

Why GEALAN-acrylcolor®...

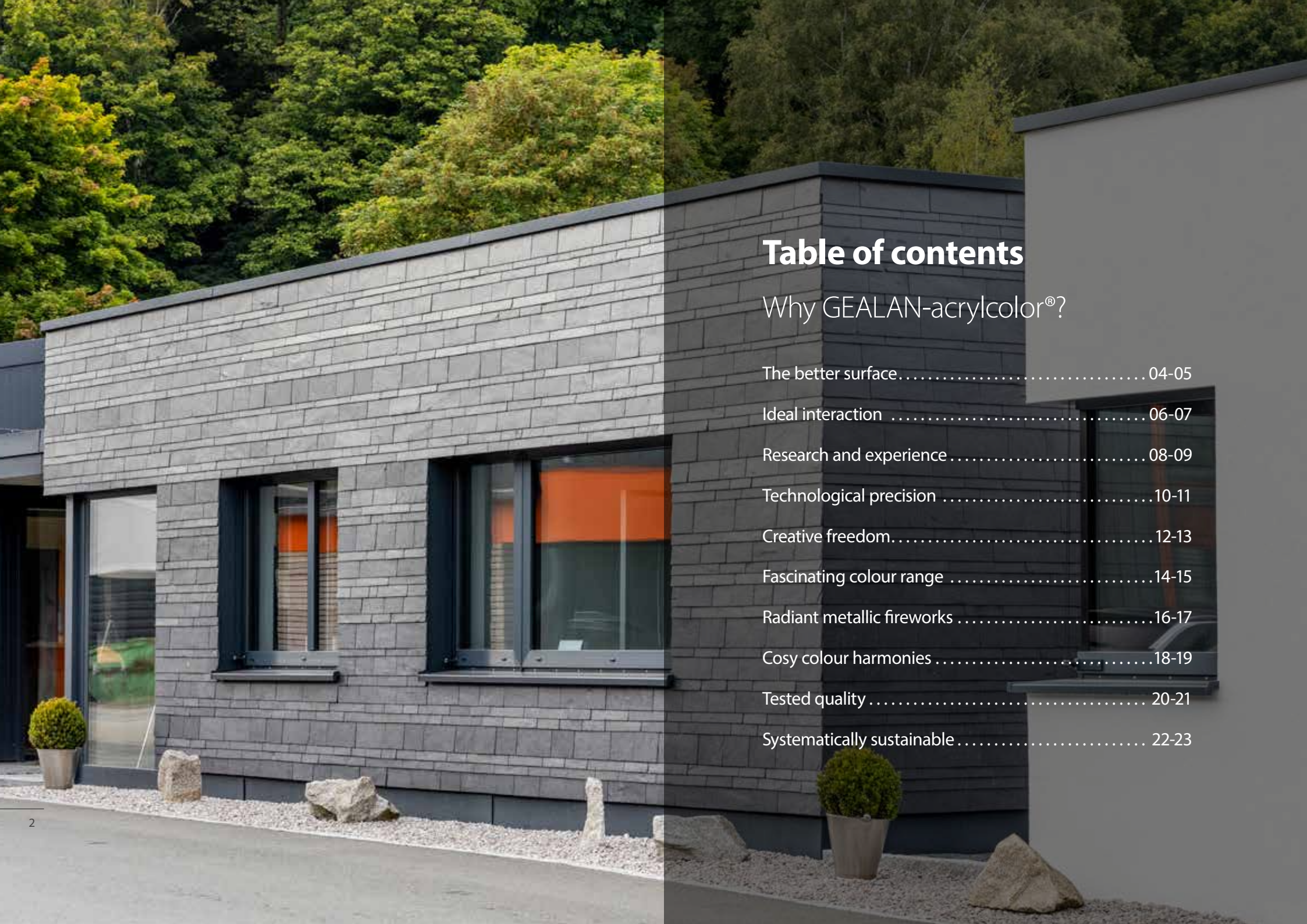


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GEALAN-acrylcolor® stands for outstanding variety in terms of design and colour. We've been consistently developing our surface technology for over 40 years. Window systems with GEALAN-acrylcolor® meet the highest technical and functional demands for innovative, coloured surfaces.





