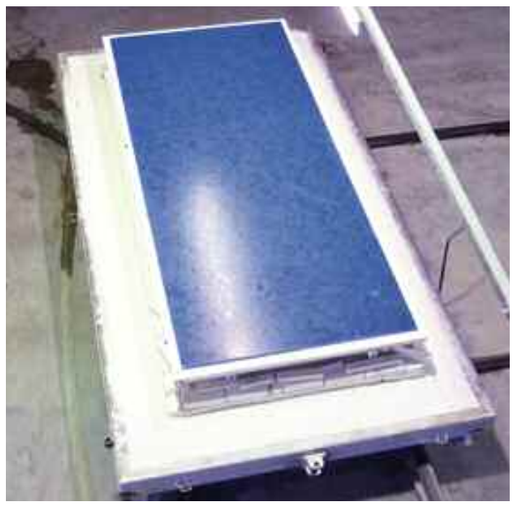
Glaskeramik is the newest innovative material to hit the construction, architecture and design industries. The material, being made entirely 100% from recycling the waste from industrial glass production, achieves a true circular economy outcome from its manufacture and application.
Glaskeramik is Made in Germany.

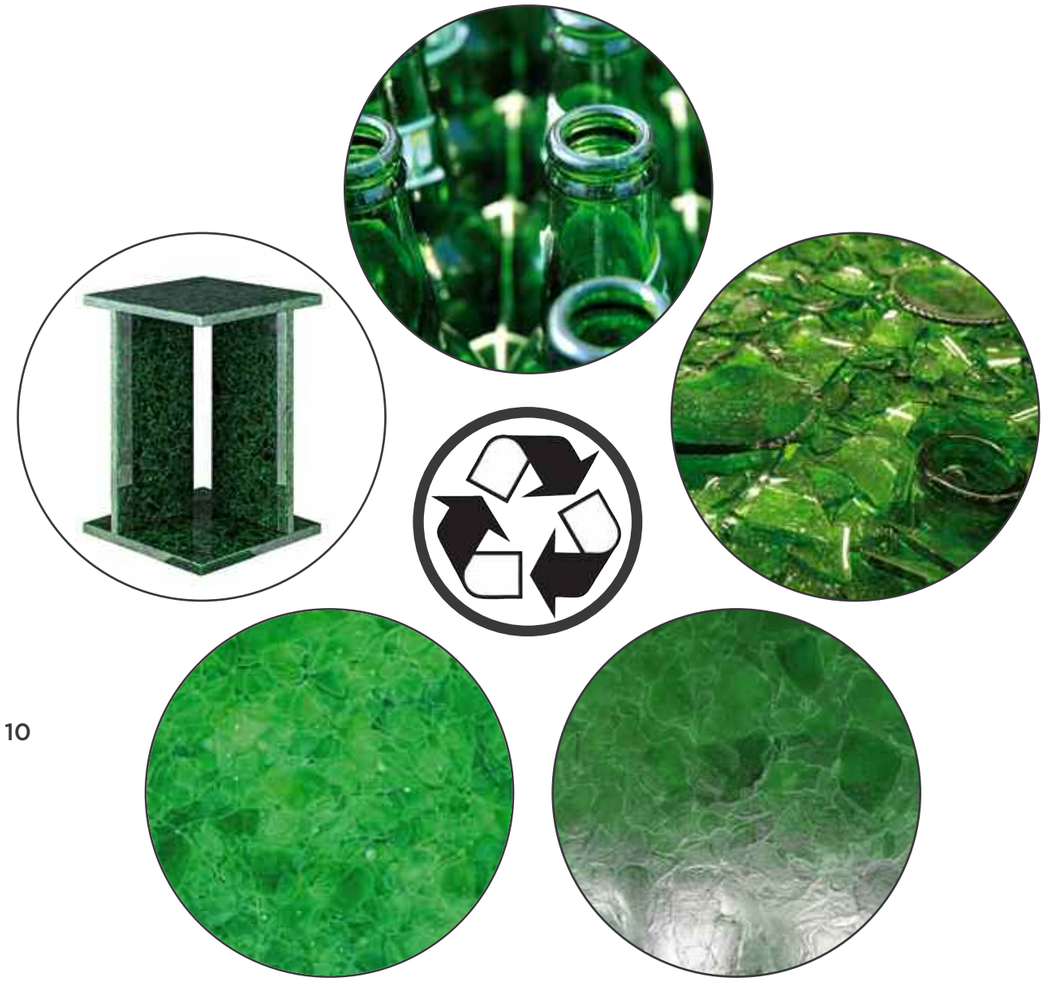
Handwork plays a critical part in our production.
The glass waste material is inspected, broken, in a controlled manner, into shards then put through a complex sintering process, without need for pressure nor binding additives, using only temperature, care and attention with a little time. In this way we produce a unique Glaskeramik sheet which displays random yet even details. The inherent translucent character of the crystallized glass allows for backlighting possibilities and results in a very exciting and singular brilliance

