



Education and training

Planning guide and product range

Focus brochure

Facade



Interiors



Acoustics



Floor coating



Cover photo reference:

Education centre Frastanz, Hofen, DE,

Architect: Pedevilla Architects, Bruneck, IT

Contractor: Farben Kobold GmbH, Frastanz, IT

Sto expertise: StoTherm Classic, StoColor Dryonic S, StoDeco Profile

Photo: Gustav Willeit, Bruneck, IT

It should be noted that the details, illustrations, general technical information, and drawings contained in this brochure are only general proposals and details which describe the functions. They are not dimensionally accurate. The applicator/customer is independently responsible for determining the suitability and completeness for the construction project in question. Neighbouring works are described only schematically. All specifications and information must be adjusted or agreed in the light of local conditions and do not constitute work, detail or installation plans. The technical specifications and product information in the Technical Data Sheets and in system descriptions/approvals must be observed.

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Education is an investment in the future. People spend the most formative years of their lives in nursery schools, schools, and universities. Education and training require environments that meet the needs of young people in an aesthetic and functional sense. These special places must be built with foresight and responsibility.

University Library, Graz, AT

Architect: Atelier Thomas Pucher, Graz, AT
Sto expertise: StoVentec R, StoMiral MP, StoVentec Glass,
StoSilent Distance, StoSilent Top, StoPox BB OS
Photo: Christian Schellander, artboxx, Schiefeling, AT



100 Jahre 1918-2018
100 Jahre 1918-2018
100 Jahre 1918-2018

Functional, eco-friendly, cost-effective

Alongside eco-friendly aspects, the everyday suitability of facades and rooms plays an important role when building educational institutions. Sto understands the vast range of requirements.

There are many factors that determine whether education is provided in a successful way. The built environment plays a particularly important role. A healthy, low-emission environment is just as important as the durability of facades and rooms. The facilities must meet a vast range of requirements in terms of their functionality.

This is why Sto products are particularly suitable as they are highly durable. They also offer unlimited design freedom. Learning is made easier when the atmosphere is friendly, positive, and free from disruptions.

Facades from Sto give the ideal first impression as the calling card of an educational institution. At the heart of the product range for schools are custom interior products. StoSilent acoustic solutions in particular reduce noise in accordance with legal requirements and support concentration. StoCretec floor coatings are an ideal addition to the range.

This brochure provides an overview of the Sto product range while offering inspiration for planners with its images.

Image on right:
**Uni/PH Building,
Lucerne, CH**
Building owner:
Canton of Lucerne, CH
Architect: Enzmann +
Fischer AG, Zurich, CH
Contractor: ARGE
Cirelli AG, Ebikon, CH
Sto expertise:
StoVentec R, Stolit®
Milano
Photo: Fotogalerie Uni PHZ,
Lucerne, CH





Responsible service

Planning day-care centres, schools, and universities means implementing the applicable laws while ensuring the functionality, cost effectiveness, ecology, and aesthetic appeal are ideal for the premises.

Time is money – there is no doubt about that. But when building educational institutions, from nursery schools to universities, there is an additional rule: space is money. Property construction and usage are therefore subject to strict legal requirements that must be integrated into every project right from the outset. There are a wide range of international standards in place governing the calculation, classification, and presentation of costs in building and underground construction. These cover all phases of the project, from construction to usage of the building.

Expert support during the planning stage is essential to ensuring that all of the parameters are kept in focus. Technical skills and a strong customer focus are not only built into the product range at Sto but are also crucial to the construction phase: Our experts make sure that the right information gets to where it needs to be via the fastest route throughout the construction project, whether that's when planning, making calculations, creating costing records, or applying products on site. That's what you call responsible service – from the very start of work.

Image on right:
University of Graz, AT
Architect: Scherzer und Valent Architekten, Graz, AT
Sto expertise: StoVentec R, StoLotusan®
Photo: Christian Schellander, artboxx, Schiefeling, AT



Primary school, Krk, HR
Architect: Randić-Turato project group, Rijeka, HR
Sto expertise: StoSilco®, Sto-Primer
Photo: Randić-Turato project group, Rijeka, HR



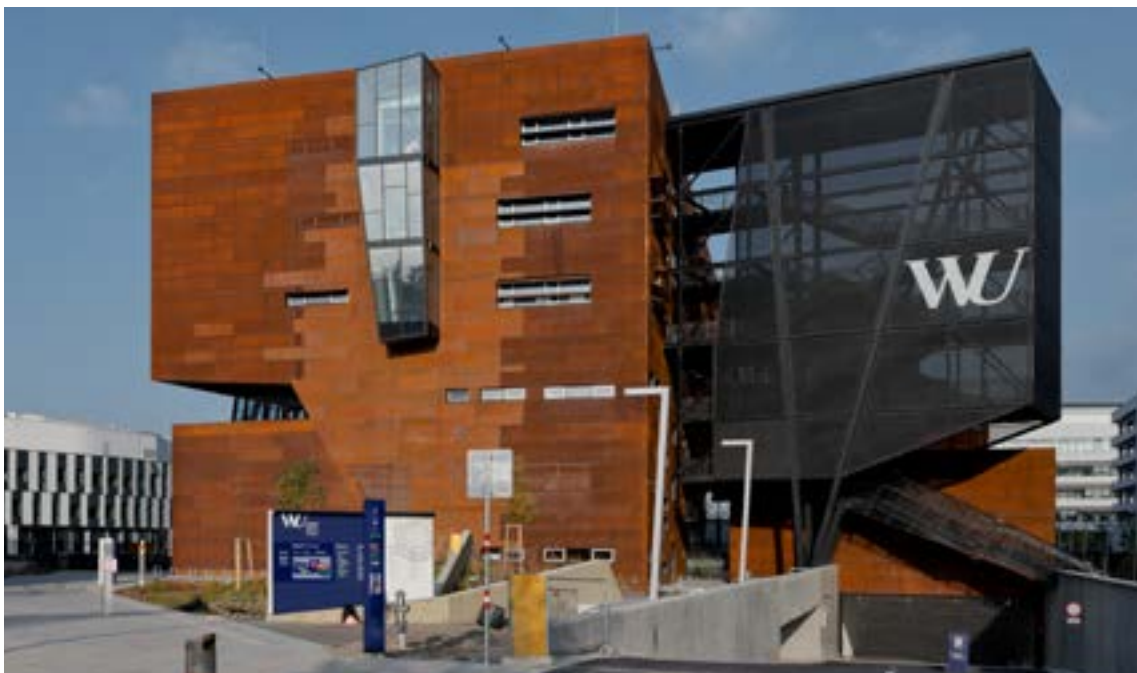
Exciting space allocation plans for educational institutions

Education needs space, from beautifully designed facades to carefully devised interiors. Sto excels in both areas and is a technology leader for both facade insulation systems and innovative interior products.

Education is as diverse as the people it serves. The kaleidoscopic possibilities are reflected in the range of surfaces in the Sto innovations. Powerful facades represent the future opportunities offered to young people in the form of education and training. But in the interior too, there should be a focus on the character and vibrancy of the space, as well as on functionality and natural ambience: The Sto interior range offers a wide range of surface solutions specially designed for nursery schools, schools, and universities.

Sto's expertise really comes into its own in both areas – the facade and interior – when working on major projects, such as the Vienna University of Economics and Business. In this project, the entire campus was planned, designed, and implemented with Sto solutions, both internally and externally. The advantage is that everything comes from a single source. All the components interact seamlessly, creating a balanced, well-functioning whole with a strong aesthetic appeal.

Image on left:
Campus of the Vienna University of Economics and Business, AT
Sto product solutions were used in many buildings.
Left and right:
Building by Atelier Hitoshi Abe and Pierre De Angelis, Los Angeles, USA.
Centre: Building D3/AD, designed by CRAB Studio, London, GB.





Vienna University of Economics and Business: The future of studying

About Hitoshi Abe, Piere de Angelis & Peter Cook

The campus of the Vienna University of Economics and Business was opened following a construction period of nearly 4 years. As the largest new-build university in Europe, it is the responsibility of an illustrious group of international architecture firms. This large-scale project is defined by its use of state-of-the-art technology and sustainable energy strategies. For two buildings, Sto contributed the seamless acoustic solution and the high-tech facade.

8000m² high-tech facade with futuristic aesthetics

The newly designed campus of the Vienna University of Economics and Business is a “city within a city”. The six building complexes span a diverse range of architectural styles – each building looks different, but they all stand in

perfect harmony. One of these buildings is “D3/AD, Departments und Administration,” which resembles an organically grown structure that winds through courtyards, niches, and terraces. British architect Peter Cook from CRAB Studio is responsible for the design. On the ground floor, the building looks rather drawn back, but on the top floors it opens up in an airy design. Meanwhile, the facade strips provide a colour gradient from orange to beige. The modern facade technology from Sto shows what really matters: 8000 square metres of high-tech facade brings bold colours to the building exterior.

Inspired by mille-feuille

The southern “D2/SC” building is home to four more departments as well as a sports centre, the offices of the Austrian Students’ Association, and the Student Center. It borders the “Prater” public park and comprises two slim, oblong structures.

The design by Japanese architect Hitoshi Abe was inspired by the French dessert mille-feuille (“thousand sheets”), which is made from layers of wafer-thin puff pastry. Applied to the building, this is intended to represent permeability and proximity. There are no spaces between the building parts. “This is a place for people to meet, not just to pass by one another,” explains the architect.

For this building part, Sto acted as a technical consultant while also being responsible for the seamless acoustic solution in the interior. A total of 6500 square metres of wall and ceiling are designed with the acoustic solution StoSilent Distance. The sound-absorbing textured coating StoSilent Decor M was used as a high-quality finish. This can also be used with very intense colour shades.



Design freedom for the facade

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First impressions count! The facade is the face of a building, it is an ambassador between the interior and the exterior, and representative of the institution. Educational institutions from nursery schools to universities represent the future of our society. Sto turns their facades into a real statement, championing modernity and a focus on the future.



