

# News Release

## BASF building products in new office building D 105 at Ludwigshafen site

- Ucrete and MasterTop are impressive solutions for the kitchen, wet areas, storage, break and plant rooms
- Exterior insulation with Neopor® and Styrodur®
- Customized climate management with SLENTEX®

The office building D 105 in Ludwigshafen has a total area of around 35,000 m<sup>2</sup> over seven floors and offers work stations for about 1,300 staff plus a conference center with state-of-the-art event equipment. "A large number of BASF products were used on the new building, all of which meet the requirements of modern workspaces and have a number of different applications," says Cristobal Garrido Segura, architect and expert for construction systems at the European Construction Competence Center of BASF.

### Flooring and wall systems for different applications

The Master Builders Solutions flooring solutions meet the highest requirements in terms of durability, comfort of use and hygiene. Around 2,700 m<sup>2</sup> of corridors and storage rooms were coated with the particularly durable polyurethane system MasterTop 1324. The resistant epoxy resin system MasterTop 1273 S was used in the plant rooms. Using the elastic polyurethane flooring MasterTop 1325 in the break rooms demonstrates the special emphasis placed on walking comfort and design. In the sanitary facilities, both the slip-resistant system MasterTop 1325 R and the wall system MasterTop WS 300 PU were used to create a seamless finish – ensuring the highest levels of hygiene and a holistic room design. The

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MasterTop systems are low-emission and so contribute to a healthy indoor climate.

The product Ucrete polyurethane concrete has been used to cover 1,400 m<sup>2</sup> of flooring subject to particularly heavy wear in work and storage rooms as well as in the main kitchen and utility room of the building. This is an extremely durable flooring system with joints held to a minimum. Compared with the tiling that was originally planned for the floor, Ucrete offers ecological and hygienic advantages and meets the requirements of a waterproof surface protection system without the risk of water absorption or even washed-out joints. The system is particularly suitable for open food areas as it does not transfer taste or odor and can be cleaned just as easily as stainless steel.

### **Green Sense® Concrete**

The shell of the office building D 105 is based on the Green Sense Concrete technology for resource-saving production and processing of concrete. This means that manufacturers can produce concrete cost-effectively and can improve it in terms of resilience, processing properties, durability and environmental friendliness. The service package consists of three components: the improvement of the concrete formula by BASF experts, the use of high-performance concrete superplasticizers such as MasterGlenium and a life cycle analysis of the concrete mixture. This analysis documents the economic and ecological performance criteria of the concrete for comparison with a conventional concrete mixture.

### **Various materials for exterior insulation**

The flat roofs of building D 105 are covered with insulating material made of Neopor®, for which BASF produces the raw material. The low thermal conductivity meets the high energetic requirements of the building, reduces carbon emissions and lowers costs. Moreover, the high compressive strength of the material combined with its relatively low weight is advantageous for the structure. As it is possible to construct sophisticated roof landscapes with sloping elements made of Neopor, there was no need to use a heavy sloping concrete layer.

Furthermore, insulating materials made of Neopor absorb hardly any water, making them a good base when covering flat roofs with plants and grass.

The insulation of floor panels and perimeter of the new building D 105 are made of Styrodur®. The extruded rigid polystyrene foam (XPS) which has now been approved for use in earthquake-prone areas, makes a significant contribution to the reduction in carbon emissions thanks to its optimal thermal insulation. Two elements of the external facade were insulated with the new high-performance insulation material SLENTEX®. SLENTEX is easy to process, non-flammable, made of inorganic aerogel and stands for highly efficient thermal insulation. With a lambda value of under 19 mW/(m·K), SLENTEX achieves significantly lower thermal conductivity than comparable insulation materials.

### **Latent heat storage system ensures pleasant room temperature**

The micro-encapsulated phase-change material Micronal® PCM from BASF was used in the meeting rooms. The latent heat storage system supplements the active cooling ceilings with its thermal buffer storage function. It absorbs excess heat in the ceiling surface at increasing room temperatures, stores it and only releases it when the room temperature drops again. The temperature in the meeting rooms therefore remains constant and pressure is taken off the cooling system.

### **Coatings and pigments for challenging surfaces**

RELEST® Powder F HWF was used to coat the wall panels, a highly weather-resistant system that can withstand extreme conditions. In outdoor weathering tests, it has been shown that its resistance is about three times more effective than a traditional polyester system. What's more, the RELEST® Powder F HWF-System only needs maintenance cleaning every two years so saving on processing costs. The matt, grey powder coating used for the wall panels and window profiles of the office building is based on BASF pigments. The pigment Heliogen® Blue K 7090, which is particularly characterized by light

fastness and weather resistance, was used in the formulation of the base powder. The pearlescent pigments Mearlin® Star Pearl 139S and Mearlin Bright White 139X give the surfaces a stylish look.

### **With transparency and modern building materials to building certification**

BASF is seeking a platinum-standard certification of the new office building from the DGNB (German Sustainable Building Council). This requires compliance with high standards in construction, use and dismantling. The DGNB system looks at all the key aspects of sustainable building over the entire life cycle of a building, taking six topics into account, for example ecology, economy and technology.

### **About BASF**

At BASF, we create chemistry – and have been doing so for 150 years. Our portfolio ranges from chemicals, plastics, performance products and crop protection products to oil and gas. As the world's leading chemical company, we combine economic success with environmental protection and social responsibility. Through science and innovation, we enable our customers in nearly every industry to meet the current and future needs of society. Our products and solutions contribute to conserving resources, ensuring nutrition and improving quality of life. We have summed up this contribution in our corporate purpose: We create chemistry for a sustainable future. BASF had sales of over €74 billion in 2014 and around 113,000 employees as of the end of the year. BASF shares are traded on the stock exchanges in Frankfurt (BAS), London (BFA) and Zurich (AN). Further information on BASF is available on the Internet at [www.basf.com](http://www.basf.com).