OUR PRODUCTION PROCESS

The surface of the slabs, on exiting the ovens, is naturally patinated and textured; this has not only a great feeling to touch but also diffuses light in a half reflection. When continuing the processing we can polish off this surface and with that transform the 2D effect into 3D effect better showing off the crystalline structure



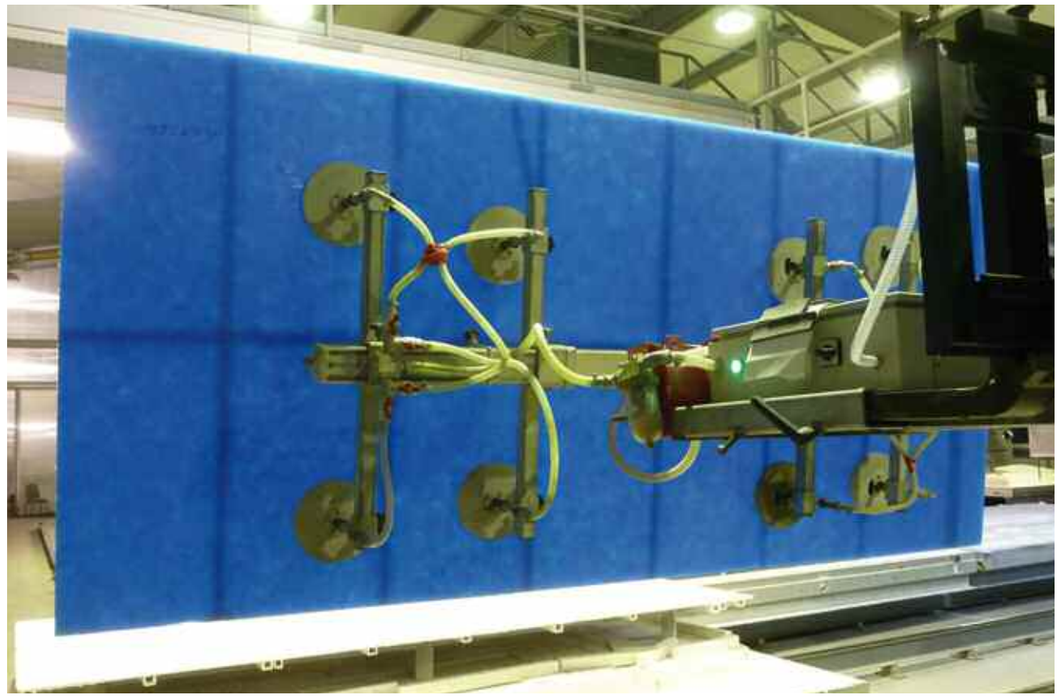




THIRD-PARTY VERIFIED EPD ISO 14025 and EN 15804 Institut Bauen und Umwelt e.V.

TÜVRheinland® ZERTIFIZIERT Management System ISO 9001:2008 www.tuv.com ID 9108626703

CERTIFIED CM cradletocradle



In the industrial production of float glass, whether it is solar glass, coloured or even bottle glass, there is continual defective or over-production waste, which comprises of around 5% of the total production output.

From this industrial waste we source our entire production of Glaskeramik slabs. We have applied for and gained the Cradle2Cradle and EPD certifications, be it for LEED points or DGNB certification, following rigorous material testing. With these certifications our Glaskeramik adds a meaningful dimension to the protection of natural resources and is especially pertinent for sustainable builds. Aside from this, Glaskeramik is not just a circular economy material, but out of this sustainability mindset we also perform an environmentally conscious production process, where the larger part of the energy input is generated from our own solar power plant and the water, that we use in production, is refreshed and recirculated. Glaskeramik is additionally an hygienic, impervious and stain resisting material, where in production no glues, epoxy resins or other chemicals are used. The result is a long standing, easy-clean, colour safe, durable surface devoid of influences from acid rain, UV or chemicals

The colour of the Glaskeramik results from the chosen glass source and its inherent opacity or translucency; nevertheless we have some ability to generate different outcomes with the same material with some programmed adaption, research and also via lighting.