Welcome to school: Focus on the entrance area

Every stage of life begins with a single step – often crossing the threshold of an educational institution, be it a nursery school, school, or university. The entrance area is where people form their first impressions.

Visitors are welcomed into a building in the entrance area – in educational institutions, this will happen day after day over many years. Designing the entrance, the functional zones, and the proper demarcation of the transition between public or semi-public areas and the school itself requires expertise and intuition. Sto has decades of experience in environmental psychology and provides valuable planning support.

The design of the surfaces in entrance areas is not just a matter of aesthetic appeal. Experience shows

that entrances tend to be subject to very heavy demands – particularly when energetic children are involved. Carefully positioned coverings make entrance areas – such as those in schools or nursery schools – particularly durable and easy to clean, without compromising on aesthetic appeal. Sto offers a host of systems for this purpose – with plaster, ceramics, natural stone, or glass.

Image on right and bottom right:
Private Secondary School, Athens, GR
Architect: Golden Ratio SA, Athens, GR
Applicator: Spiros Pangiotou, Athens, GR
Sto expertise: StoTherm Vario, Stolit® K, StoCleyer W
Photo: Demi Karatzaferi, Athens, GR



Jules Ferry Elementary School, Gujan-Mestras, FR
Architect: WIA Architectes, Eric Wirth, Latresne, F
Sto expertise: StoTherm System, StoLotusan®
Photo: Manuel Panaget, Le-Mesnil-le-Roi, FR



Entrance design: A school is always evolving

The challenge of educational areas

For older generations, school was often a place of tough experiences that are difficult to imagine today. Education was defined by front-of-class teaching, in contrast to the advanced teaching and learning systems of today. Modular room concepts are adapted to organisational needs, which undergo continuous development and evolution. Design methods are defined by building regulations, but it is the didactic criteria of educational practice that are setting new parameters for the implementation of school buildings.

Diverse functions

Schools can be defined as communication bridges and connecting elements with the surrounding urban structure. This creates valuable space for dialogue between generations and cultures, and administration and citizens.

Planning objective for entrances

The entrance to an educational institution is an exterior and interior communal space intended to pique the interest of users and promote the socialisation of trainees.

Scope for design of surfaces

In busy entrance areas, the colour scheme and texture play an important role. Hard facade coverings such as natural stone, brick, and glass offer benefits due to their durability and material properties. Exciting contrasts can be created in combination with plaster, wood, and metal. The entrance area is developed as a creative production. It functions not just as an eye-catching design, but also as a welcoming ambassador, a calling card, and a magnet for visitors.

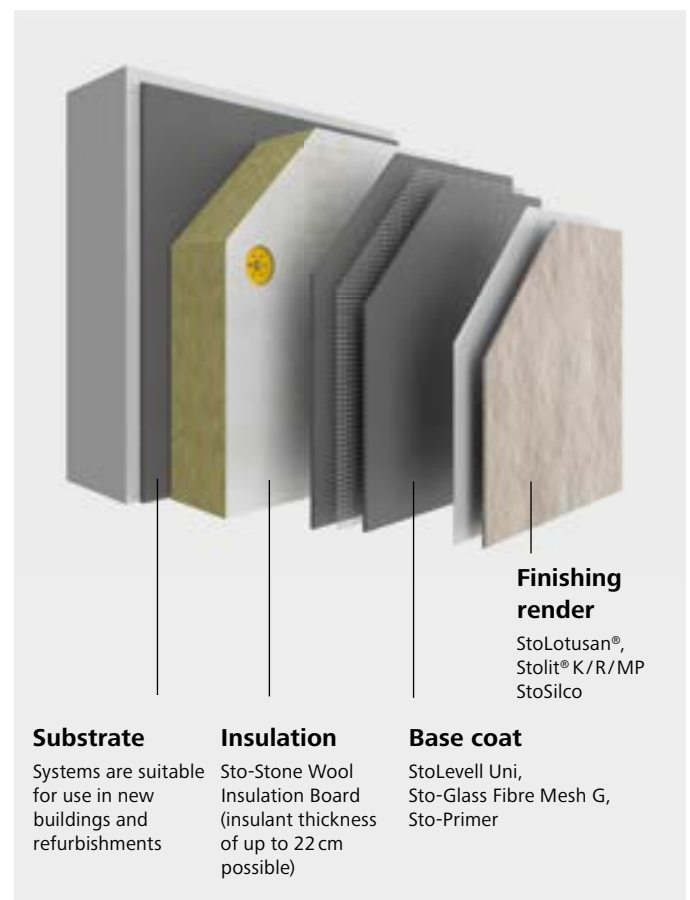
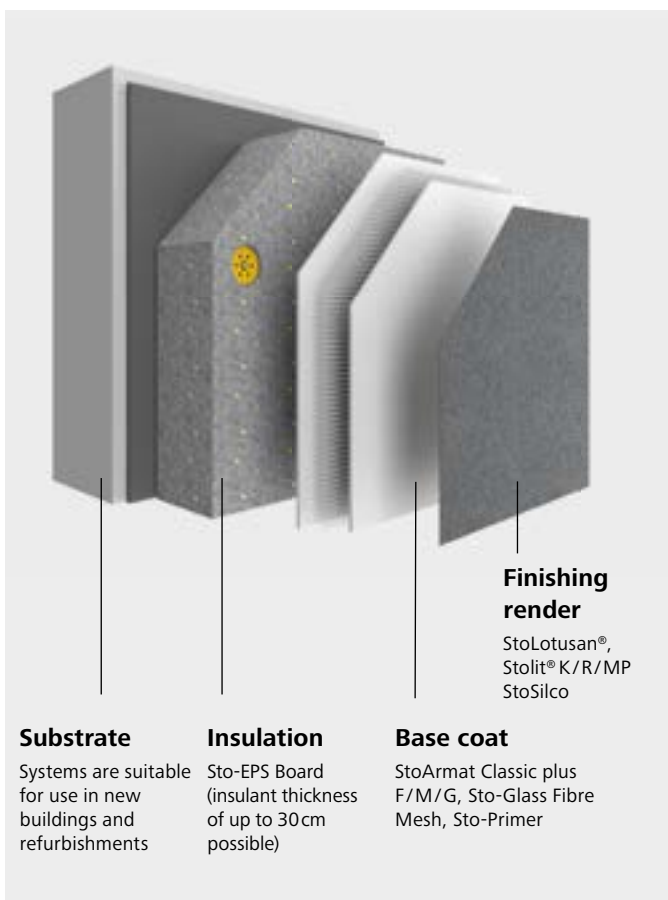
Product recommendation: StoCleyer W





StoTherm systems: Safe and efficient

Image on right:
FIS, international school, Erlangen, DE
Architect: Dittrich
Jakobs Brennauer djb,
Erlangen, DE
Sto expertise:
StoTherm Classic,
Stolit® K, StoColor
Maxicryl
Photo: Duckek, Ulm, DE



StoTherm Classic®

Among the many strengths of StoTherm Classic® are its maximum shock and impact resistance – ten times higher than mineral systems – its optimum insulation properties, and a huge range of design possibilities. Almost 100 million square metres of reference surface and by far the lowest complaint rate on the market prove its technical superiority. In addition, numerous finishes and textured renders that can be modelled fulfil every need in terms of facade design.

StoTherm Mineral

StoTherm Mineral is the ideal choice for public buildings. The system fulfils all requirements for fire protection and consists of purely mineral components, from the insulation to the finishing coat. Alongside mineral finishing renders and facade paints with high resistance to algae and fungi, surface claddings made of ceramics, natural stone, or brick slips are also available for the StoTherm Mineral system.



Hail-resistant facade insulation for schools

StoTherm Classic® passes Fibag® test

A StoTherm system is the first, and to date, only external wall insulation system to undergo the simultaneous test. The test facility at the Research Centre for Integral Construction Engineering (FIBAG) in Graz simulates a simultaneous load from rain showers, mass hail, and storms right up to hurricane force. The result of the tests following subsequent testing of the surface: no cracks, no damage, no complaints.

Cement-free base coat for resistance to hail and ball games

We have subjected StoTherm Classic® to an extra test: our facade structure had to withstand a total of 66 shots from handballs and hockey balls at a speed of up to 85 km/h.