THE BETTER
SURFACE



Over 40 years of experience and consistent research and development in the PMMA finishing of window profiles – that's what GEALAN-acrylcolor® stands for. The versatile surface offers systems in a classic or modern design, for every installation situation – available in a wide range of colours. The silky matt surface combines aesthetics with extraordinary resistance. And it's passed the test millions of times: Since the market launch in 1980, millions of profile metres have been produced and processed into windows all across Europe.

GEALAN-acrylcolor® sets benchmarks for PVC windows

- + Unique colouring procedure provides finish and lasting protection
- + Inseparable bond between acrylic glass and PVC through co-extrusion
- + Ideal for window exterior exposed to weather
- + The highest surface standard in the area of PVC



Under the microscope, the difference becomes very clear. After 10 years of weathering effects, the acrylic layer on the left is much smoother and barely appears affected. GEALAN-acrylcolor® remains impervious for decades.



PMMA



PVC



Proven for decades

GEALAN-acrylcolor® is considerably different from other colouring procedures for PVC windows. The material properties of PVC and acrylic glass (PMMA) are highly compatible: Fine-tuned components come together, fusing perfectly to form a compound. This presents a clear advantage over multiple layers of primers and adhesives, as is the case with foiled profiles. PMMA is one of the hardest extrudable materials, much harder than PVC, and therefore scratch-resistant and extremely durable against effects of the weather such as sun, wind, rain, cold and temperature fluctuations.

During production, the PMMA layer is polished, resulting in a silky matt surface that repels dust, dirt and pollen. At 0.5 mm, it is thick enough for minor scratches to easily be polished out. It is user friendly, from production, to installation all the way to application – over decades.





IDEAL INTERACTION

Durable

Inseparable bond between PVC and PMMA prevents flaking and chipping of the paint layer permanently.

Scratch-resistant

Higher resistance than most construction elements thanks to the hard, impervious acrylic layer.

Weather-resistant

Withstands even extreme climatic conditions for decades without problems.

Lightfast

Extremely colourfast and lightfast, even when exposed to intense sunlight, for decades.

Stronger

Thicker than any paint layer with enough material reserves to polish out minor scratches.

Resistant to dirt

Homogenous surface with an elegant brush effect remains resistant to dirt over the long term.



**The GEALAN-acrylcolor® material combines
experience, research and innovation**

- + Raw material mixtures developed and tested in-house
- + Longstanding, close collaboration with European suppliers
- + Optimised for use in window processing
- + Material development tailored to extreme weathering

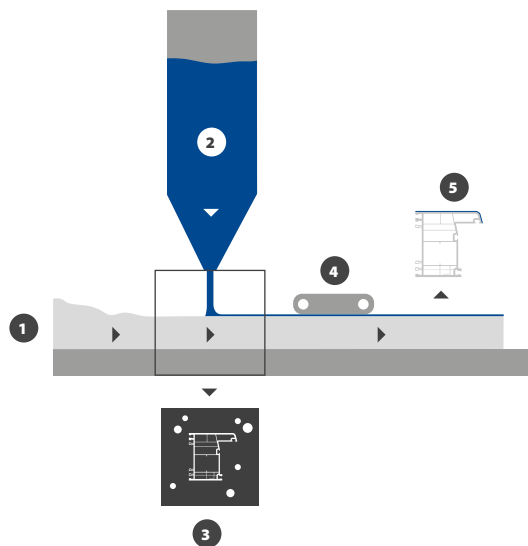
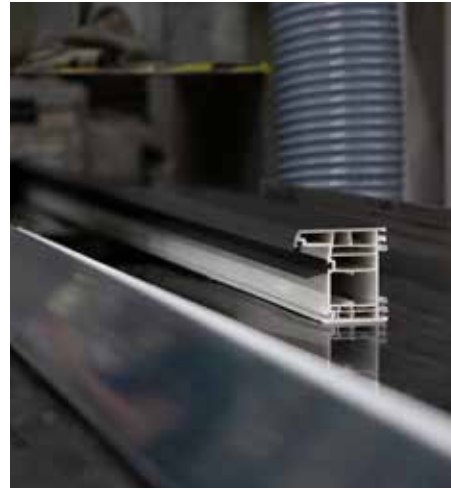
PROVEN EMPIRICAL
VALUES