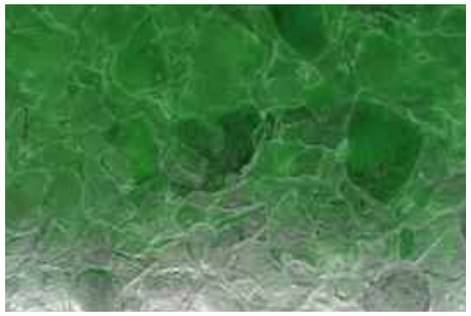
Polar White
waste glass from the protective ultra-white glass used in PV production

Jade
sourced from recycling float glass, whereby its iron content provides the green hue

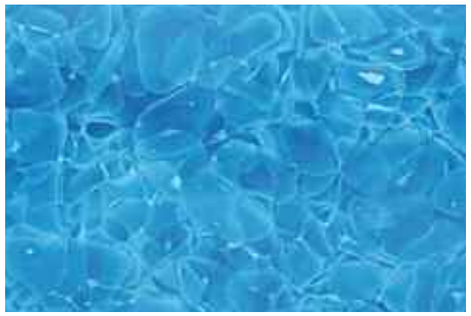
Ice Nugget
sourced from recycling 6-8mm thickness low-iron glass waste

Light Grey
made from the waste in the production of metallic laminated solar shading glazing

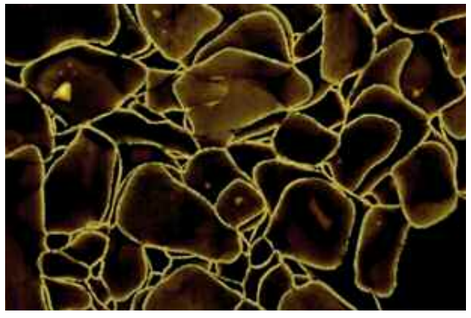
Green
sourced from recycling green (usually beer) bottles.



Ocean Blue
sourced from recycling blue coloured mineral water or beer bottles



Champagne Brown
waste from the production of beer and German Champagne brown bottles



Black
produced from the defective production of grey float glass sheet

APPLICATION KITCHEN

APPLICATION KITCHEN

In kitchens there are various applications for Glaskeramik. These may form the work surfaces, perhaps with polished cutouts for sinks and holes cut for tap sets or hobs or even the splashbacks or cladding for lighting devices, even the kitchen flooring can be specified.

In producing one-piece work surfaces with cutouts we recommend a minimum 100mm remainder material for its transit safety, or without this we will need to add jointing. These can be unobvious joints (see image here of backlit Galaxy cream white). On kitchen work surfaces we would recommend using our patinated surfaces which have a certified hardness Mohs of 6 and are scratch resisting. For vertical cladding such as splash- backs, especially in conjunction with lighting, we would recommend the MOH 4 rated polished surface as most suitable. Everyday dirt can be removed (without resorting to abrasion) using hot water and universal glass cleaners. Kitchen surfaces are well resistant to heat but heat shocks from hot pans should be avoided. Glaskeramik has a closed surface where cleaning and maintenance is very easy and without need of specialist products or cleaning regimes. Glaskeramik is an impervious, stain resistant and thus hygienic solution which requires no sealer or impregnation

APPLICATION BATHROOM

APPLICATION BATHROOM

The many versatile faces of Glaskeramik show themselves even better in laboratory, sanitary and bathroom areas: where there may be methods of indirect bathroom lighting, as lit back walls and screens or vanities.

