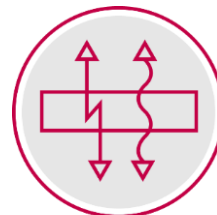




Electrically conductive LUVOCOM® from antistatic to highly conductive

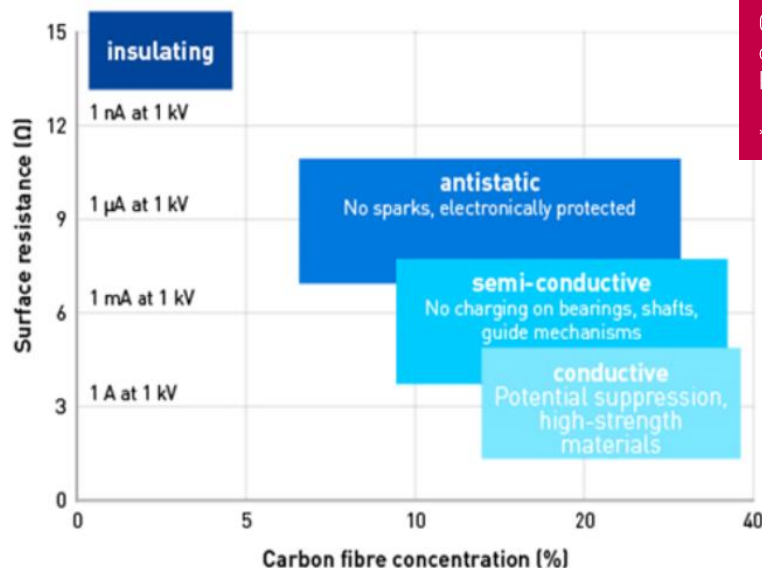
- Electrical resistance up to $10^{-0,5} \Omega$
- Adjustable conductivity
- Wear resistant materials
- Weight reduction and design freedom
- Customized solutions



CONDUCTIVE



Conductive compounds have decisive advantages over metals or coatings: they offer a great degree of freedom in design; the finished parts have a lower weight, are easier and more cost-effective to manufacture and are also tougher. Electrically conductive polymeric materials are produced by adding conductive substances such as carbon fibers, carbon nanotubes (CNTs), steel fibers or graphites. The desired electrical resistance can be adjusted during the process: from 10⁹ Ohm (antistatic formulation) to less than 10⁹ Ohm (antistatic formulation) up to 10¹ Ohm (conductive materials). The chart below shows examples for PA compounds with different concentrations of carbon fibers.



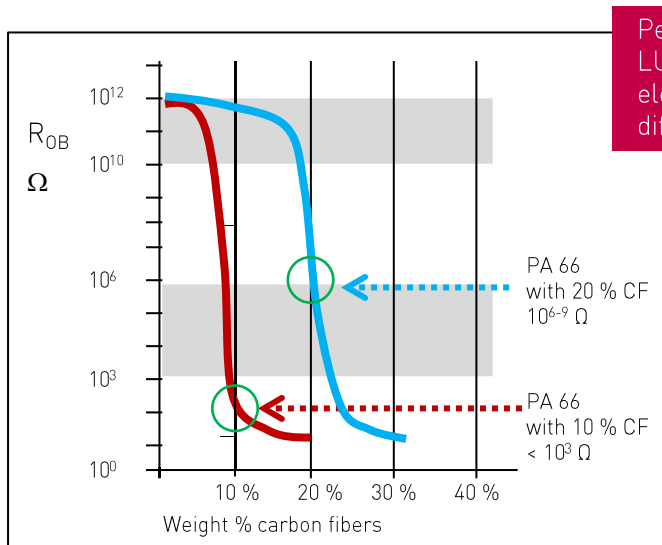
Conductivity range* of electrically conductive LUVOCOM.
Example for PA 66 compounds with CF

* Further explanation on next page

The typical fields of application for electrically conductive compounds are many and varied. In addition to covers and machine parts for explosion-protected areas, electrical and electronic components, the range also includes casings and functional parts for paper transport (examples include office machinery and cash dispensers). Conductive compounds are additionally used in carriers for electrically sensitive products (electronic components, explosive substances), where statically generated electricity has to be carried away immediately in order to avoid disruption or explosions resulting from spark discharge.



Conductive wheel



Percolation curves of two LUVOCOM compounds. Specific electrical properties achieved by different modification technology.



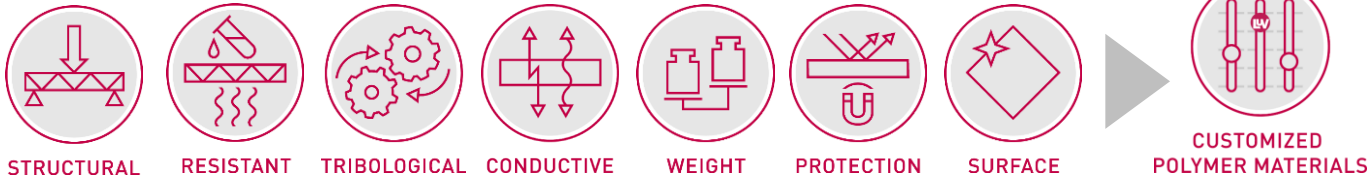
Areas for electrical surface resistance

- $R_{0B} 10^6 - 10^{10} \Omega$ Area for Antistatic Compounds**
 - Ex areas, protection against disruptive discharge
 - Slow electrostatical discharge for electronic applications
- $R_{0B} 10^3 - 10^6 \Omega$ ESD area (Electric Static Dissipative)**
 - For fast electrostatical discharge
 - For grounding discharge
- $R_{0B} 10^0 - 10^3 \Omega$ Area of High Conductivity**
 - Materials for shielding of electromagnetic fields of high frequencies
 - Current conduction in mA area

Colored carbon fiber compounds based on PA 66



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