MAGNA.
GLASKERAMIK

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MAGNA GLASKERAMIK REFERENCE FACADE – Lennestr. 1, Berlin, Germany.

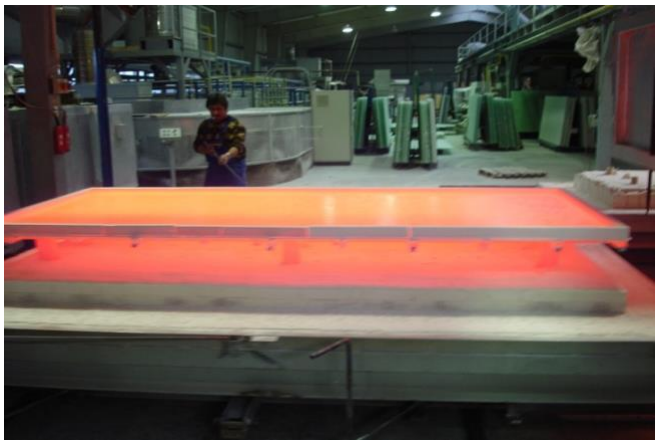
REFERENCE PROJECT: Mixed Use Building, Berlin, by Petzinka Pink and Partner, Hamburg, Germany.

The building is set in the centre of the embassy district of Tiergarten and opposite the Holocaust Museum, Berlin. The complex is a series of offices and residencies stacked above a shopping ground floor which in turn lies over a parking garage. The upper stories are all clad with wintergardens to reduce the level of noise emanating from the city streets and they do act well as a very necessary buffer to the outside.

The building cladding in small panels of Magna Glaskeramik use a Keil anchor fixing solution, this being a small hand-fitted anchor which is inserted on site into the hole placed on the backside. In places one can find cut-outs made by water jet are revealing here the garage parking control lights or there Fire Engine Dry Riser Water access points, so the material well accommodates the building façade needs and suffers the harsh environment of dirt and traffic very well over its near 20 years of life so far.

The colour green comes from the iron in float glass which is the source material that has been crystallized in reprocessing. Every time one passes the building the light has changed and the flicker of the sunlight on this glass exterior will develop and alter across the day and show a reflection of the weather conditions and the light. The ripple of the façade glaskeramik surfaces shifts with the changing natural light and the integrated window openings sit flush with the façade.

The building is entirely clad in a rainscreen of an area of around 600 M2 of Magna Glaskeramik in type called Jade Patinated, thickness 21mm panels with 10mm open joints between panels, this hangs on an aluminium rail under-construction method to take the cladding forces back onto the main concrete structural frame. This is used externally, also on balconies and semi-internally in the wintergarden areas.



This material offers a new and C2C Gold accredited sustainable and truly circular economy ethic, whereby the entire contents are sourced and upcycled from trade waste glass and can be locally recycled by glass processors at the end of a long life. The material is heavily durable, offering true performance and tested certification as well as suited to both hot and cold climates, closed surface against vandalization, impervious to staining and almost self-cleaning in its finish.

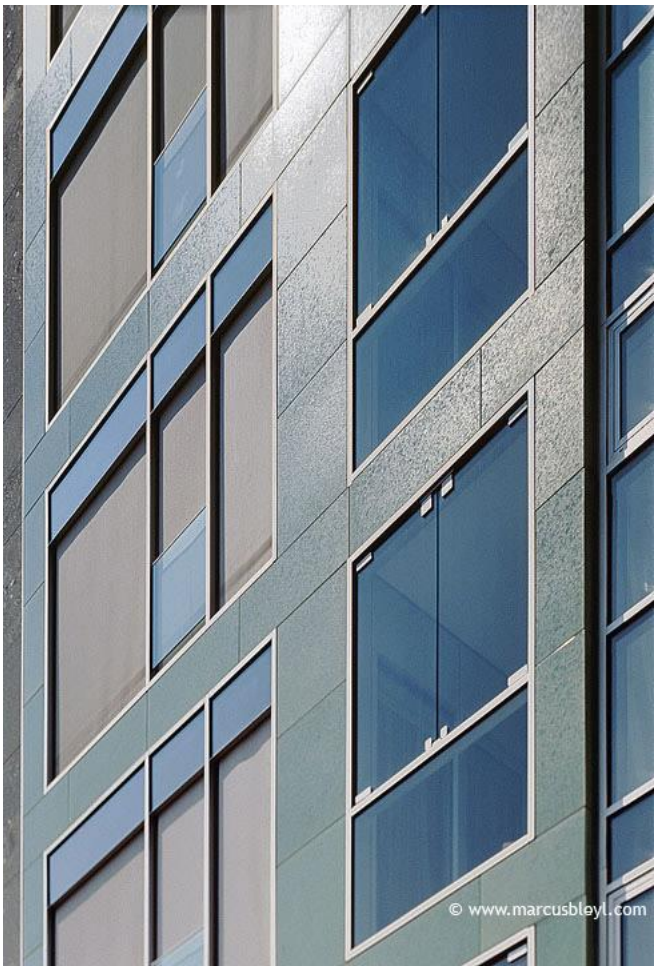
The positioning of the anchors are at 100mm from edges and there is even the potential to mitre bond the material at outside corners. Most cladding formats were cut to 1200 x 600mm sizes with 10mm open joints but larger are possible as are curtain walling.

Magna form the material from glass industry waste stream, in this case Float glass, those industries forming flat glass or bottle glasses can be used as source, this waste is then reprocessed by sintering in a computer-controlled manner, without additives and the outcome will reflect the input material. Green beer bottle source will produce a dark green and low iron glass from solar panels can provide a very white coloured Glaskeramik. A range of types can be studied on manufacturer website: www.magna-glaskeramik.com This material is circular, (fully recyclable) as it has no additives (such as a resin bond which many companies resort to reduce the issue of tension) and is categorized as crystallized glass ceramic in its nature and character much as a tested ceramic slab. The technology allows for the growth of these strong crystals and deals with the air bubbles captured by the sintering process whilst also removing the tension in the sheet formation. This means that the true advantage over cast-glass types is that the material slabs (of currently 2780x1260mm but also 3500x1500mm maximum sizes) can be premade, without a mould, and stocked in quantity affording a swift processing for projects. The material thus covers applications in the glass, cast glass and the natural stone market but offers light translucency and randomized interior details. The patinated, natural surface offers an unusual textural and aesthetic effect in the changing light and weather conditions which makes it stand out amongst the usual façade solutions.

Glaskeramik is more usually specified as a rainscreen but is even available in laminated curtain wall façade applications. It is generally regularly specified in interior applications from light walls, interior surfaces, flooring slabs and reception desks and kitchen splashbacks through to works of art, water fountains and shower screens. The material is made in Germany to a high quality and standard and with a wealth of leading glass consultancy and technical advice in order to create a stable outcome. If you would like to know more about this exciting new material or require technical advice please contact the author or via the manufacturers website. Magna Glaskeramik GmbH is pioneering the circular economy in its production of 100% recycled and 100% recyclable façade material which is being taken up by global accreditation and test data, the water use is also circulated within the plant and the energy use is offset by a large solar array on the roofscape.

European Test Approval for Anchored Rainscreen, Environmental Product Declaration, ISO 9001, EN 12600, Cradle2Cradle Gold Certification. Independent Solar Impulse Foundation Label: www.solarimpulse.com

Photo Credits: Marcus Bleyl, Andrew Savile



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