Here the polished edges and crystalline structure come to the fore. For example, a shower screen made of Glaskeramik can be a main attraction if specified in semi-transparent Ice Nugget, Light Grey or Clear Jade types (polished double sided). The fixing technology should be as per usual metal channel and shuffle glazing methodology using silicone adhesion and soft protection. Unrestrictive from application the material can receive a safety glass status using an additional film or full glass to Glaskeramik lamination.
To this end the safety films come in a variety of finishes and textures to create your desired effect

APPLICATION COUNTER

Wellington Hospital, London

Architect + photo:
Sylvia Leydecker
www.100interior.de

One of the most commonly seen applications of Glaskeramik is for cladding and surfaces of reception counters and desks

Arena Leipzig, photo: Marcus Bleyl

APPLICATION COUNTER

Design + realisation: popup bau
Photo: Martin Stöver

The special optical charactistics of the material come to the fore in such applications as here shown. Through backlighting one cannot only make an exciting design object but also use colour RGB LEDS to generate colour palettes, as Glaskeramik is a very even light diffuser. Sometimes with a light box 5-10cm depth of construction or simple LED arrays or LED strips directly on the material or using LED light sheets (such as Polylite) where depths are minimal, areas of even diffusion are large. Glaskeramik can, much like natural stone, be cut and worked into complex forms with waterjet and CNC tooling. We can also provide mitre cut corners or dropped and UV glue bonded aprons without any difficulty. In certain cases we may be able to offer either almost jointless 20+20mm bonded sheet polished edges, even 20+20+20 mm, and even solid thick 45 mm slabs; the arisses at important junctions can be carefully minimized such that where slabs come together they can do so in a near seamless butted joint ◘

Gordon Ramsay, London

Casino Wien, LORENZ, Innenarchitektur

gmp Architektur-Pavillon,
Elbchaussee, Hamburg
copyright HGEsch Photography

COMBINING WITH OTHER MATERIALS

Fountain Citti Park Lübeck

Glaskeramik is a fascinating material solution for interiors, one which also has many application possibilities.

The play of light, detailed structure, of surface finish, texture and aesthetic makes for an exciting material opportunity as yet unseen in the market.
It can be used in combination with other materials to great effect, options such as stainless steel, bronze and brass, natural stone and concrete make for a creative meeting of surfaces. The mix of effects using water in fountains, or pools, as well as material on chimney pieces and fireplaces makes for great drama in a space. The Glaskeramik can even be used as slab flooring feature in and between other floor surfaces, with light or without it. Here we recommend the patinated surface for slip resistance with R9 certification. With additional films, inset metal strips or sand blasting one can increase this up to R12

Euro Plaza Hotel, Wien by Rosskopf & Partner

Sony Style - T5 Heathrow, London

INTERIOR WALLS | ELEVATOR

GLA Chukyo Hall, Prayer Hall, Nagoya, Japan.
Photo: Shigeo Ogawa

Glaskeramik is predestined for high value urban interiors, particularly as wall cladding in lift lobbies and in main entrance reception areas, due to its amazing and detailed crystalline structure.

The size of the panels will be limited only by our maximum sheet sizes (3500 mm x 1500 mm patinated finish and 3400 mm x 1400 mm polished finish) and the necessary structural and fixing solutions. Fixings can be made flexible via undercut anchor or using silicon. Weight of 48 kg/m² at 20 mm can be reduced to a thickness of 15 mm where lift cars require this. There, simple profiles and cassette systems can make fixing possible and mid joints can take the test movements. In some cases we can form curved material by slumping sheets, here is an example cladding panel beside a revolving entrance doorway, but we can also curve shower screens in this manner. Polished surfaces will be engagingly transformed during curving and show a slight rippling effect ◘

Lift car 199 Bishopsgate, London

INTERIOR WALLS

Berkeley Hotel, Knightsbridge, London; Architect: Rogers Stirk Harbour&Partners

Naturalia Shop, Paris; Architect: Kengo Kuma Assoc.

REFERENCE PROJECT BOOTH FOR ST. SEBALDUS

Photo: Marcus Bleyl

24 **Reference project: Booth for the church of St Sebald in Nuremburg/Germany**
Architect: Christine Kayser
Completion date: March 2016
Material: Glaskeramik Cream White patinated with anti-shatter film in brown colour applied to the backside

Glaskeramik can be used with a safety film backside (like with shower screens) in the public realm, where safety needs are paramount, this film can also be coloured to adjust the overall colour, or accentuate the character of the material or indeed help obscure any anchors necessary. All of these aspects were combined in this Information Booth for the church of St Sebald in Nuremburg. The light coloured cuboid is a real attraction in the space due to its elegance and perfection and is contrasted wonderfully against the centuries old sandstone of the church

Photo: Marcus Bleyl

INTERIOR WALLS | PROJECT EXPERIENCE

Concept by Naveen Mehling; Photo: Marcus Bleyl


Photo: Marcus Bleyl


Office Guangzhou, China, v. Gerkan, Marg+Partner

INTERIOR WALLS | LIGHTING


Cannon Place Station, London

As every slab of Glaskeramik is made up of many intricate layers of recycled glass cullet, there is a strong light diffusion character and translucency.