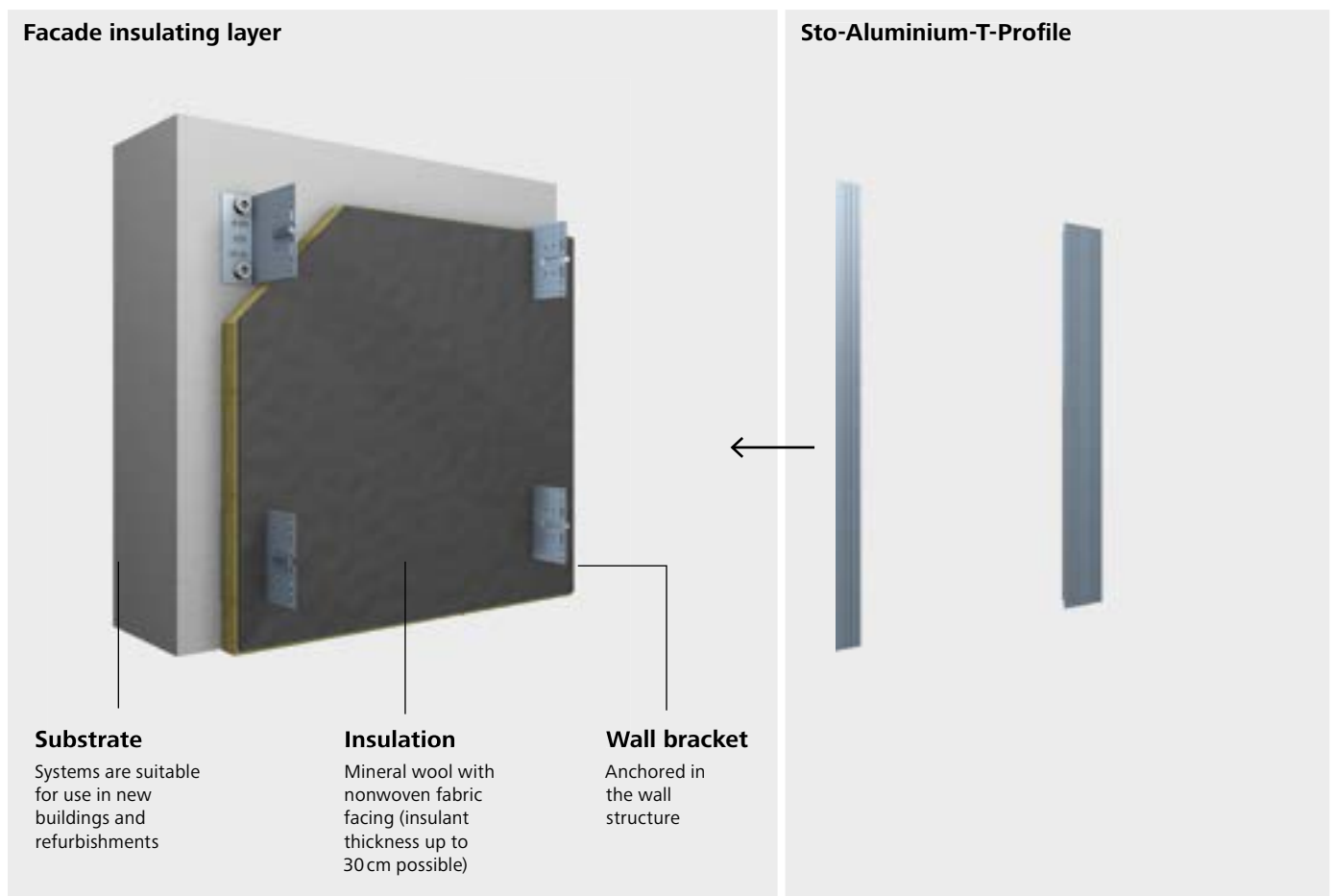
Case study: International school in Erlangen, DE

StoSignature allows you to decorate facade surfaces with unique textures: from fine to rough, linear or graphic. Choose from five texture families and additional effect aggregates or from ready-made combinations with a metal, timber, and concrete look.

The StoSignature texture Rough 1 + Effect Granulate 30 was chosen for the facade of the Franconian International School in Erlangen. The striking facade catches the eye with its subtle texture: granulate is blown into the wet render using the stencil technique to create an international ribbon of abstract flags, turning the building envelope from an enclosure into a kind of information carrier.



StoVentec: Optimum solutions thanks to RSC technology





Design freedom thanks to a recycled product

Sto-Render Carrier Board made of expanded glass granulate

Glass is made exclusively from natural and sustainable raw materials: sand, soda, and lime. The initial material for the StoVentec Carrier Board is at least 88 per cent recycled glass by volume, which is manufactured into expanded glass granulate.

As well as being ecologically neutral and posing no risk to health, this material has outstanding technical properties. For example, the carrier board made from expanded glass granulate boasts low thermal and hygric elongation properties. It is also characterised by excellent elasticity and resistance to weathering.

Mechanical stresses are no problem either. With a bulk density of approximately 500 kg/m³, the StoVentec Carrier Board is up to 70 per cent lighter than comparable products on the market. This makes installation easier, minimises application errors, and saves time.

Case study: Anton Bruckner Private University, Linz, AT

The pleated white facade flows around the Anton Bruckner Private University like delicate crepe paper. Although it may look light and effortless, it represented a major challenge for the Sto facade team. "With rounded corners, angled surfaces, and a large number of penetrations, it was a significant challenge," says Sto project manager Reinhard Magauer, reporting on the construction project. "Our technicians had to make slots in the StoVentec Carrier Boards and mount them in individual segments. They installed an additional waterproofing sheet so that the RSC system can achieve its full effect."

A total of 2500 square metres have been lined with StoVentec R, a passivhaus-certified and highly crack-proof system that is free from thermal bridges. It easily adapts to unusual and angled shapes thanks to the back ventilation.





Functional facade paints by Sto

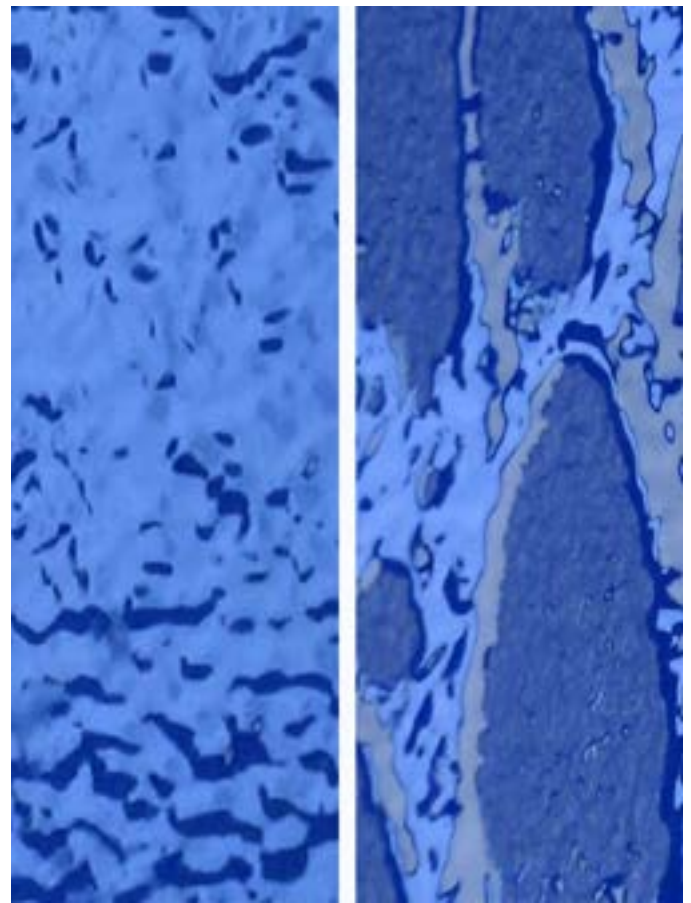
Image on right:
Student residence, Münster, DE
Design: Kresings GmbH, Münster, DE
Application: Klaus Fischbach GmbH, Gelsenkirchen, DE
Sto expertise: StoTherm Classic
Photo: Guido Erbring, Cologne, DE



StoColor Lotusan®

In addition to excellent building physical properties, Lotusan facade paints and external renders also incorporate the unique Lotus-Effect®. The Lotus-Effect® ensures that beautiful facades remain beautiful for longer. It enhances the self-cleaning effect: dirt runs off with the rain. The facade stays clean and dry for longer.

What sounds like state-of-the-art technology is in fact modelled on nature, as this effect was first discovered on the leaves of the lotus plant. Sto has simply transferred the natural self-cleaning effect of the lotus plant into modern facade coatings.



StoColor Dryonic®

We have a fog-basking beetle to thank for the fact that facades can dry at lightning speed in any weather. It extracts the water for life from early morning fog using its shell. Inspired by its texture, Sto has developed the new facade paint with Dryonic Technology.

Whether it's external render, concrete, brick, metal facades, plastic, or facade cladding: StoColor Dryonic® can be used on all conventional substrates. The paint can be applied using a paint brush, roller, or airless spray. This even allows gutters, pipes, panels, or garage doors to be protected against microorganisms.





Inspiration for interiors

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- 36 Library, media centre, and central facilities

The surfaces in the interior of schools and educational institutions are subject to significant wear and must therefore be extra-durable without being harmful to health. Room acoustics are another major challenge: the acoustic quality of the spoken word plays a more important role in school and universities than virtually anywhere else. Sto offers a wide range of aesthetically appealing and functionally high-quality ceiling solutions with acoustic optimisation.





Classroom, lecture theatre, and students' room

In classrooms, the most important element is one that is not obvious at first glance: a healthy atmosphere that is low in pollutants has a positive impact on concentration. And good acoustics help, too.

This is why products and systems from Sto meet particularly high standards and create an atmosphere that makes learning easier and ensures people can pay attention over longer periods.

Classrooms are small areas of educational institutions with an intense level of communication. Speech intelligibility must be guaranteed throughout the space. The air exchange cycles are usually extremely short, so measures for keeping the room air free of pollutants must be considered.

In addition, classrooms are subject to heavy use and various types of mechanical stress (e.g. scraping, impact, rolling). Surfaces must therefore be robust and resistant to cleaning agents.

Image on right:
Post Sportverein e.V.
Augsburg, DE
Architect: Kögl
Architekten,
Neusäß-Steppach, DE
Sto expertise: StoSilent
Modular
Photo: Martin Baitinger,
Böblingen, DE

Achieving optimum room acoustics – quickly and easily

Room acoustics comfort factor

We do not perceive spaces with our eyes alone. A room's sound also has a significant impact on whether it is perceived as pleasant and inviting by its occupants. But what can be used to positively influence the sound in an existing room, all while maintaining a pleasing aesthetic?

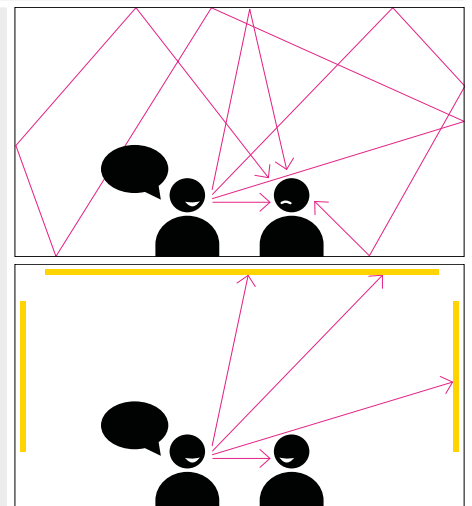
What makes acoustics worse?