As the only provider of PVC window profiles in Europe, GELEAN has focused on the PMMA finishing of PVC window profiles for over 40 years. This not only means years of experience, but also continuous improvement of the materials used in close collaboration exclusively with European suppliers and research teams from multiple universities. The PMMA is adjusted with the help of additives for optimal processing of the profiles for window manufacturers. The raw material mixtures are also optimised to reduce the temperature at which the paint heats up when exposed to sunlight.

Co-extrusion

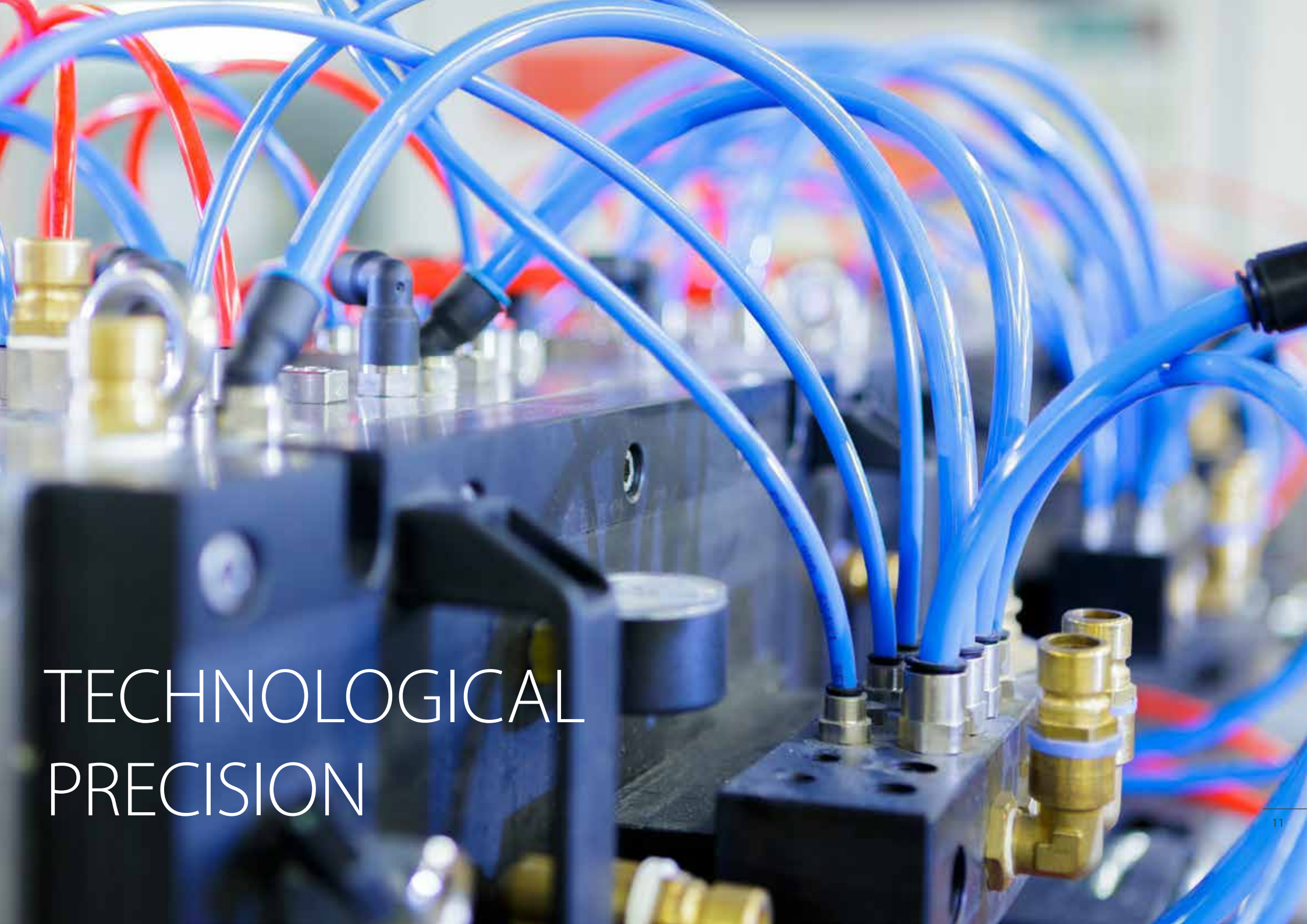
1. The liquid PVC mass is fed in via the main extruder.
2. The coloured acrylic melt is added via a coextruder
3. In the tool nozzle, an inseparable bond is formed between the two liquid components.
4. To achieve a uniform structure, the surface is polished to produce a silky matt, brushed look
5. The finished GEALAN-acrylcolor® profile