It is this that creates the drama in the space when using light and Glaskeramik together to build a spectacle.
Through the high value in the character of this material, Magna Glaskeramik GmbH has gained wide experience through the specification of the product by renowned architectural offices, and has developed with them many diverse solutions for complex project needs which which all go to inform our advice for your project

APPLICATION FAÇADE

Glaskeramik is not only geared towards interior cladding and features but also can be widely used for external facade and surfaces.

Here it not only presents itself as a sustainable option with added optical qualities, but also offers additional technical and performance advantages. Glaskeramik has a FR class of A1 (Non combustible) and is frost resistant. During the production process we use no epoxy resins or adhesives and so the glass-like surface stands resistant against outside influences such as acid rain and UV damage. The materials colour is stable through its entire life which is imperative for facade uses.
Magna Glaskeramik GmbH has developed a variety of facade solutions to address the different needs of projects

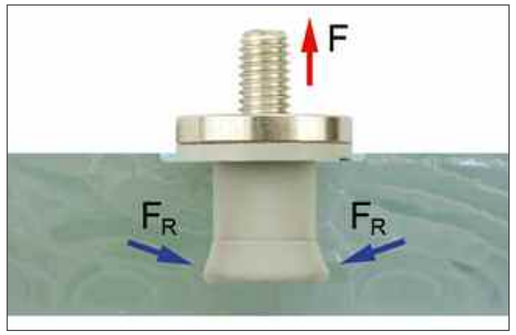
Augenzentrum Michelfeld, Stuttgart

APPLICATION FAÇADE


Talbot Gateway, Blackpool


Museum Abtei Liesborn, Wadersloh

FZP ANCHOR FAÇADE



The most common fixing system for rainscreen applications uses a special development from the Fischer Fixings specialist, Germany who have made a particular undercut anchor.

Façade panels for this system will be prefabricated in the factory in Germany including cut-to-size as well as drilling and placing of the undercut anchor. As a result large format facades (up to 3500 mm x 1500 mm depending on structural calculations) with minimally visible fixings, 10 mm open jointing can be installed using aluminum profiles supporting back to the structural floors and walls; where panel weight becomes critical then steel angles at the bottom edge can be used to alleviate the turning motion on the anchors. Magna Glaskeramik offers you wide reaching project services, which includes advice on detailed design and structural calculation support. The whole resulting rainscreen system with the Fischer FZP-GZ anchor has both material guarantees and also official European Technical Approval certification ETA 16/0302

