

Coating systems for the food industry

Reliable, high-performance, and long-lasting

Floor
coatings



Food industry coatings

Coating systems for the food industry have to fulfil the highest functional and hygiene requirements. They must not impair the quality of the products and need to be able to withstand extreme loads. Our StoFloor Food floor coating systems provide reliable, high-performance, and long-lasting solutions.



Cover photo:
Floor coating in a poultry hatchery: meets high requirements with regard to hygiene and durability.

Photo: anish_ap1/Adobe Stock

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 only described 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 included in the Technical Data Sheets and system descriptions/approvals must be observed.



Contents



04 Certified coating solutions for the food industry

Safety, hygiene, and functionality guaranteed at all times

06 Floors for bakeries and flour mills

Slip-resistant, resistant to chemicals, and easy to clean

07 Floors for dairies and cheese factories

High thermal and chemical resistance, easy to clean

08 Floors for the meat and fish industry

High thermal and chemical resistance

09 Floors for beverage production facilities

Resistant to chemicals and permanently wet conditions

10 Floors for food packaging areas

Seamless, abrasion-resistant, and easily decontaminable

12 Overview of polyurethane concrete coating solutions

Certified systems offering outstanding performance

16 Overview of EP and PUR coating solutions

Floor, wall, and ceiling: we offer everything from one source

18 Working together to ensure success: make the most of our services



Certified coating solutions for the food industry

Safety, hygiene, and functionality guaranteed at all times

Ensuring that food is safe and harmless at all stages of the production process is a constant challenge. Companies carry out extensive quality and safety checks to ensure that this is the case. It is not just the raw materials used in production that are subject to extremely strict requirements, but also operating resources such as furniture, machines, or building materials.

Coatings for floors, walls, and ceilings must demonstrate their suitability for use in food production, packaging, and storage. They must not impair the quality of the products and must comply with the highest standards of hygiene.

At the same time, they need to guarantee slip resistance and withstand all kinds of loads.

Our StoFloor Food floor coating systems provide functional, long-lasting solutions for all areas of food production and storage. They have specific test certificates including HACCP, FDA, ISEGA, indirect contact with food, among others. Our portfolio also includes coatings for walls and ceilings. In addition, you will benefit from the Sto Group's overall expertise in the fields of floor coating, concrete repair, concrete protection, facade, interiors, and acoustics.

Extensive quality and safety checks ensure that food is safe and harmless.

Photo below:
Seventyfour / Adobe Stock

Photo on right:
Pixel-Shot / Adobe Stock







Floors for bakeries and flour mills

Slip-resistant, resistant to chemicals, and easy to clean

Occupational safety is the top priority throughout the different areas of bakeries or flour mills. Floor coatings must provide verifiable slip resistance. Floors in areas for baked goods production must comply with slip resistance class R 11, while those in defrosting and re-heating kitchens must comply with class R 10.

The use of baking soda, flavouring agents, fats, cleaning agents, and disinfectants means that the floors need to be resistant to chemicals. At the same time, high mechanical and thermal resistance is also required due to the loads resulting from production equipment, various vehicles, and heavy-duty ovens. In addition, the floor coatings need to be easy to clean. In areas subject to high levels of dust, such as flour mills, an electrically conductive floor will protect against explosions.

Floors in bakeries need to withstand high thermal and mechanical loads while also guaranteeing occupational safety.

Photo: Studio Romantic/Adobe Stock



Floors for dairies and cheese factories

High thermal and chemical resistance, easy to clean

In dairies and cheese factories, hygiene and cleanliness are the top priority. Microorganisms must not be able to settle on the surfaces of production equipment, walls, ceilings, or floors. It is therefore important to ensure that floor coatings are easy to clean. They must also demonstrate high chemical resistance in order to withstand daily cleaning with disinfectants. Furthermore, they must not be damaged by contact with lactic acid or salts. The use of steam jet washers means that the surface must have high thermal resistance. Fats and other fluids on floors can pose an occupational safety risk. Therefore, floors used in fresh milk and ice cream production areas must comply with slip resistance class R 12. Those used in cheese production, storage, and packaging facilities must comply with class R 11.