Sound reflections in a room occur as a result of sound-reflecting surfaces on ceilings and walls. The reflected sound causes unpleasant reverberation, which in turn has a negative impact on the room acoustics. This lowers productivity, satisfaction, and well-being – important motivating factors when it comes to learning. The noise level can sometimes be very high, especially in lecture halls containing a large number of people.

What makes acoustics better?

Ceiling and wall elements absorb a large proportion of the disruptive reflections. The reverberation time is reduced and the room acoustics are significantly improved. Which acoustic systems are used here will depend on the architecture of the room. We distinguish between suspended and directly mounted systems, with the latter having either a full-surface or a modular design. Sound-absorbing elements usually have rough surfaces, which are not always resistant to touch (recommended installation height of over 2.0 metres).

Modular systems provide design freedom with a high degree of aesthetic appeal, while directly mounted or suspended systems keep the room clear and simple. Particularly in schools and nursery schools, the materials and systems used have to meet high requirements in terms of comfort, durability, aesthetic appeal, and sustainability.



Sound and its impact. Speech acoustics in particular must be optimised for a learning setting.



StoSilent Modular for better acoustics

StoSilent Modular is a programme of acoustic systems for quick and simple acoustic optimisation. It comprises variable modules specially suited to rooms in which suspended or directly mounted systems are not possible, or where the acoustics need to be optimised when the room is already in use. Thanks to the special properties of the materials used in the acoustic systems – namely PET fibres, expanded glass granulate, or polyester fibres – sound is absorbed, reverberation times are regulated, and extraneous noise is kept to a minimum.

The StoSilent Modular ceiling and wall elements can be installed quickly and easily without rendering rooms out of action for long periods of time. StoSilent Modular delivers design freedom with maximum aesthetic appeal: the various module designs – rectangular, curved, free shapes – can be used to set accents, by means of different forms and colour shades, that are both interesting and tasteful.

Good acoustics in seminar rooms

Like school classrooms, seminar rooms are arranged for conventional lecture-style teaching. The room-acoustic requirements are therefore the same:

- Very good speech intelligibility
- Relatively short reverberation time
- Low background noise
- No disruptive flutter echoes

Depending on the size, shape, and – in particular – occupancy of the rooms, absorbers may need to be installed and combined with reflectors in the right positions.

Assembly room, hall, and auditorium

When planning and implementing larger rooms, there is one central objective: the user groups must accept the facilities and implement the functional concept intuitively.

Larger rooms are operated in conjunction with classrooms or lecture halls. However, they have many additional roles, such as representing an educational institution or giving larger groups the opportunity to hold conferences. They are usually linked to the entrance area of the building as the last element in the first impression – like a visual calling card.

The division of the room into zones is not immediately obvious, which is why guidance systems and semi-open discretion zones are needed.

Surfaces that reflect sound, such as concrete, tiles, or glass, require countermeasures in the latter room sequences. In addition, the particularly high frequency of visitors demands durability and increased cleaning.



**Primary school hall,
Krak, HR**
Architect:
Randić-Turato project
group, Rijeka, HR
Sto expertise:
Sto-Primer, StoSilco K
1.5, StoLevell Beta
Photo: Randić-Turato project
group, Rijeka, HR



StoColor Opticryl – all you need for the perfect wall

The difference between matt and gloss

The following basic rule applies when using intense colour shades: the glossier the paint, the more hard-wearing and cleanable the surface.

Matt paints that are exposed to significant mechanical stress often develop spots that look greasy and transform into shiny, mirror-like areas. This is referred to as pigment breakdown. With matt paints, exposed pigments and extenders are pressed down on, resulting in changes to the colour shade and gloss level.

Silk gloss and gloss interior paints are better at binding pigments and extenders. They form a binding agent layer that protects against mechanical stress.

Hard-wearing paint – perfect suitability

The acrylic emulsion paints from the StoColor Opticryl family with wet-scrub resistance class 1 are easy to clean and resistant to many surface disinfectants. Thanks to their high resistance and durability, they can withstand high levels of mechanical stress without any issues. Not only that, but they are also ideal for textured surfaces, nonwovens, and glass-fibre wall coverings.

We offer four gloss variations to suit all kinds of design requirements: StoColor Opticryl Gloss, StoColor Opticryl Satin, StoColor Opticryl Satinmatt, and StoColor Opticryl Matt – with each available in a huge colour shade variety.

The advantages are clear: the interior paint is very hard-wearing and durable; texture-retaining; very easy to clean and resistant to most surface disinfectants; has excellent flow properties; and good hiding power.



Break area, dining hall, and kitchens

In addition to eating, the focus of dining halls in educational institutions is on relaxation and communication. This means there is a clear need for a concept that promotes communication.

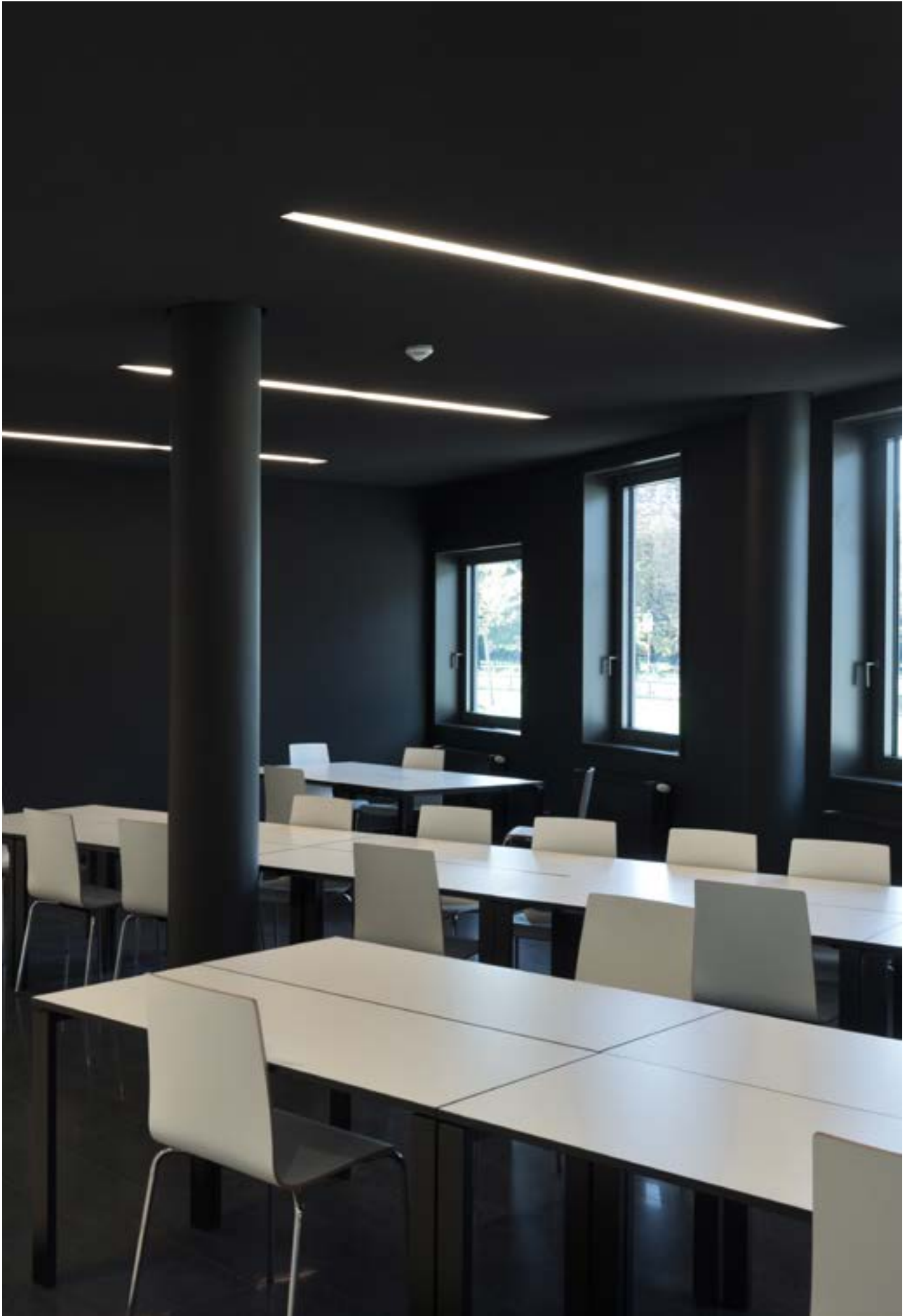
The design must be warm and inviting so that users stay for longer and communicate with one another.

High levels of odours and noise pollution must be prevented by using appropriate surfaces and concealed mains utilities. This is often supported by choosing a theme that matches the Corporate Design of the educational institution. Island zones create a comfortable atmosphere in which visitors feel completely at home. As in other halls, larger dining halls tend to be designed with discretion zones to create places of retreat with completely different textures to the classrooms.

Images:
Wirtschafts-
universität Wien,
Wien, AT
Architect: Atelier
Hitoshi Abe, Los
Angeles, USA
Sto expertise: StoSilent
systems



Break areas in universities.
Atelier Hitoshi Abe from Los Angeles made use of a minimal colour scheme but established clear zones for different purposes. The acoustic functional ceiling prevents excessive noise pollution.



Circulation and access areas

School corridors are subject to extensive legal regulations that demand a great deal of expertise. Sto has developed appropriate products to ensure that the design and economic aspects are compliant.

Images on the right:
Comprehensive school, Teltow, DE
Architect: NAK
Architekten GmbH,
Berlin, DE
Sto expertise: StoFloor
Comfort Elastic BB 100
Photo: Angela Elbing, DE

In addition, there are increased fire protection requirements relating to the use of non-combustible materials. On the other hand, there is a focus on the economics of application, as it must be quick and easy to repair small areas of damage. There are also standards that must be met with regard to sound absorption, particularly impact sound.