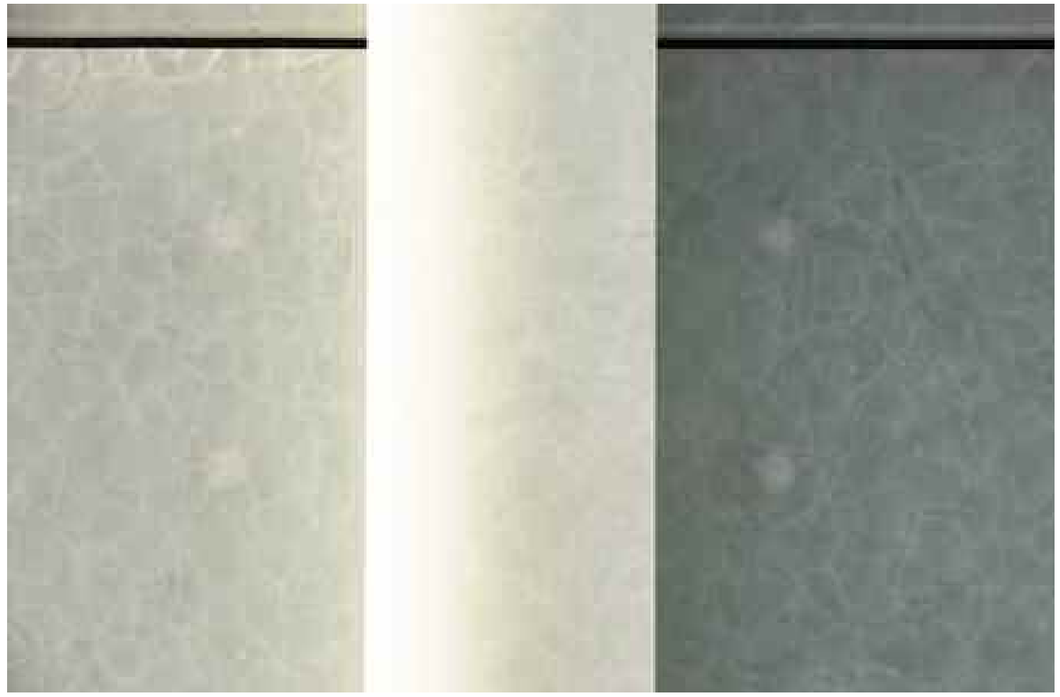
APPLICATION FAÇADE

Mixed use building Trondheim, Norway;
Photo: Henrik Larsen

Museum Folkwang, Essen
copyright: Christian Richters

Reference object Folkwang Museum, Essen
Architect: David Chipperfield
Completion date: 2010
Material: Glaskeramik Cream White patinated

The David Chipperfield Architects designed extension to the Am Folkwang Museum in Essen shows off the Glaskeramik material in a facade with great aplomb. It expresses itself through partial reflection and diffusion of the changing light over the day and, as a result, never appears to look the same. Both functionally, aesthetically and technically this is a triumph of high quality workmanship and brings the museum to a very high level in the art establishment as well as provides the City of Essen with both an evocative and urban public building as well as a major visitor attraction. On this occasion they required 2780 mm x 1235 mm sized recycled Glaskeramik panels as a rainscreen system using the Fischer FZP-GZ anchor. The shimmering, light green-white, glacier-like panels use the patinated surface of Glaskeramik which alters, by direct sun and in overcast skies, throughout the day



DM service station, Schorndorf


Appart Hotel, Bear Gardens, London


Lithodecor-System

In external environments the material can additionally be made an attraction with backlighting. The motorway services shopping area at Schondorf Ammersee has lit facade elements in Glaskeramik as highly visible features as the material directs the light intensely and in a pronounced manner unlike other diffuser materials.

Magna Glaskeramik fitted well into the design concept through its sustainability and energy neutrality, added to that was its upcycling principles, 100% recyclability with the associated C2C and LEED accreditation.
Other applications in facades are offered as closed curtain wall systems. Here often using post and beam curtain systems whereby the Glaskeramik becomes the outer leaf of the insulated glazing as a laminated (safety glass to Glaskeramik) panel and can be viewed from both sides to allow light inside a building. Some choices of Glaskeramik will allow some partial visibility through, others only light and not a view.
In addition Glaskeramik can be brought in with alternative facade solutions such as the Litho System (Litho Glassceramics) which uses a large format lightweight concrete carrier behind, or another solution, for smaller panels, using a „V“ clip held into cut and notched edges by our partner Label Facades

DESIGN OBJECTS


copyright: pulpo Font Low


Lampe e27 by Tim Brauns


Coffee table NAMI by Deutsu


Lit Stool

Glaskeramik offers great flexibility and uniqueness with countless design possibilities to realize new design ideas and creations in the stone or glass arenas.