Due to the permanently wet conditions, production and storage areas in cheese factories must be fitted with a slip-resistant floor.

Photo: dvv1989/Adobe Stock



Floors for the meat and fish industry

High thermal and chemical resistance

The meat and fish industry is subject to extremely strict safety and hygiene regulations which stipulate, among other things, that floor coatings must have HACCP certification. Any possibility of odour or flavour transfer from the coating to the meat or fish must be excluded, and it must not provide a breeding ground for germs or bacteria. Highly effective cleaning agents and disinfectants are used to maintain high hygiene standards, which means that the floor must have high chemical resistance. This will also protect it from the effects of salts, blood, fats, and offal. Areas exposed to hot and cold temperatures require a coating with high thermal resistance. Depending on the area in question, the slip resistance classes R 12 and R 13 ensure safety even in wet conditions.



HACCP-certified floor coatings are used in areas for meat and fish production.

Photo: Dragosh/Adobe Stock

Floors for beverage production facilities

Resistant to chemicals and permanently wet conditions

Breweries, wine producers, fruit juice producers, and other beverage manufacturers require floor coatings with high thermal resistance. Constant exposure to hot water in washing areas as well as alternating exposure to hot and cold water demand a great deal from the floors in these facilities. In order to ensure occupational safety in permanently wet conditions, the floors in bottling and fruit juice production facilities must comply with at least slip resistance class R 11. Storage and fermentation cellars are equipped with floors conforming to slip

resistance class R 10. High chemical resistance ensures that the coating surface is less susceptible to stains. Wine, juice, or beer residues can be easily cleaned. The coating surface should be resistant to cleaning agents and disinfectants. Machines, vehicles, barrels, and pallets exert high mechanical loads on floors – in localised places as well as across large areas. Therefore, the coatings must be highly impact-resistant and wear-resistant.

In brewery cellars, it is important that the floors are highly durable as well as slip-resistant.
Photo: pressmaster / Adobe Stock





Floors for food packaging areas

Seamless, abrasion-resistant, and easily decontaminable

When it comes to food packaging, hygiene is the top priority in order to protect the health of the consumers. Therefore, some packaging processes take place under clean room conditions or in a vacuum. Seamless, abrasion-resistant floor coatings are used in these areas. These coatings must have high chemical resistance and enable simple, residue-free cleaning and decontamination. As the floors are driven over frequently by transport vehicles, they require high wear resistance. They must also be able to withstand daily cleaning with a steam cleaner and, in some cases, chemical cleaning agents.



Food packaging areas require seamless, abrasion-resistant floors.

Photo: vipavlenkoff/Adobe Stock

Image on right:

“Wine Cathedrale” of the CHÂTEAU VALTICE winery, Valtice, CZ

StoCretec expertise: StoFloor Food PU 205 SR polyurethane concrete coating system

Photo: Tomáš Slavík, Prague, CZ





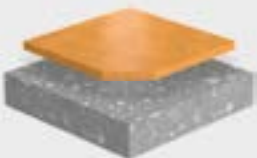
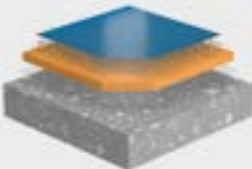
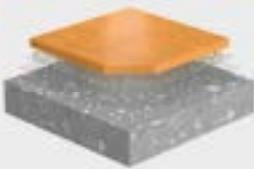
Overview of polyurethane concrete coating solutions

Certified systems offering outstanding performance

Our polyurethane concrete coating systems for the food industry are HACCP-certified. They fulfil all requirements with regard to load-bearing capacity, hygiene, and occupational safety. Our floors are exclusively installed by qualified specialists, ensuring high quality and long-lasting functionality.