The co-extrusion of GEALAN-acrylcolor® profiles has been consistently – and not just proverbially – honed over the past 40 years in the in-house toolmaking department. Over 150 tools are used to realise a wide variety of complex geometries. Interaction between the Research & Development, Toolmaking and Extrusion departments, involving external experts, ensures a reliably high level of surface quality. Bundling and developing our competencies on site enables us to quickly respond to customer requests.

GEALAN-acrylcolor® is the result of technological expertise

- + All tools developed, produced and run in in-house
- + Use of modern methods and machines
- + Digital modelling supports optimised manufacturing processes



TECHNOLOGICAL
PRECISION



CREATIVE FREEDOM



New construction and renovation

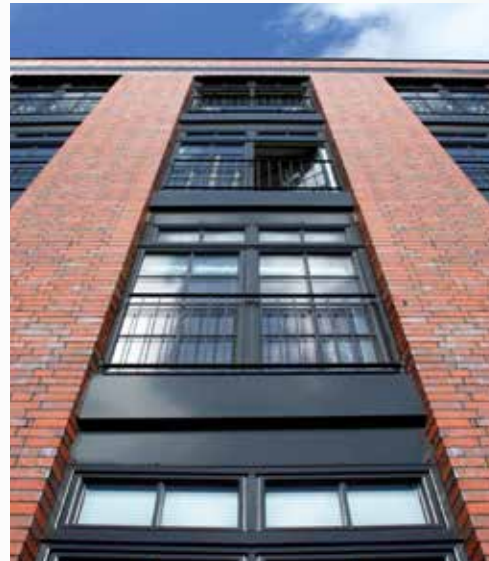
GEALAN-acrylcolor® is available in a wide range of systems and profile geometries. GEALAN-LUMAXX® from the S 9000 system featuring historical decorative profiles makes it possible to renovate heritage-protected buildings. On the other end of the product range, the all-glass GEALAN-KUBUS® system meets the design standards of modern architecture.

Windows, doors and sliding systems

GEALAN-acrylcolor® surfaces are available as standard for various profile systems in all depths: whether the cost-effective system S 8000 in a depth of 74 mm, the versatile system platform S 9000 or the premium all-glass system GEALAN-KUBUS®. The surface is available for windows, front doors and lift-and-slide doors.

Extensive accessories

In addition, various accessory solutions are available in GEALAN-acrylcolor® that enable a very wide range of window elements. This includes solutions for corner elements, couplings, shutter guide rails, connection profiles and trim. Even active ventilation systems in the window can be integrated in GEALAN-acrylcolor®.