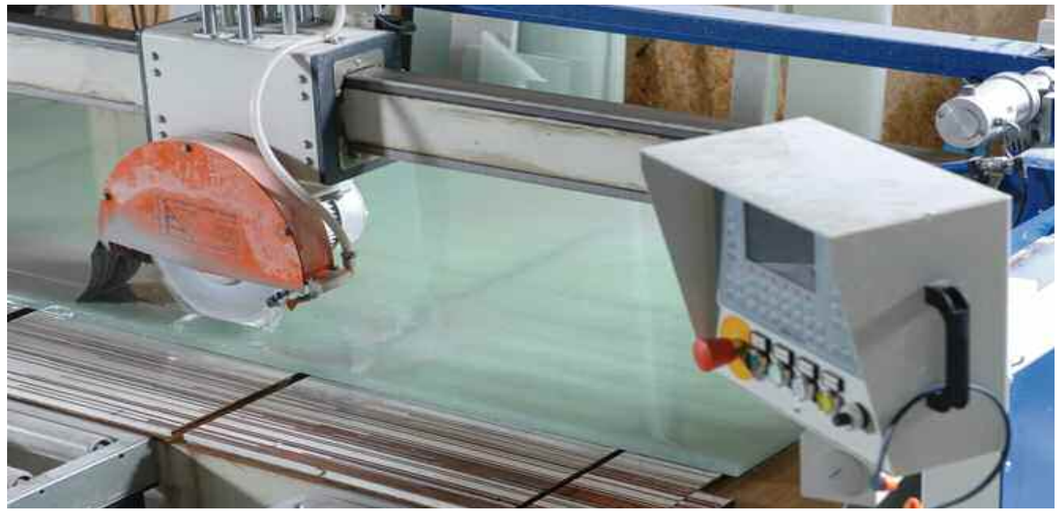
Accreditations include the Red Dot Design Award 2012, Interior Innovation Award 2014, the Raumprobe material prize for Environment 2016 alongside many national and international press articles.
Under the Motto „Everything is possible“, MAGNA Glaskeramik aggressively supports the development of new products, colours and designs. As a direct result of this attitude there is now an exciting selection of accessories, furniture pieces, lamps and curved basins to excite and inform

TECHNICAL DATA

Description	Value	Norm
Dimensions **Dimensional tolerances**	3500 x 1500 mm patinated 3400 x 1450 mm polished probable dimensions from 12/16 on length and width +/- 1 mm	
Thickness **Thickness tolerances**	15-30 mm, >21 mm special production patinated +/- 1,25 mm polished +/- 1,10 mm	
Density	ca. 2,48 g/cm^3	DIN EN ISO 10545-3
Weight per m^2 with 21 mm thickness	ca. 50,4 kg	
Bending strength 5% fractile Jade **Bending strgth. 5% f. Polar White**	patinated 22 N/mm^2 patinated 20 N/mm^2	EAD 13-33-0030-06.01 EAD 13-33-0030-06.01
Load-Bearing-Capacities	ca. 3,44 kN	EAD 13-33-0030-06.01
E-Modul	ca. 30 kN/mm^2	EAD 13-33-0030-06.01
Hardness according to Mohs	6 patinated 4 polished	DIN EN 15771 DIN EN 15771
Heat expansion 20-100°C	7,22 x 10^{-6} x K^{-1}	DIN EN 103
Heat conductivity at 64°C	1,04 W/mK	
Specific heat capacity Cp	0,7 J/gK	
Water absorption	ca. 0,07 Ma,- %	DIN EN ISO 10545-3
Frost resistance	no trials with visible defects	DIN EN ISO 10545-12
Stain resistance	5 (stain can be removed with hot water)	DIN EN ISO 10545-14
Chemical resistance	A, GA	DIN EN ISO 10545-13
Fire class	A1	EN 13501-1
Surface wear	Class II, 300 revolutions	DIN EN 154
Slip resistance	R9 patinated	DIN 51130

Please find informations about Glaskeramik, applications, processing, care, maintenance, transport and guarantees on our homepage www.magna-glaskeramik.com
ABOUT US | FAQs.

TECHNICAL INFORMATION FOR PROCESSORS



Glaskeramik is a material from 100% recycled glass, through this and during production, come minor material crystalline variations from the sintering tuning, nevertheless working the material is achieved through use of methods and equipment and tooling generally seen in the natural stone and large format ceramic panel industries.

MAGNA offers its wealth of natural stone experience and detailed technical production information alongside a full knowledge of codes and methodology. The full processing handbook can be found on our homepage. For our partners we offer regular training sessions for material working in our production facilities in Loitsche and Teutschenthal

MAGNA NATURSTEIN GMBH

The parent company MAGNA Naturstein GmbH is one of the biggest distributors and fabricators for natural stones in Central Europe, based in Loitsche/Magdeburg, Germany.

MAGNA Naturstein works with over 100 production associates in both indoor and outdoor service, on a surface area of over 100,000 square meters, 45,000 of which is indoor floor space. We demand and guarantee the highest quality standards for the workmanship of our natural stone, glass ceramic, quartz composite and large ceramic wares.

MAGNA Naturstein promises its customers more than natural stones from the clay slab and base plate; we also secure the finest finish. We lay particular focus on the technological handling of quartz from COMPAC, as well as the large ceramic wares from THE SIZE

MAGNA NATURSTEIN

COMPAC THE SURFACES COMPANY

NEOLITH