Image on right:
Pilsen brewery, Pilsen, CZ
StoCretec expertise:
StoFloor Food PU 205 SR polyurethane concrete coating system
Photo: Tomáš Slavík, Prag, CZ

Polyurethane concrete coating systems

System	StoFloor Food PU 205	StoFloor Food PU 205 SR	StoFloor Food PU 255
Description	PUR coating system, 4–6 mm, self-levelling, high resistance to chemicals and mechanical stress, high thermal resistance up to +90 °C	PUR coating system, 5–7 mm, self-levelling, slip-resistant, high resistance to chemicals and mechanical stress, high thermal resistance up to +90 °C	PUR coating system, 6–12 mm, trowelable, high resistance to chemicals and mechanical stress, high thermal resistance up to +120 °C
			
Application	• Production and storage areas • Preparation of baked goods • Retail areas with ovens	• Production and storage areas • Meat cutting plants • Sausage kitchens	• Production and storage areas • Breweries • Fermentation cellars
Properties			
HACCP certification	yes	yes	yes
Layer thickness	4–6 mm	5–7 mm	6–12 mm
Mechanical resistance	■ ■	■ ■	■ ■
Chemical resistance	■ ■	■ ■	■ ■
Thermal resistance	• Thermal resistance from –15 to +90 °C • Thermal shock resistance	• Thermal resistance from –15 to +90 °C • Thermal shock resistance	• Thermal resistance from –45 to +120 °C • Thermal shock resistance
Cleanability	■ ■	■ ■	■ ■
Slip resistance class *	Upon request	Upon request	Upon request
Miscellaneous	Self-levelling PU mortar coating	Self-levelling PU broadcast mortar coating with sealer	Trowelable, thick-layer PU mortar coating

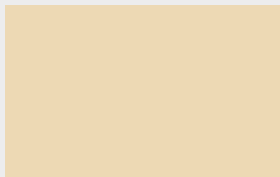
■ Good

■ ■ Very good

* The slip resistance class depends on consumption and broadcasting. You can obtain the current test certificates from our Technical Service Centre.



Polyurethane concrete colour shades



Cream



Light-grey



Brown



Blue



Dark-grey



Orange



Yellow



Green



Red

When implemented in the project in question, the colour shades may differ from those shown here.
We cannot guarantee colour uniformity.

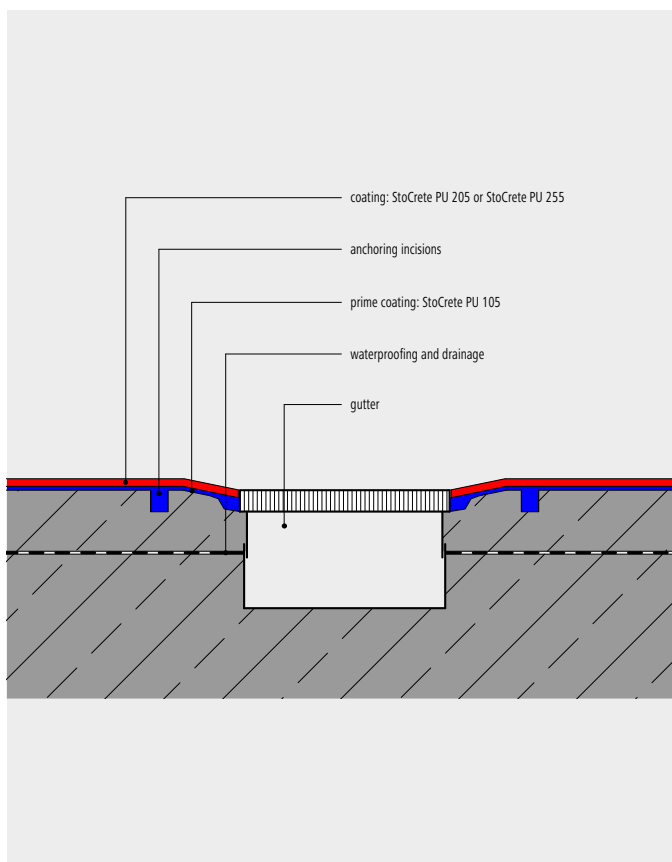
Cleaning

A plan detailing the type and frequency of cleaning should be implemented for each area. The cleaning intervals for floors and machines should be coordinated with each other to prevent residues from drying onto the floor.