Colour window profiles emphasise the facade design. The GEALAN-acrylcolor® colour range includes up to 9 standard colours, while 50 special colours are possible on request. In selecting colour pigments, strict attention is paid to ensure that they ideally harmonise with the material properties of PMMA and absorb as little UV radiation as possible. Even the darkest of colours are heating-optimised. This means that the heat input into the profile resulting due to exposure to sunlight is kept as low as possible. Maximum weather resistance and colourfastness ensure the colours remain stable over the long term. This is tested in our in-house labs as well as by external partners and is RAL-certified.

GEALAN-acrylcolor® means colour variety and the highest quality

- + Wide range of trend colours down to typical regional colour nuances
- + Pigment mixtures developed in-house for use with PMMA
- + Close collaboration with renowned European suppliers
- + Heating-optimised, weather-resistant and colourfast

The image features three overlapping rectangular panels. The top panel is a dark green color, the middle panel is a dark blue color, and the bottom panel is a light brown or tan color. The panels are arranged in a staggered, overlapping fashion, creating a sense of depth. The text 'FASCINATING COLOUR RANGE' is centered on the light brown panel.

FASCINATING
COLOUR RANGE



RADIANT METALLIC FIREWORKS

GEALAN-acrylcolor® in
metallic shades makes real
differentiation possible

- + Extraordinary appearance thanks to embedded metallic pigments
- + PVC windows in an aluminium look for design without compromise
- + Trend colours DB 703 and silver in the standard colour range
- + New in the range: Pearl beige, similar to RAL 1035, with metallic effect



The acrylic layer enables metallic pigments to be embedded in addition to colour. GEALAN is the only system provider with PMMA-finished surfaces in metallic colours in its range. These are particularly demanding in production – when running in new GEALAN-acrylcolor® tools, the colour silver is used to test and ensure an optimal, uniform application of colour.



Silver / similar to RAL 9007

Signal grey
(similar to RAL 7004)



RealWood
Ginger Oak

White aluminium
(similar to
RAL 9006)

COSY COLOUR HARMONIES

Coloured windows not only define the building envelope from the outside. Windows also play a leading part inside the building. They provide light and set the atmosphere in the rooms. GEALAN-acrylcolor® profiles can be complemented with decorative foils indoors, transforming them into design elements. High-quality RealWood foils come very close to real timber both visually and haptically. Matt foils follow the latest trends. The result is a harmonious interplay of inside and outside.





The right combination of GEALAN-acrylcolor® surfaces on the outer and decorative foils on the inner frame results in windows that complement and highlight the building's architecture and interior design – a way to transform design visions into a reality in a trendy, yet timeless manner.