Choose the right path with StoPur BB 100

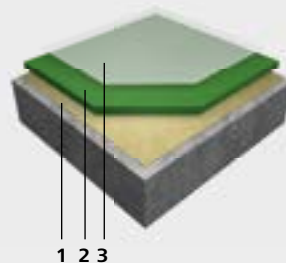
The high-performance alternative to linoleum

Flooring has to put up with a lot in schools and universities: people walking around in heels, dropping materials, moving furniture, transporting loads, the list goes on. High-quality PVC, linoleum, or rubber floor coverings can withstand all this, but they are relatively difficult to lay. StoPur BB 100 is an alternative that performs just as well and is just as cost-effective, but which has other particular benefits besides.

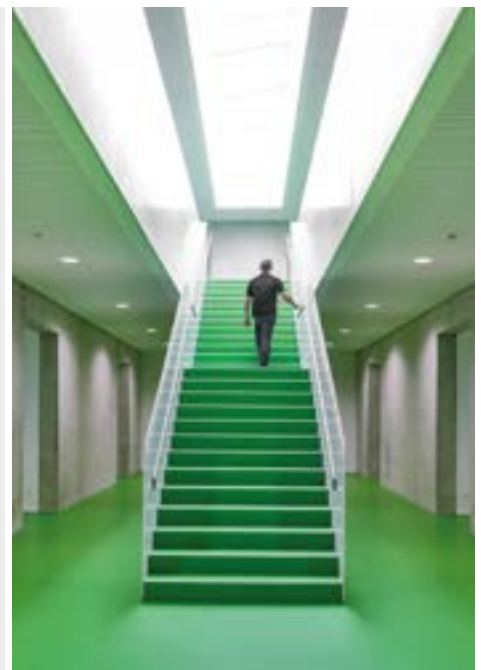
Reduces footfall sounds

StoPur BB 100 is a solvent-free, elastic polyurethane resin coating for floors subject to high mechanical stress, such as those found in hospitals. Its viscoplastic property ensures high resistance to shocks and impacts, good damping of footfall sounds, and is noticeably pleasant to walk on. The system build-up has been tested by the Committee for Health-related Evaluation of Building Products, which verified that noise was reduced by 12 dB.

System build-up



- 1 — Prime coating**
StoPox WG 100 on existing coatings
StoPox GH 205 on mineral substrates
StoPox 452 EP on mineral and bituminous substrates
- 2 — Coating**
StoPur BB 100 possibly with chippings
- 3 — Sealing coats**
StoPur WV 100 transparent (gloss)
StoPur WV 150 transparent (silk matt) or
StoPur WV 205 transparent (matt)







Sanitary facilities

Hygiene is the focus. In terms of user comfort, it is important to use materials that ensure cleanliness and a pleasant atmosphere and provide attractive support for these objectives.

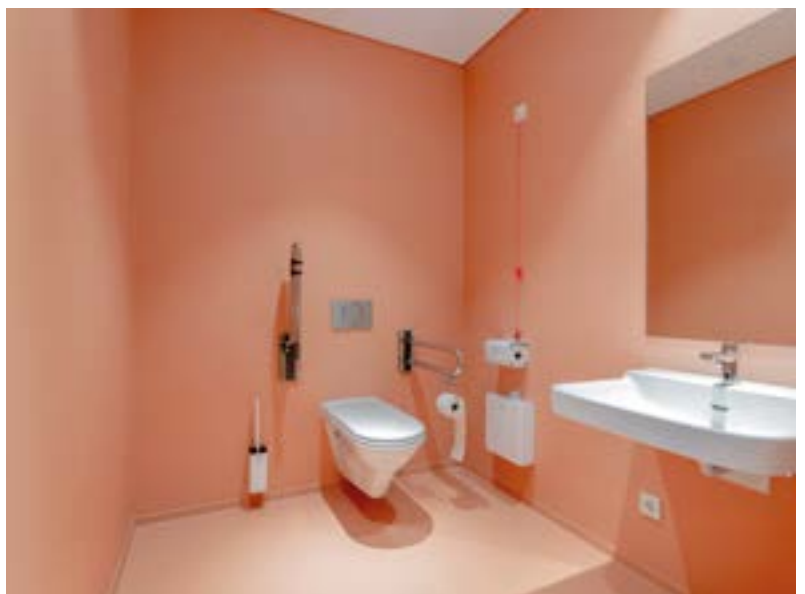
This applies in particular to public institutions that are subject to a high frequency of use and thus increased contamination.

Sanitary facilities must be equipped to ensure that severe contamination can be easily removed. However, their design must not be bland or sterile. They can be seen as small cells for a short duration of stay that can leave an intense spatial impression. Colour concepts can be drawn from a modular system as educational institutions usually have a large number of sanitary facilities.

Images on the right:
**School Buetze,
Wolfurt, AT**
Architect: Schenker
Salvi Weber ZT GmbH,
Vienna, AT
Photo: Christian Schellander,
artboxx, Schiefing, AT

StoColor Puran Satin – the highly durable lacquer paint

The highly resistant PU gloss paint is resistant to many surface disinfectants, weak acids and alkaline solutions, and mineral lubricants. This makes it a perfect choice for even the most sensitive areas and really tricky applications with maximum colour shade variety. It can even withstand the highest mechanical stresses with no problem – and all from a product with an environmentally-friendly formulation. Its emission behaviour has been tested under realistic conditions in a test chamber. Under normal application conditions, no impairments are to be expected for users.





Science class, workshop, and laboratory

Technical progress is essential to workshops and laboratories. From durability to cost-effectiveness or environmental compatibility: it must be possible to implement work procedures with maximum safety.

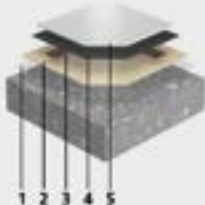
And yet they are not all that different from classrooms when it comes to standards of acoustics, room air, or mechanical and chemical resistance. There are differences when it comes to the use of electrical devices, as the floor design should be conductive.

Conductive floor coatings: The ESD zone

ESD-protected area in workshops

Electrostatic charge not only presents a risk to sensitive electronic components but in extreme cases can also cause fires and explosions. On non-metallic surfaces that cannot conduct electricity themselves, appropriate coatings must therefore be used for conducting the static charge.

System build-up

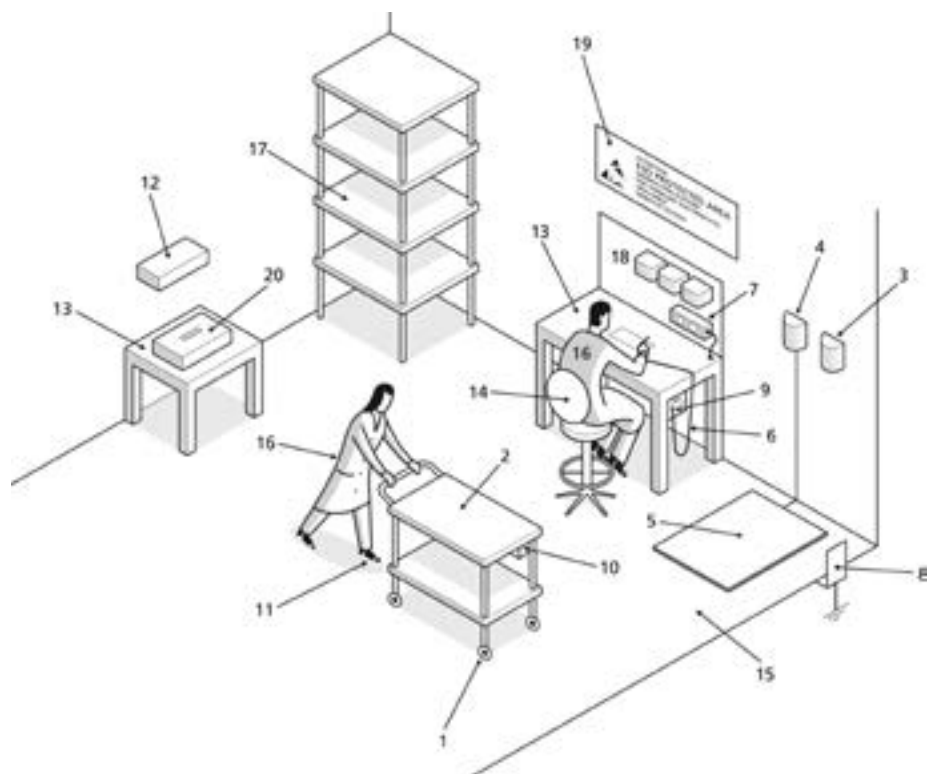


1/2 — Priming coat and Levelling coat
StoPox GH 205

3 — Conductive layer
(with conductive strip in image)
StoDivers LB 100, Pox WL 110/118

4 — Coating
StoPox KU 614

5 — Quartz sand
StoQuarz







Library, media centre, and central facilities

During planning, special attention is paid to safety, lighting, and transport as well as storage conditions. Today, the function of a library has been adapted to new technologies and media.

In addition to accessibility, sustainable construction, and the new roles of the “teaching library,” there should be areas for relaxation and communication. The considerations also include appropriate storage for valuable resources and zones for cultural events.

Image on right:
**Commerzbibliothek,
Hamburg, DE**
Architect: 360grad+
architekten GmbH,
Hamburg, DE
Sto expertise: StoSilent
Photo: Fotodesign Christoph
Gebler, Hamburg, DE

Image below:
**Public library,
Frankfurt, DE**
Architect: KSP Engel
und Zimmermann
GmbH, Frankfurt, DE
Sto expertise: StoPox
GH 205, StoPur BB
100, StoPox WG 100
Photo: Jean-Luc Valentin,
Frankfurt, DE

A floor for books

Turning a bank into a library

With 230,000 books, CDs, and magazines, plus 40 Internet terminals and 200 reading desks, the new headquarters of the Frankfurt public library offers entertainment and information for every interest over a floor space of 7000 m². Special attention was paid to the durable flooring, which can withstand the impact of a very busy public building over the long term.