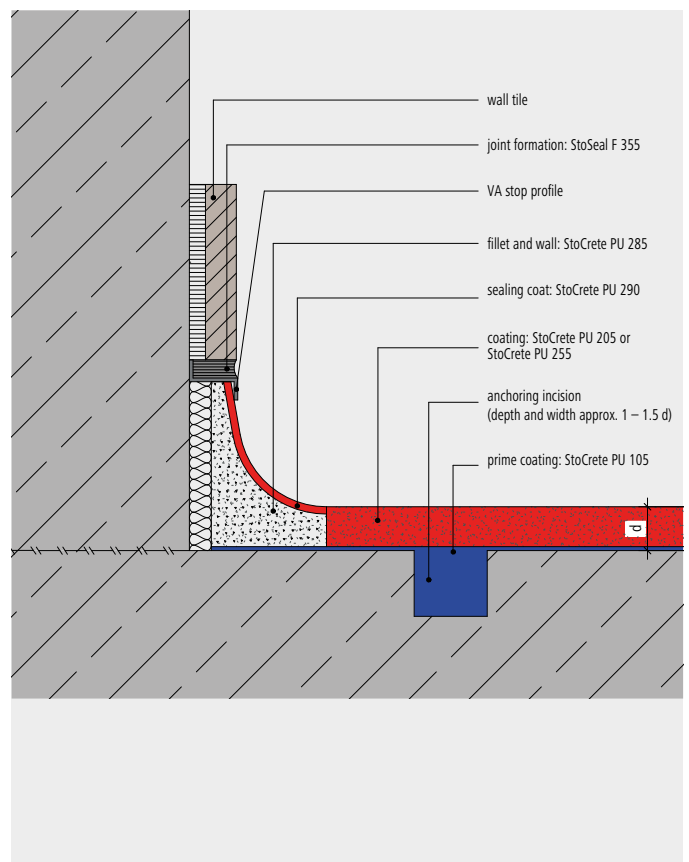
Our StoDivers GR and StoDivers UR cleaning agents are tailored to the StoFloor Food floor coating systems. Further information about cleaning can be found in our "Cleaning floor coatings" instructions.



We provide expert planners with suggested detail solutions for our coating systems. Examples of these can be found below. More system sections can be obtained from your personal advisor if required. The application guideline for our polyurethane concretes supports certified specialists with the application of the floor coating.



System section:
Connection to a gutter



System section:
Wall junction with seamless background
to a wall tile

Chemical resistance of polyurethane concretes

Substance name	Concentration (%)	Temperature (°C)	Result
Ammonium hydroxide	28	20	■
Aniline	100	20	■
Petrol		20	■
Benzoic acid	100	20	□
Benzene	100	20	■
Beer		20	■
Blood		20	■
Butanol	100	20	■
Calcium hydrochloride	saturated	20	■
Chlorine solution	saturated	20	■
Chromic acid	30	20	■
Acetic acid	26	20	■
Ethanol	100	20	■
Ethylene glycol	100	20	■
Hexane	100	20	■
Isopropyl alcohol	100	20	■
Potassium hydroxide	50	20	■
Kerosene		20	□
Cresols	100	20	■
Maleic acid	30	20	■
Methacrylic acid	100	20	■
Methanol	100	20	■
Methyl ethyl ketone	100	20	□
Milk		20	■
Lactic acid	85	20	■
Mineral oil		20	■
Sodium hydroxide	50	60	■
Sodium hypochlorite	15	20	■
Sodium chloride	saturated	20	■
Oleic acid	100	80	■
Vegetable oil		80	■
Phosphoric acid	85	20	■
Crude oil		20	■
Nitric acid	30	20	■
Nitric acid	65	20	–
Hydrochloric acid	concentrated	20	■
Hydrochloric acid	concentrated	60	–
Sulphuric acid	50	20	■
Styrene	100	20	■
Tetrahydrofuran	100	20	□
Toluene	100	20	■
Water (distilled)		85	■
Hydrogen peroxide	30	20	■
Wine		20	■
Xylene	100	20	■
Citric acid	60	20	■

■ Resistant
 □ Remove immediately
 – Not resistant



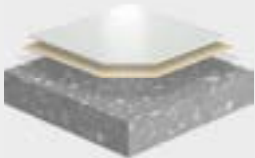
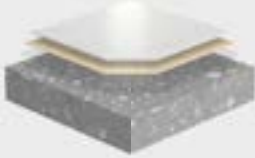
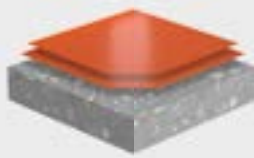
Overview of EP coating solutions

Floor, wall, and ceiling: we offer everything from one source

Our epoxy resin systems meet the high requirements stipulated for use in the food industry. They have been used successfully for decades in these sensitive production areas.