*RAL 9005 /
jet black*

*RealWood
RAL 7016
anthracite grey*



*RAL 7016 /
anthracite grey*



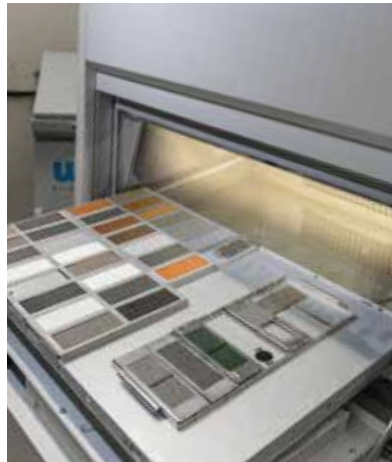
*RealWood
RAL 9010 pure white*

*RAL 9016 /
traffic white*

*Pure white
(similar to
RAL 9010)*



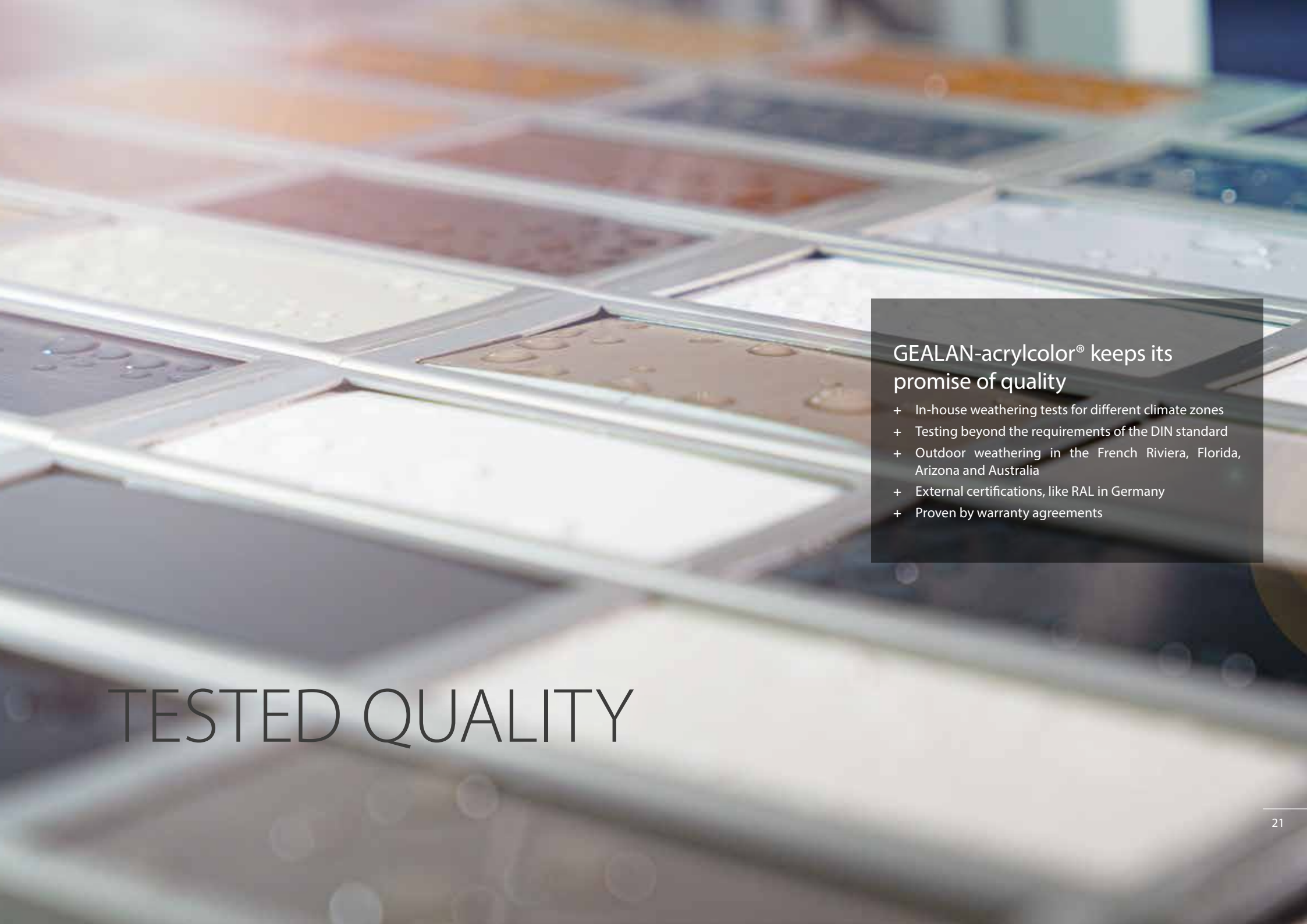
*Pearl beige
(similar to RAL 1035)*



GEALAN-acrylcolor® promises more than just high quality over decades of use. This is ensured by strict internal quality controls. GEALAN-acrylcolor® profiles are artificially weathered in an in-house laboratory and exposed to many years of sunlight in xenon tests. This accounts for ever more extreme weather conditions in Europe. The quality of the profiles is also monitored externally and has held various quality certifications, such as the RAL certification for Germany, for decades.



