New Dimensions of Protection

Our definition of progress involves achieving more protection and security in all aspects of life. Materials, which are durable and flexible meet these criteria and bring it to a new level of meaning.

Providing more Protection through Flexibility

A display screen, which can be bent, rolled or folded? Sounds utopian, but it will soon be a reality. Ultra-thin glass plays a crucial role in this achievement. Not only does it protect sensitive electrical components such as organic light-emitting diodes – OLEDs – from moisture and oxygen, but also it is also extremely flexible and temperature-resistant. As a chemically impermeable layer, it is an ideal Ultra-barrier (z-barrier). Even at a thickness of just 25 micrometers, it is impenetrable to water vapor and oxygen.
Shaping a Safe Future

Innovations are intended to improve our lives and make them safer and the development of glass products is no exception. By combining certain glass types with materials, such as polymers, a considerably higher robustness and flexibility can be achieved, dramatically increasing the level of protection in an automobile for example. Glass, which is slightly flexible, can prevent cracking. Moreover, the optical properties remain stable. Specialty glass also makes it possible to cut down on weight, which is currently an essential factor in the range of vehicles in the e-mobility sector.

For the highest design standards

For many industries, design has become increasingly important. In contrast to other materials, conformable glass offers a unique set of design benefits. It can adapt perfectly to surfaces of all kinds, refining and safeguarding them at the same time. Thus, in the automotive sector, opaque surfaces are being replaced or enhanced by glass, and components in automobile interiors are coated with thin and ultra-thin glass. Even complex geometries can be realized by 3D molding. In comparison to plastic, metal or wood, glass ensures a modern optical and tactile experience. It provides designers with entirely new options for smart combinations and shapes.

Glass-Polymer Composites: The best of both worlds

Material innovations can provide optimal protection. A compound of specialty glass powders and polymers opens entirely new possibilities. For example, the selective use of these glass types enables higher resistance to fire and chemicals. In addition, when specialty glass types are used as a filler material, improved abrasion resistance, lower wear and tear, and enhanced optical functionalities (such as protection from UV radiation) can all be achieved. When specialty glass powder is used as an additive in polymer-based engineering materials, textile fibers, foams, pastes or casting compounds, it opens a new realm of benefits in many application areas.
We transform your vision into innovation

Innovations need creative minds. What is crucial for success, however, is how their ideas are pursued and this is exactly why SCHOTT has launched the ‘Opportunity Lab’. It is the perfect setting for everyone wanting to have their visions directly confronted by leading glass experts so that they can further develop them and move them forward.

“When developing new glass and material composites, we are always looking to the future; it does not matter whether it involves the daily needs of consumers or the high standards of entire industries.”

— Stephen Pan, Opportunity Lab Team Member Asia

“We see ourselves as promoters of visions. We are open to new ideas and we want to help make them happen. As a team, we want to overcome the existing boundaries of technology.”

— Dr. Jessica Scheler, Opportunity Lab Team Member Europe

“Glass is extremely versatile and its potential is still a long way from being exhausted. Now is absolutely THE opportunity because today’s challenges can contribute to tomorrow’s innovative glass solutions.”

— Greg Wolters, Opportunity Lab Team Member North America
Rethinking glass: For all that seems possible and impossible.

Glass offers innovative solutions for numerous ideas and projects. It enjoys having the most versatile properties imaginable, which can be changed and adapted as is required. Thus, there is a high potential for innovation, which can lead to entirely new application areas coming into use. It is what makes glass one of the most versatile materials for the future.

Maximize the innovative potential which glass has to offer.

**Material Development**
Designing materials for today’s and tomorrow’s customer needs: optical and technical glass, glass ceramics and special materials e.g. powders, ceramics, sol-gel ....

**Melting**
New and optimized processes/technologies: for melting special glass and glass ceramics via lab experiments, test bed facility and modeling.

**Hot Forming**
Expert for hot processes after melting: especially forming processes of glass directly from the melt and reshaping of glass by reheating.

**Coating Development**
Development of new functionalities for glass and glass ceramics via advanced coating and surface modification which allows glass to be more transparent, harder and scratch resistant.

**Laser Processing**
Identification, development and adoption of unique processing technologies: for cutting, structuring, shaping, joining or modifying edges and glass bodies; for filamentation and ablation, laser-induced scribing and cleaving, bending (uniaxial or multiaxial-3D), intrinsic decoration, marking and layer structuring.

Contact

Challenge glass!
Challenge us!

The SCHOTT Opportunity Lab allows easy access to the experts of anything having to do with glass.

Call us:
+49 (0)6131-66-5566

Links

- More about glass powders
- Discover Ultra-Thin Glass

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