The floor in a very busy public building of this type must be particularly resistant and easy to maintain. Visitors bring moisture and contamination into the building from the street, as well as road salt and grit in winter. Behind the lending desk, the heavy book trolleys put strain on the walkways and sound insulation also plays an important role. The StoPur BB 100 floor coating system is ideal for this requirement profile. The solvent-free polyurethane resin coating is pleasant to walk on while offering impact sound insulation and a high level of impact and shock resistance. The abrasion-resistant StoPur WV 100 sealing coat protects the colour quality over the long term. The level of maintenance required remains low over the entire working life: following initial treatment and a floor finish with StoDivers P 120, the floor only requires regular cleaning.



Acoustics in libraries



StoSilent Distance

The StoSilent Distance system can be installed as a suspended ceiling or wall covering with a cavity behind it, which conceals additional mains utilities in libraries. The sub-construction is made of metal profiles and the acoustic panel consists of expanded glass granulate. The advantages of this material: it is light, absorbs sound, and can be adjusted to any shape of room to form a homogeneous, seamless surface.

StoSilent Distance

The specialist for particularly large surfaces is based on a sandwich consisting of expanded glass granulate and stone wool, which is excellent at absorbing sound. Since it does not require a sub-construction, the system only minimally reduces the room height. The corresponding finish means you can even design seamless surfaces of up to 700 square metres.

Challenges and solutions for good acoustics

	Challenge	Technical background	Using	Solutions
School	Significant quality boost thanks to: <ul style="list-style-type: none"> • Increase in Speech intelligibility • Less stress and effort thanks to reduced noise • Reduced noise in the workplace for personnel • Enhanced audibility for people with impaired hearing (inclusion) 	<ul style="list-style-type: none"> • Adjusted room acoustics with absorption and sound direction • Short reverberation times for quiet rooms • Prevention of disruptive reflections and flutter echoes 	<ul style="list-style-type: none"> • Very good speech intelligibility for effective teaching and learning • Quiet rooms for high levels of concentration and attention • Particularly high requirements for learning foreign languages • Very quiet rooms and short reverberation times for teaching pupils with impaired hearing 	The products and systems must be tailored to the specific requirements of the building in question. <ul style="list-style-type: none"> • Full-surface acoustic system on the ceiling • Absorbent elements for ceilings and walls, e.g. StoSilent Modular
Nursery school	Significant quality boost thanks to: <ul style="list-style-type: none"> • Increase in Speech intelligibility • Less stress and effort thanks to reduced noise • Reduced noise in the workplace for personnel • Enhanced audibility for people with impaired hearing (inclusion) 	<ul style="list-style-type: none"> • Short reverberation time • High absorption • Low background noise 	<ul style="list-style-type: none"> • High absorption over large areas for reducing noise and regulating reverberation 	<ul style="list-style-type: none"> • Absorbent elements for ceilings and walls, e.g. StoSilent Modular



Floor coatings for traffic areas

40 Building and preserving multi-storey and underground car parks

42 Solutions for different zones

44 StoCretec recommendations

For decades, StoCretec has been a leading supplier of floor coatings for multi-storey and underground car parks as well as of systems for protecting and repairing the reinforced concrete elements in these buildings. The requirements for car park coatings are highly diverse. An ideally tailored solution has to be developed in accordance with the location, condition, and stress on the surface.



Building and preserving multi-storey and underground car parks

The process of zoning a car park comes with its own unique challenges. And they usually go hand in hand with extreme cost pressure during the building phase.

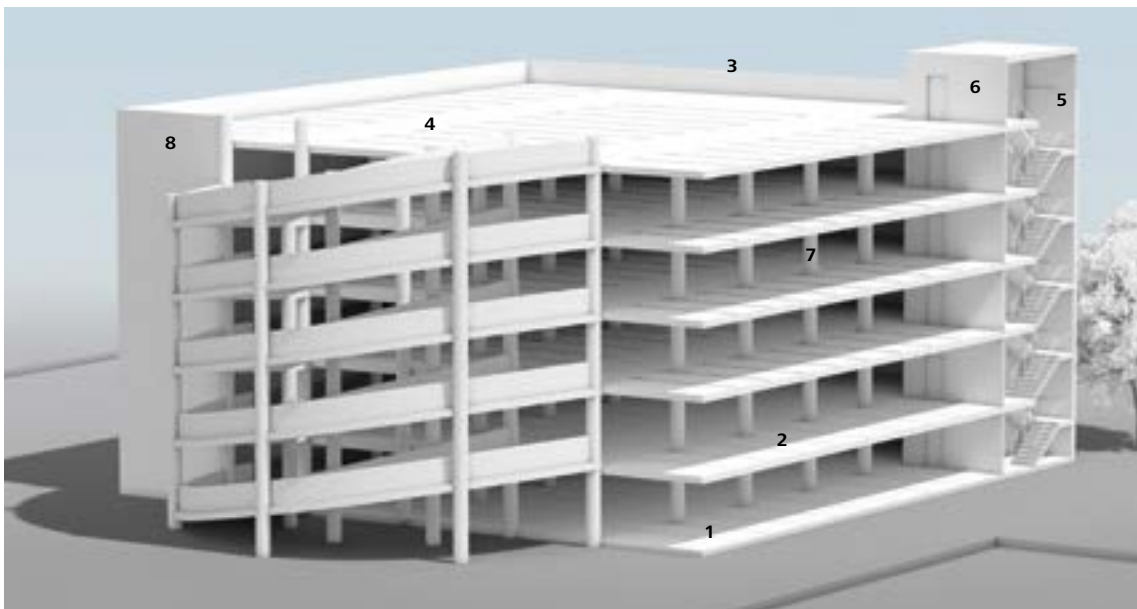
The requirements for car park coatings are highly diverse depending on the area of application. An ideally tailored solution has to be developed in accordance with the location, condition, and stress on the surface.

There is virtually no other kind of building that varies so greatly in terms of size, shape, and stress levels as multi-storey and underground car parks. The spectrum ranges from single-storey underground car parks below small school buildings to vast parking complexes at university hospitals. And virtually no other kind of building in the context of educational institutions is subject to such cost pressures. Particularly in the past, simple concrete structures were used. Parking decks were

largely open. Not even areas subject to significant vehicle traffic were protected. And yet the stress put on reinforced concrete inside multi-storey car parks is particularly severe. Vehicles carry water and, in winter, de-icing salts along with them. The CO₂ concentration is greatly increased as a result of exhaust emissions. Driving on the concrete surfaces generates vibrations, resulting in fine cracks. It is then easier for harmful substances to get inside, causing damage to the reinforcing steel and concrete at a much faster rate.

Nowadays, building protection is often part of the planning for new builds. And the colour design is a key factor in the battle to win the hearts and minds of users.

Image on right:
underground bicycle parking, Tübingen, DE
Building owner: university city Tübingen
Planner: KMB Plan Werk Stadt GmbH, Ludwigsburg, DE
Sto expertise: StoFloor Traffic Elastic 590 EP
Photo: StoCretec, Kriftel, DE



- Areas of application**
- 1 Floor slab
 - 2 Intermediate deck
 - 3 Exposed deck
 - 4 Ramps
 - 5 Pedestrian areas
 - 6 Staircase
 - 7 Supports/walls
 - 8 Facade



How to design car parks properly

Responsible planning

Many car drivers find older multi-storey and underground car parks creepy and oppressive, since they are frequently gloomy and confusing. Monotonous concrete grey only adds to the feeling of strangeness. The low ceiling heights of the parking decks feel smothering.

So key factors when it comes to the colour design of a multi-storey car park are orientation, safety, and a necessary degree of comfort. All the elements that make up the space (known as substrates) such as walls, ceilings, floors, girders, and columns are included in this.

The design must consist of more than just dominant colour shades, accent colours, direction arrows, and parking deck/space numbers. The design of an underground car park should really leave a lasting impression of the space.

Be brave with colour shades!

Colour shades are used first of all to create order. If people can find their way around easily, this creates a feeling of transparency, with users getting to know the inner workings of the garage, so to speak. Where are the lifts and stairs? Where is the ticket machine and the exit ramp? Where did I park?

Large floor and wall areas must be covered in a paint with high reflectance to achieve the cosy luminance that is desired. These areas, which are mostly light and colourless, are counteracted by the bold, saturated colour shades used to highlight columns, lifts, doors, and ramps.

Another significant aspect in car park design are typographical elements and floor markings. The clearer and richer in contrast the style, the easier it is to orient oneself.

StoDesign: professional design of underground car parks and parking decks

StoDesign develops professional colour and material concepts for facades and interiors, from single buildings to entire streets. Parking decks form part of the deliberations in many such projects.

Planning considerations are based on a thorough analysis of the architecture, user behaviour, the building's function, and how it is accessed both from the interior and exterior. Technical and design variations are developed, presented to the decision-maker, and seen through to the end of the application procedure. Colour shades, materials, and surfaces are defined during this process, although the user is always at the centre of the design – whether they are still sitting in their vehicle or walking around as a pedestrian.

Solutions for different zones



Floor slabs with watertight concrete

Car parks with floor slabs made of watertight concrete pose great challenges for planners. In order to ensure durability, a coating system has to satisfy conflicting requirements: suitability for rising damp combined with the ability to bridge cracks.