Kunststofffenster
RAL GÜTEZEICHEN
+ Montage

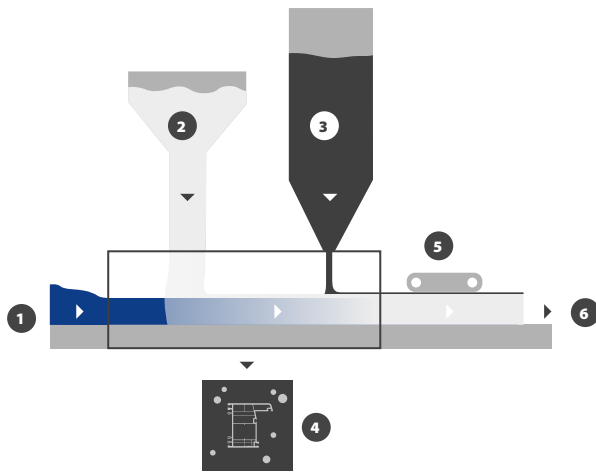


GEALAN-acrylcolor® keeps its
promise of quality

- + In-house weathering tests for different climate zones
- + Testing beyond the requirements of the DIN standard
- + Outdoor weathering in the French Riviera, Florida, Arizona and Australia
- + External certifications, like RAL in Germany
- + Proven by warranty agreements