We also recommend our coating systems for walls and ceilings featuring the StoPox WL 100 final sealing coat. They are characterised by low outgassing and low particle emission. Their smooth, seamless surfaces are easily decontaminable and simple to clean.

EP and PUR coating and sealing systems

System	StoFloor Food KU 601	StoFloor Industry Elastic WHG Deck 100	StoFloor Food WL 100
Description	EP coating system, high resistance to chemicals and mechanical stress	EP coating system, crack-bridging	EP sealing system, horizontal and vertical surfaces, water-based, gloss
			
Application	• Production and storage areas • Laboratories	• Production and storage areas • Retail areas • Laboratories	• Production and storage areas • Laboratories • Floor, wall, and ceiling
Properties			
Mechanical resistance	■	■	■
Chemical resistance	■■	■■	■
Thermal resistance	□	□	□
Cleanability	■■	■■	■■
Slip resistance class *	Upon request	Upon request	Upon request
Miscellaneous	• Easily decontaminable • Conductive system build-up if required	• Crack-bridging • Easily decontaminable • Conductive system build-up if required • High chemical resistance	• Water-based • Free of benzyl alcohol • Nonyl phenol-free • Easily decontaminable • Tested for rising damp
Audits**			
FDA in accordance with 21 CFR§175.300	yes	yes	yes

■ Good

■■ Very good

□ Depending on system build-up

*The slip resistance class depends on consumption and broadcasting. You can obtain the current test certificates from our Technical Service Centre.

**Please inquire about the validity of the test certificates in our Technical Service Centre.





Working together to ensure success: make the most of our services



Product and system consultations

We are always there for you. At over 90 different locations, on the construction site, via telephone, video call, email, or chat – however you choose to contact us, we can tell you all about our products and develop solutions tailored to your project. We can create samples or sample surface areas on request, as well as organising the relevant documentation.

Planning support

We will take the time to understand your needs. Our project management team will work with you to develop a solution that is perfectly tailored to your construction project. Whether you are looking for concepts for a refurbishment or a new building, tender specifications, or detail drawings – we will support you right from the design phase and create detail solutions in collaboration with you. So you can achieve the best possible results.

Technical Service Centre

Get information quickly: our colleagues at the Technical Service Centre are on hand with prompt expert advice. They are able to clarify complex questions directly with our product management team and can provide you with documentation, permits, and approvals. The Technical Service Centre will also take delivery of your samples and drill cores for analysis of the substrate, layer thickness, etc. The Sto laboratory will analyse your specimens and we will inform you of the test results without delay.

High-quality, innovative products and system solutions for floor coatings are not the only thing we offer. You will also benefit from an extensive service portfolio covering all aspects of your construction project from planning through to completion. Please ask us for advice.



Technical advisors

We can provide you with on-site support. Our Technical Advisors will carry out orientation measurements on your behalf. From taking drill cores to measuring the conductivity of a floor coating or determining the pull-off resistance of the concrete substrate – we will help you with the measurements you need in order to plan further steps or to carry out quality assurance.

Sampling

A sample is worth a thousand words. We will be happy to provide you with hand-held samples of our products and system solutions. Or we can produce a tailored hand-held sample for your construction project. Larger sample surface areas can also be created on the building in question before work starts to give you an idea of what the project will look like when it is completed.

Training and further education

Education is the key to success. We certify specialist applicators for coatings in the food industry, ensuring high quality when it comes to the installation of functional, long-lasting floors. We also offer an extensive training programme for our business partners and employees. Try our product training, technical training sessions, and specialist seminars – at your site, online, or at one of our locations.

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