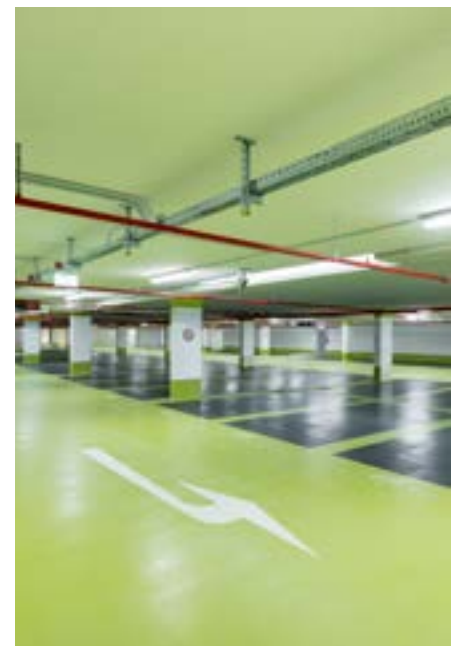
The innovative product StoPox 590 EP – a formulation comprising special epoxy resin with cementitious extender – is the ideal solution. At the same time, the coating build-up boasts excellent bonding properties on concrete substrates with increased levels of moisture as well as high alkaline stability.



Formation of a monolithic concrete impermeable to water

Not all driving surfaces and parking areas in multi-storey and underground car parks are situated on long-span or protruding intermediate floors with crack movements caused by loads or temperature. Floor slabs on the lowest level in particular do not experience stresses of this nature, but do have other problems to contend with. The primary task of floor coatings in multi-storey car parks is to protect the substrate. There must be no risk of the coating peeling off.

StoFloor Industry WL 100 or StoFloor Traffic BB OS offers perfectly coordinated solutions for such surfaces.



Intermediate decks

Crack-bridging protective surface coatings that can be driven over are required wherever there is a risk of cracks forming. These are frequent occurrences particularly when it comes to intermediate decks. Surface protection measures with a rigid OS 8 system also offer several advantages when it comes to intermediate decks. This coating system is characterised by its capacity to bear the loads of high shear and transmitted forces exerted by vehicles, such as on bends or when travelling up and down ramps. Combined with an accompanying crack treatment, this solution ensures that maintenance is simple and economical.



Entrance areas and ramps

These specific driving areas present particular challenges due to the high shear and abrasion loads exerted by vehicles. Tough, durable surfaces must therefore also provide skid resistance. The risk of rising damp needs to be counteracted as well.

The StoFloor Traffic DV 100 coating build-up has good skid resistance, as does the StoFloor Traffic Elastic 590 EP scatter coating. The latter boasts a high layer thickness, along with good adhesion to the substrate regulated by the same.



Exposed decks

As with intermediate decks, exposed decks are also at risk of cracks forming and can exhibit significant changes in crack width as a result of temperature and alternating load stresses. Crack-bridging protective surface coatings that can be driven over are therefore also required for exposed decks.

The two coating build-ups StoFloor Traffic TEP MultiTop meet these demands by bridging cracks by means of a double-layer covering. They are also durable in the face of significant temperature fluctuations – from direct sunlight right through to frosty and cold.



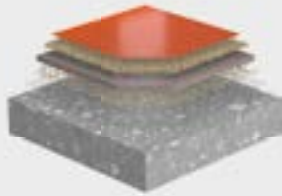
Pedestrian areas and stairwells

Pedestrian areas also have to be able to withstand the stresses of high levels of footfall. Moisture and de-icing salts are also walked through these areas and the CO₂ content causes the concrete to degrade at an accelerated rate. What's more, pedestrian areas need to be indicated using colour in order to direct the users. StoCretec multi-storey car park systems offer a range of effective and cost-saving solutions that also provide a lot of scope for initiative.

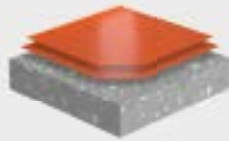
It goes without saying that all the systems presented here are resistant to all cleaning agents and chemicals commonly found in multi-storey car parks, such as de-icing salts, fuels, brake fluids, engine oils, and lubricants.

StoCretec recommendations

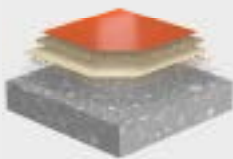
Base plate

Requirements	<ul style="list-style-type: none"> Resistance against alkali Water-vapour transmission rate No big temperature changes Risk of rising damp
System	StoFloor Traffic Elastic 590 EP
Properties	<ul style="list-style-type: none"> Crack-bridging, colour coating Tested for rising damp Solvent-free Certificate of compliance in accordance with DIN V 18026, surface protection system OS 8 & 13
Primer	StoPox GH 502, Sanding with StoQuarz 0.3–0.8mm
Wearing course	StoPox 590 EP Sanding with StoQuarz 0.3–0.8mm
Sealant	StoPox DV 100
Layer thickness	2.5 mm (certificate of compliance)
System view	

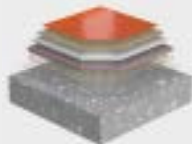
Floor slab/Monolithic concrete impermeable to water

Requirements	<ul style="list-style-type: none"> No requirement for bridging of cracks No big temperature changes Risk of rising damp
System	StoFloor Industry WL 100
Properties	<ul style="list-style-type: none"> Diffusion-open, rigid, and colour coating Solvent-free and water-dilutable
Primer	StoPox WL 100 (for gloss surfaces) or StoPox WL 200 (for matt surfaces) + water max. 20%
Self-levelling filler	
Sealant	StoPox WL 100 (for gloss surfaces) or StoPox WL 200 (for matt surfaces) + water max. 10%
Layer thickness	< 1 mm
System view	

Ramps

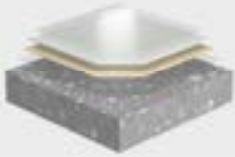
Requirements	<ul style="list-style-type: none"> High shear and abrasion loads High slip resistance requirements Tough, durable surface Risk of rising damp
System	StoFloor Traffic DV 100
Properties	<ul style="list-style-type: none"> High slip resistance Good mechanical resistance
Primer	StoPox GH 502, StoPox GH 530 Broadcasting with StoQuarz 0.3–0.8mm
Coating	StoPox GH 502, StoPox GH 530 Broadcasting with StoQuarz 0.6–1.2mm
Sealant	StoPox DV 100
Layer thickness	> 2.5 mm
System view	

Exposed deck

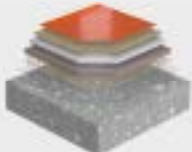
Requirements	
System	StoFloor Traffic Elastic EZ 500
Properties	<ul style="list-style-type: none"> Elastic double-layer covering as per OS 11a, certificate in accordance with DIN V 18026
Primer	StoPox GH 500/530 for areas in contact with the ground, broadcasting with StoQuarz 0.3–0.8mm
Elastic floating layer	StoPur EZ 500
Wearing course	StoPur EZ 502 (pre-filled) Broadcasting with StoQuarz 0.3–0.8mm
Sealant	StoPox DV 502 gloss, alternatively: StoPur DV 505, non-yellowing, matt sealer
Layer thickness	> 4.5 mm
System view	

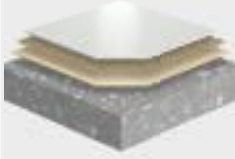
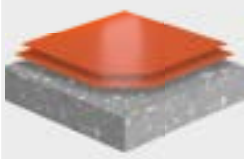
StoFloor Industry WL 100	StoFloor Traffic BB OS
<ul style="list-style-type: none"> Diffusion-open, rigid, and colour surface protection system Solvent-free and water-dilutable Certificate of compliance in accordance with DIN V 18026, surface protection system OS 8 	<ul style="list-style-type: none"> Rigid, colour coating, tested for rising damp Solvent-free Certificate of compliance in accordance with DIN V 18026, surface protection system OS 8
StoPox WG 100	Preparatory filler or primer: StoPox GH 502, StoPox GH 530 Sanding with StoQuarz 0.3–0.8 mm
StoPox WG 100 with StoQuarz 0.1–0.5 mm (1:0.8) Sanding with StoQuarz 0.3–0.8 mm	
StoPox WL 100 (two coats) + water 10 %	StoPox BB OS or StoPox DV 100
approx. 1.5 mm or 2.5 mm (certificate of compliance)	approx. 1.5 mm or 2.5 mm (certificate of compliance)
	

Intermediate deck

Requirements	<ul style="list-style-type: none"> Garage open or closed to the side Resistant to high shear and transmitted forces Accompanying crack treatment
System	StoFloor Industry BB OS
Properties	<ul style="list-style-type: none"> High level of resistance to mechanical stress Easy to apply and design Certificate of compliance in accordance with DIN V 18026, surface protection system OS 8
Primer	Depending on the absorption capacity of the concrete substrate with StoPox GH 530
Self-levelling filler	StoPox GH 530 (1:0.7) with StoQuarz 0.1–0.5 mm, broadcasting with 0.3–0.8 mm
Sealant	StoPox BB OS (interior), StoPox DV 100 (exterior)
Layer thickness	approx. 1.5 mm or 2.5 mm (certificate of compliance)
System view	

Pedestrian areas

<ul style="list-style-type: none"> Requirement for bridging of cracks Big temperature changes/frost possible High slip resistance requirements
StoFloor Traffic Elastic TEP MultiTop
<ul style="list-style-type: none"> Increased bridging of cracks Elastic double-layer covering as per OS 11a, certificate of compliance in accordance with DIN V 18026
StoPox GH 530 Broadcasting with StoQuarz 0.3–0.8 mm
StoPox TEP MultiTop
StoPox TEP MultiTop (pre-filled) Broadcasting with StoQuarz 0.6–1.2 mm
StoPox DV 100 gloss, alternatively: StoPur DV 508, non-yellowing, gloss Sealant > 4.5 mm