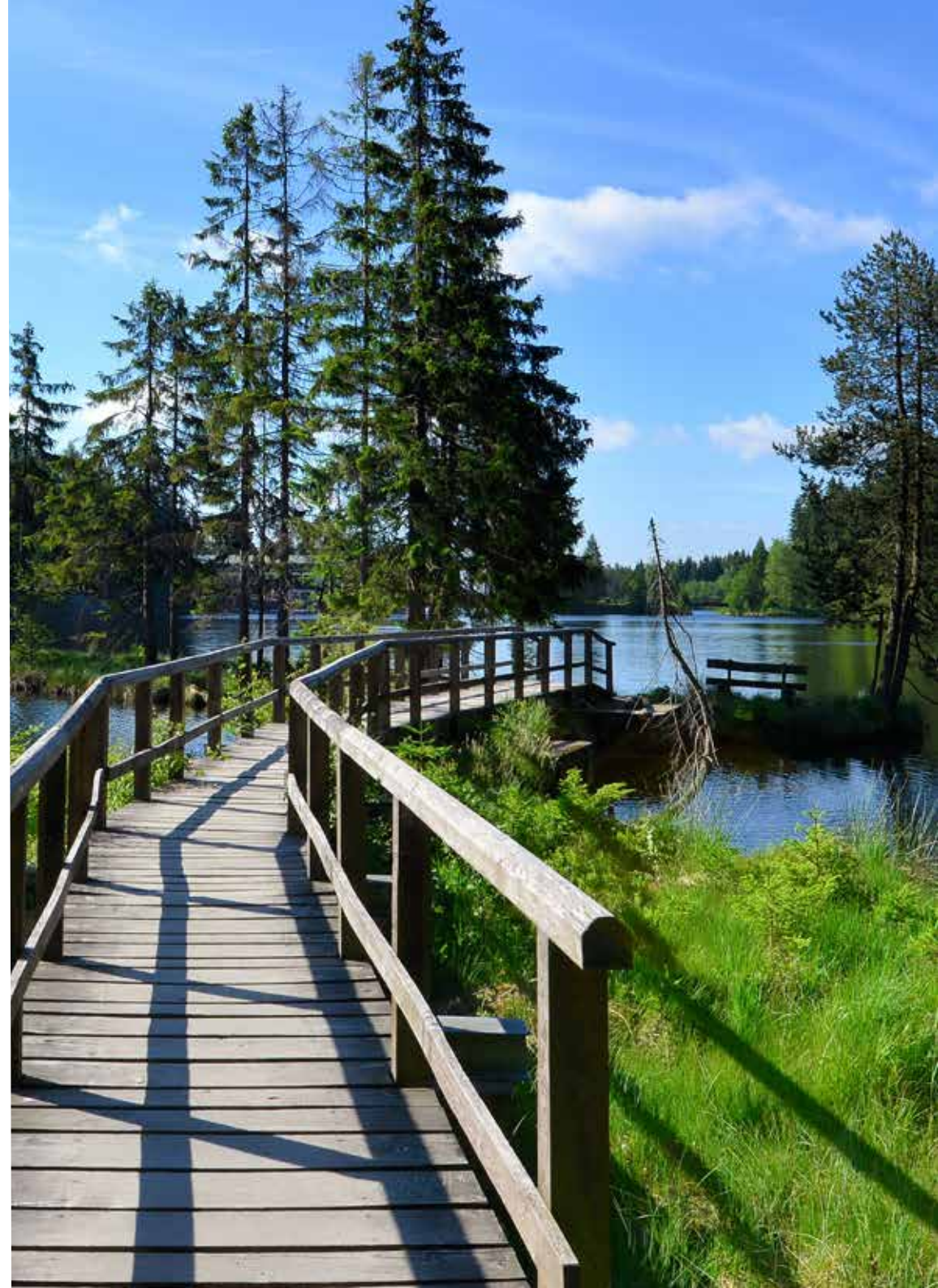
TESTED QUALITY

GEALAN PVC profiles already consist of recycled material to a large extent. Even profiles with the high-quality GEALAN-acrylcolor® surface can be produced in part with recycled materials – thanks to the further development of co-extrusion to tri-extrusion, where three materials can be extruded at the same time. For a convincing environmental record, resource conservation and CO₂ savings.



Tri-extrusion

1. The liquid reclaim mass is fed in via the main extruder.
2. The liquid PVC mass is fed in via a coextruder.
3. The coloured, melted acrylic mass for the external visible areas is added via another coextruder.
4. In the tool nozzle, an inseparable bond is formed between the three liquid components.
5. To achieve a uniform structure, the surface is polished
6. The finished GEALAN-acrylcolor® profile

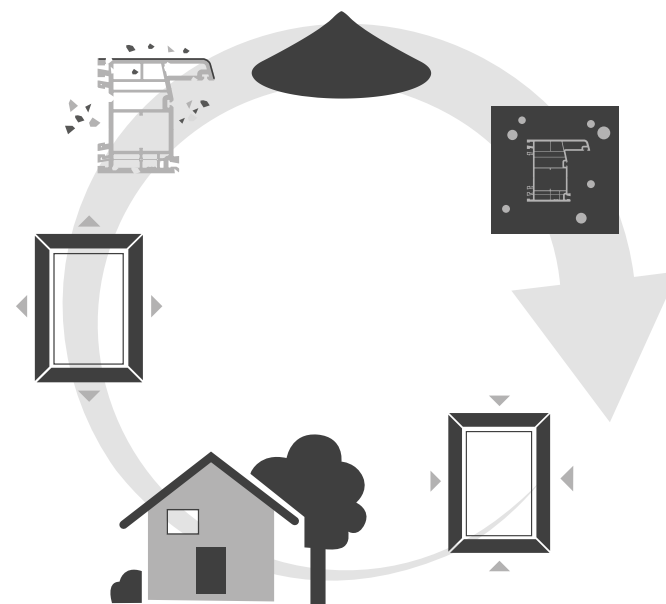


Produced responsibly

For over 25 years, GEALAN has demonstrated that it manufactures with a responsible eye towards nature and the environment. In 1996, GEALAN was the first PVC processing company in Europe to introduce an environmental management system, which is continuously validated in accordance with the European Eco-Audit Ordinance. One of the latest milestones is the 100% migration of German locations to electricity from renewable energy sources.

PVC windows stand for a closed recycling cycle. All waste resulting during the production of GEALAN PVC profiles is recycled 100% and reused in production. During their product lifecycle, PVC windows consider ecological effects: They are certified to be long-lasting and low-maintenance. They save energy thanks to their good thermal insulation properties. At the end of their lifecycle, the old windows are 100% recyclable. Windows with GEALAN-acrylcolor® profiles can also be fully recycled. The resulting recycled material is returned to the closed circular window economy – to produce new, high thermal insulation window profiles.

SYSTEMATICALLY
SUSTAINABLE



... That's why GEALAN-acrylcolor®

www.gealan.co.uk