



Industrial flooring for High Chemical, Mechanical and Thermal Stresses

A precise analysis of the substrate, operational loads or stresses and the efficiency required determine which components will be used and how the STEULER-KCH floor coating or lining system will be constructed. Floor linings and acid-protection brick or tile from STEULER-KCH protect concrete substrates from corrosive attack, prevent penetration by chemicals and hazardous agents into the substrate and thus contribute to maintaining the value of plant and equipment. Practice proven solutions for expansion joints, trench connections and constructions but also sealing details for foundation sockets and hall structures round out the various flooring systems we offer.

Temperature fluctuations, dampness, chemical stresses, heavy crane loads, scratches during production or maintenance work – industrial flooring from STEULER-KCH securely handles all such stresses. Such special surface features as evenness and anti-skid

properties improve plant operation and increase occupational safety. In many areas, additionally properties such as electric conductivity, tightness against liquid ingress, colour design, physiological tolerance, crack bridging, resistance to aging and weathering as well as imperviousness to water vapour are also specified.

Many of our floor topping systems can be applied in a variety of RAL similar shades and in a beautiful, high-quality look by spreading the topping with chips or colourful sands. Special grades for the food processing and pharmaceutical industries are available as are electrically conductive systems for the electronics and other industries. For stress under highly concentrated chemicals or constant liquid loading, acid-resistant brick and tile offer a high level of security.



Above: Chemically and mechanically highly stressable floor coating in a zinc winning plant.

Requirements:

- Long-term chemical resistance and tightness
- Long-term thermal resistance
- Long-term mechanical resistance
- Adhesion to substrate surface (steel, concrete)
- Resistance to ageing
- Non-slip properties and decontamination capability
- Ability to bridge cracks (for concrete substrate)
- Physiologically harmless
- Electrical dispersion capability

Resins based on polyurethane, epoxy, vinyl ester, unsaturated polyester and furane are processed to trowel, self levelling, broadcast and laminate systems. STEULER-KCH offers coordinated system build up (primers, adhesive and leveling layers, intermediate layers, top and abrasion resistant layers, sealers) with a variety of fillers and reinforcements – crack-bridging ability, easy to apply, without pores.

Coatings with General Building Regulation Approval Issued by the DIBt

In many industrial sectors, providing proof to government authorities that special protection measures for surfaces and installations in production and storage areas were carried out is generally more of a rule than an exception. STEULER-KCH are able to provide the most technically appropriate and economical solution from our multitude of coating systems with general building regulations approval. you can count on our support from

planning and design, material selection and all the way through to final acceptance.

In addition, many of our coating systems having building regulation approval also meet supplementary criteria, such as being slip-resistant, fit for traffic or electrically discharging.

our range of coating systems with general building regulations approval has been developed for an extremely wide range of practical situations. Many systems can also resist higher chemical concentrations over longer periods or meet occupational safety regulations.

As a recognised specialist operation according to the German Water Management Act, we are also aware of our responsibility for proper installation by our trained specialist installers.



Above: Self-levelling industrial flooring in the food industry.



Above: Decorative floor covering with a coloured chip surface.



Tile Linings

With acid-proof ceramic tiles and bricks as well as carbon materials in both standard and special formats combined mortar and grout based on synthetic resins and potassium silicate materials from STEULER-KCH high-quality combined flooring and tiling systems are produced.

Ceramic tiles systems from STEULER-KCH feature low open porosity and high chemical resistance. The high mechanical stability and good anti-abrasive properties offer safe protection for sealing layers when used on floors or areas subject to abrasion. Technically expert service also includes proper design of detailed items in the installation such as connection to stainless steel components such as gutters and drains or wall connections.

Traffic with high loads, scratching in the production or during maintenance - STEULER-KCH industrial floorings securely handles all such stresses. Such special surface features as evenness and anti-skid properties improve operations and increase occupational safety.



Above: Thermoplastic gutters mechanically anchored into the foundations with special detailed solutions for connection to tiled industrial floor.



Above: Expert service also requires expert manufacture of the detailed bonding elements.



Tiling in the pharmaceuticals and food industries

In companies making pharmaceutical products or food, the floor is always a functional component of what is a complex technical system. It is equally important that legal stipulations for work safety and hygiene are observed as well as the good manufacturing practice guidelines and technical production requirements. Ceramic coverings such as tiles are the first choice for protection against severe stresses. Two factors are especially important for proper installation: the tiles laid and the grouting used must be made of resistant materials. Underneath the ceramics, there must also be a resistant sealing layer to protect the underlying structure.

This prevents media penetrating into the substrate and damaging the structure over the long term. When there are no damaged areas, there are also no problem zones in terms of hygiene.



Above: Ceramic tiles are laid on chemically resistant sealing layers using equally resistant synthetic resin mortar and grouting.



Above: Tiling in the food industry.