Requirements	<ul style="list-style-type: none"> No requirement for bridging of cracks No big temperature changes Low mechanical stress 	
System	StoFloor Traffic BB OS	StoFloor Industry WL 100
Properties	<ul style="list-style-type: none"> Rigid coating 	<ul style="list-style-type: none"> Diffusion-open, rigid, and colour coating Solvent-free and water-dilutable
Primer	StoPox GH 502, StoPox GH 530, sanding with StoQuarz 0.3–0.8 mm	StoPox WL 100 (for gloss surfaces) or StoPox WL 200 (for matt surfaces) + water max. 20 %
Sealant	StoPox BB OS or StoPox DV 100	StoPox WL 100 (for gloss surfaces) or StoPox WL 200 (for matt surfaces) + water max. 10 %
Layer thickness	approx. 1 mm	< 1 mm
System view		



Recommended products for interiors and acoustics

Interior paints for daycare centres, school buildings, and universities

Product name	Requirements of wall and ceiling						
	Wet-scrub resistance class (in accordance with EN 13300)	Hiding power (in accordance with EN 13300)	Gloss level (in accordance with EN 13300)	Colour range	Resistance to surface disinfectants	Suitable for foodstuff industry	Mildew-inhibiting
StoColor Pura Satin	1	2	Mid sheen	■ ■	■ ■	■ ■	
StoColor PuraClean	1	2	Matt		■ ■		
StoColor Opticryl Matt	1	2	Dead-matt	■ ■	■ ■	■ ■	
StoColor Opticryl Satinmatt	1	2	Mid sheen	■ ■	■ ■	■ ■	
StoColor Opticryl Satin	1	2	Mid sheen	■ ■	■ ■	■ ■	
StoColor Opticryl Gloss	1	2	Gloss	■	■ ■	■ ■	■ ■
StoColor Sil In	2	1	Dead-matt				■ ■
StoColor Sil Comfort	2	2	Dead-matt	■			

■ ■ excellent
■ good
□ to a limited extent

StoSilent: an overview

System	Carrier layer	Absorber layer	Material layer
Category	System name	Sub-construction	Finishing coat
Suspended acoustic systems	StoSilent Distance C	sub-construction at the same level	StoSilent Board 205 C Absorber made from expanded glass granulate
	StoSilent Distance S	height offset sub-construction	StoSilent Board 105 C StoSilent Board 100 S Absorber made from expanded glass granulate
	StoSilent Distance F	arched height offset sub-construction	StoSilent Board 110 S StoSilent Board 310 F Absorber made from expanded glass granulate
Bonded acoustic systems	StoSilent Direct	load-bearing ceiling construction with priming coat	StoSilent Board MW 100 Sandwich panel made of stone wool with a covering layer of expanded glass granulate
	StoSilent Frame	load-bearing ceiling construction with priming coat	StoSilent Board R 400 Absorber made from expanded glass granulate
Acoustic plaster systems	StoSilent Compact	load-bearing ceiling construction with priming	StoSilent Board 205 C Absorber made from expanded glass granulate
Acoustic elements	StoSilent Modular	horizontal suspension	StoSilent Decor StoSilent Top Basic StoSilent Top Finish
			StoSilent Decor StoSilent Top Basic StoSilent Top Finish StoSilent Decor
			visible joints uncoated visible joints StoColor Climasan visible joints StoSilent Decor seamless StoMiral AP seamless StoSilent Decor seamless StoSilent Top Basic seamless StoSilent Top Finish
			Factory-made paint coat
			StoSilent Sil AP with StoSilent Decor StoSilent Miral AP optional StoColor Silent
			uncoated nonwoven surface
			Factory-made fine-textured paint coat

Glossary of recommended products

StoColor Opticryl

Matt, silk matt, or gloss acrylic emulsion paint, tested for harmful substances, wet-scrub resistance 1, and hiding power 2 in accordance with EN 13300. For application on texture-retaining and durable wall and ceiling areas. High whiteness, resistant to many surface disinfectants, solvent and plasticiser-free.

StoColor Sil

Preservative-free, dead-matt, interior dispersion silicate paint, wet-scrub resistance 2, and hiding power 1 in accordance with EN 13300. For coatings with a mineral appearance on wall and ceiling areas. Suitable for refurbishments thanks to the mildew-inhibiting effect and as a preventive coating for food-processing areas. Resistant to many surface disinfectants, solvent, plasticiser, and preservative-free.

StoColor Sil Comfort

Extremely matt interior dispersion silicate paint, preservative-free, wet-scrub resistance 2, and hiding power 2 in accordance with EN 13300. For coatings with a mineral appearance, directly on smooth wall and ceiling areas. Mildew-inhibiting, very good water-vapour transmission rate. Resistant to many surface disinfectants, solvent and plasticiser-free.

StoColor PuraClean

Beautiful. Stable. Clean.
In no time at all, you can get a perfect wall that's made to last with StoColor PuraClean, our new single-component interior paint. It's easy to apply, has a matt look, and can be wiped down again and again – making it the smart choice for interior walls that have to withstand a lot.

StoColor Puran Satin

Highly resistant, water-based two-component PU gloss paint, wet-scrub resistance 1, and hiding power 2 in accordance with EN 13300. For highest mechanical stress (e.g. glass-fibre wall covering, concrete) on wall and ceiling areas, specifically for kitchens, bathrooms, laboratory areas, and food-processing areas. Resistant to many surface disinfectants, weak acid and alkaline solutions, and mineral lubricants, solvent and plasticiser-free.

StoColor Dryonic®

Facade paint with Dryonic® Technology, biomimetic principle for dry facades against algae and fungal attack, without biocidal film protection. For outdoor application on mineral, organic, and inclined substrates that are not sensitive to humidity, up to an inclination of 45°. Carbon dioxide diffusion: class C1 in accordance with EN 1062-1. Optionally available with X-black Technology: heat shield to protect against solar heating.

StoColor Lotusan®

Facade paint with Lotus-Effect® Technology, natural protection against algae and fungi, without biocidal film protection, dirt runs off with the rain. For paint coats with reduced adhesion of dirt particles on mineral and organic substrates. Optionally as StoLotusan® finishing render with Lotus-Effect® Technology

StoSilent Distance

Suspended acoustic system made of expanded glass granulate boards. For suspended ceilings and wall structures. Not suitable for wall areas which can be reached by hand or which are exposed to other types of mechanical stress. Not suitable for splash zones. Seamless installation possible across areas of up to 200m². Metal sub-construction in accordance with EN 13964 with vernier hangers.

StoSilent Distance Flex

Suspended acoustic system made of expanded glass granulate boards, bendable up to a radius of five metres.

StoSilent Direct

Bonded acoustic system made of coated acoustic panels. Installed without sub-construction, adhesive applied to the entire surface of the substrate direct. For ceilings and upper wall areas of escape routes, corridors, staircases, or meeting places. Suitable for solid components, oriented strand boards, and exterior gypsum plasterboard, as well as curved surfaces. Not suitable for wall areas which can be reached by hand or which are exposed to other types of mechanical stress.

StoSilent Compact Sil

Silicate acoustic plaster system with a finely textured plaster coating. For ceilings and upper wall areas, even surfaces, and barrel vaults.

StoSilent Compact Miral

Mineral acoustic plaster system with a rough plaster coating. For ceilings and upper wall areas, even surfaces through to spherical domes and vaults.

StoSilent Modular 100

Sound-absorbing ceiling element made of recycled PET fibres on an aluminium frame. Installation system pre-assembled at the factory with vernier hangers, threaded rods, or cable hangers. Certified to the Oeko-Tex® standard 100.

StoSilent Modular 200

Sound-absorbing ceiling element made of expanded glass granulate with a finely textured colour coating. Installation system pre-assembled at the factory with vernier hangers, threaded rods, or cable hangers. With a 4cm-thick layer of PET fibre.

StoSilent Modular 300

Sound-absorbing ceiling element made from ultra-thin polyester fibre with an aluminium load-bearing construction. Corners either 90° or rounded (radius of 4cm). Suspension from pre-fabricated ex works parts and modules in accordance with installation instructions.

StoTherm Classic®

Cement-free external thermal insulation system, with maximum resistance to cracking and impacts. Resistant to hail, storms, and hurricanes according to the FIBAG® simultaneous test (highest hail resistance class 5 with the appropriate system build-up). Cement-free, organic system build-up suitable for a passivhaus. Reaction to fire class B, C in accordance with EN 13501-1. Ball-impact resistant in accordance with DIN 18032-3. Lotus-Effect® technology and anti-electromog optional.

StoTherm Mineral

Non-combustible external thermal insulation system, in accordance with class A2 as per EN 13501-1, especially suitable for high-rise and public buildings. Free choice of finishing renders and decorative facade design with ceramics or natural stone. Impact resistance in the appropriate system build-up up to hail resistance class 3.

StoVentec R

Rainscreen cladding facade with seamless rendered surface. Almost unlimited design possibilities using colour shades, textures, and materials; curved shapes possible too. Suitable for passivhaus standard due to certified sub-construction. Reaction to fire B-s1, d0 as per EN 13501-1 class A2-s1, d0 in accordance with EN 13501-1 with StoVentec Carrier Board A. Very light, flexible carrier board made of expanded glass granulate with a low thermal expansion coefficient A double coat of paint offers special protection against algae and fungi. Lotus-Effect® technology or Dryonic Technology for protection against microorganisms and for fastest drying. Resistant to earthquakes.

StoDeco

Verolith® – the lightweight mineral construction material used to make our StoDeco facade elements – opens up new possibilities in three-dimensional facade design. Using modern CNC methods, we can precisely replicate your designs in three dimensions.

StoCleyer W

StoCleyer W facade panels can be used to create an authentic timber appearance on external thermal insulation systems. The panels are quick and easy to apply. They are more cost-effective and durable than real wood and can be painted in many colour shades.

StoCleyer B

StoCleyer B is a quick and easy solution for creating insulated facades with an authentic brick look. With more than 150 surfaces across various groups, StoCleyer B opens up a wide range of design possibilities.

Headquarters

Sto SE & Co. KGaA Market Development

Ehrenbachstrasse 1
79780 Stühlingen
Germany

Phone +49 7744 57-1131
info.international@sto.com
www.sto.com
Instagram

Your Contact

