

Plastics with built-in special functions

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“Higher, faster, stronger” – this maxim also applies to high-performance plastics. Today’s increasingly demanding applications call for specialists. With its expertise and fine-tuned APSOplast® assortment, Angst+Pfister makes it easier for the user to select the right material. Angst+Pfister harnesses a network of expert partners who are at the vanguard of developing plastics with ever-improved performance. One of those partners is Ensinger GmbH, a company that has contributed a series of innovative highlights to the Angst+Pfister plastics assortment.

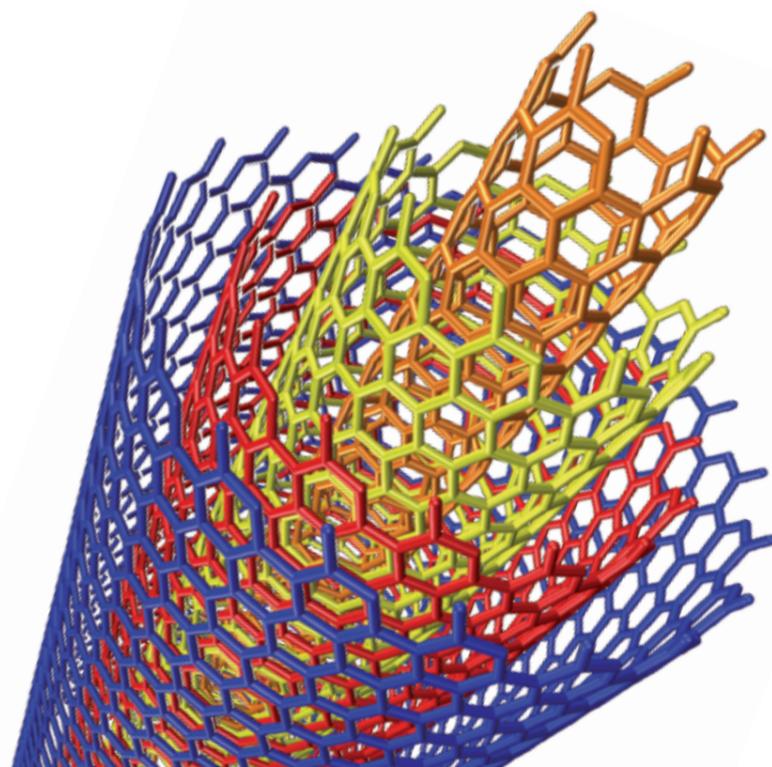
Plastics applications are becoming more and more demanding, and not just with regard to thermal stability, mechanical stressability and chemical resistance. It is also becoming increasingly important to meet customers’ desires for specific additional functions. These functions can be achieved through modifications, for example, by compounding suitable functional agents in the plastic matrix. The almost unlimited possibilities have sparked enormous momentum in the field of plastics development, and this is opening up entirely new and interesting application prospects for plastics users.

Market- and solution-oriented

Under the umbrella brand APSOplast® (Angst+Pfister Solution for Engineering Plastics), Angst+Pfister offers a comprehensive assortment of plastics geared to customers’ needs. Alongside standard engineering and high-performance thermoplastics, a wide range of innovative products for specific demands is also available from stock.

Angst+Pfister’s plastics engineers continually stay abreast of the latest developments in plastics technology and incorporate them into the APSOplast® assortment. They pass on their expertise and extensive application experience gained in close contact with customers in the form of consulting, engineering and other services.

To optimally fulfill its market- and application-oriented function, Angst+Pfister draws on products from leading partners such as Ensinger GmbH. A selection of plastics developed with specific functions in mind testifies to the innovative potential of this company. All of the plastics presented in this article have been integrated in the Angst+Pfister assortment and renamed. The original product names used by Ensinger GmbH are provided in parentheses in the following paragraphs.



Biocompatible, sterilizable plastics with high x-ray contrast



A contrast medium renders the APSOplast® material PPSU P MT XRO (TECASON P MT XRO) impervious to x-rays. That is why, for example, instruments or orthopedic test implants made from this material can be distinctly seen by surgeons with the help of imaging systems. The exceptional resistance of the plastic to strain caused by conventional sterilization techniques offers additional security.

APSOplast® PPE MT XRO (TECANYL MT XRO) can withstand up to 1,000 autoclave cycles without any appreciable impairment of its mechanical properties. Hence, this material is particularly suited for applications in medical technology, such as for reusable surgical instruments. It is also suitable for use in sterilization containers and test implants. Furthermore, APSOplast® PPE MT XRO features good long-term behavior, constant high impact resistance and easy machinability.

If you are looking for solutions for plastics applications, take advantage of our expertise. Order our documentation or contact us to arrange a consultation with one of our plastics specialists.

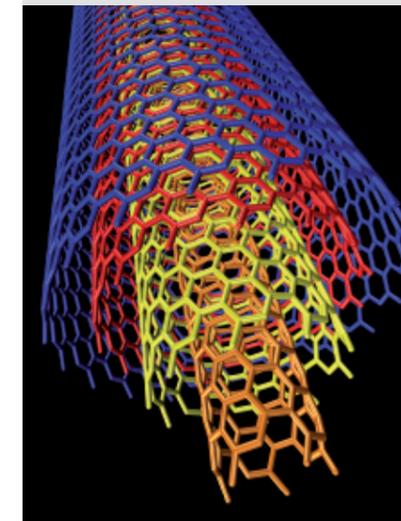
Versatile, electrically conducting construction plastic



APSOplast® POM-C AH ELS (TECAFORM AH ELS) is an electrically conducting construction plastic (POM-C) that has proven its worth in a wide range of industries thanks to its application versatility. Further distinguishing characteristics of the material are its high rigidity, its good sliding and wear properties, and its resistance to diluted acids, detergents and numerous organic solvents. The black material is UV-resistant and easy to machine. Thanks to its electrical conductivity, APSOplast® POM-C AH ELS is predestined for applications in which explosion or electronics protection is required.

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Innovative, electrically conducting high-performance material filled with carbon nanotubes



APSOplast® PEEK ELS nano (TECAPEEK ELS nano), an electrically conducting plastic with excellent chemical resistance that meets the ATEX product directive, guarantees maximum plant and process safety, even in explosion-prone atmospheres. The carbon nanotubes are used as a functional filler and, thanks to their graphitic surface structure, ensure high electrical conductivity almost as good as that of a metal. Since the large specific surface of the nanotubes makes only a small amount of filler additives necessary, the advantageous properties of the plastic matrix – high toughness, low density, good machinability – are preserved for the most part. The new material is particularly suited for applications in which good electrical conductivity and electrostatic discharge are required.

APSOplast® is a registered trademark of Angst+Pfister AG.

TECASON P MT XRO, TECANYL MT XRO, TECAFORM AH ELS, TECAPEEK ELS nano are brand names of Ensinger GmbH.