

# FACT SHEET

# Thermally conductive TPE



INDUSTRY



#### Our Know-how - Your Advantage

Thermally conductive TPEs are your solution for applications requiring thermal management in the component. The natural colored materials are characterized by good thermal conductivity and adhere to thermoplastics such as PP or PA.

- TPE materials with thermal conductivity and electrical insulation
- Different thermal conductivites are available
  - » Thermal conductivity ~ 1 W/(m\*K)» Thermal conductivity ~ 3 W/(m\*K)
- Adhesion modifications to polyolefins or polyamides for
- 2-component injection molding possible
- Thermoplastic processability
- Grades in natural colour are directly available, coloring after consultation on individual requirements possible
- Dry, uniform surfaces
- High quality haptics through high density
- "Cold" grip feeling
- Free of PVC and silicone

## **Typical Applications**

- LEDs
- Batteries for power tools
- Batteries for e-mobility
- Charging systems for e-mobility
- Drive units



### **Technical Data**

|                         |         | HTC1500/<br>122 | HTC1500/<br>109 | HTC1500/<br>117 | HTC1500/<br>132 |
|-------------------------|---------|-----------------|-----------------|-----------------|-----------------|
| Hardness                | Shore A | 60              | 55              | 60              | 81              |
| Thermal conductivity X* | W/(m*K) | 1.0             | 3.0             | 3.0             |                 |
| Thermal conductivity Y* | W/(m*K) | 1.0             | 3.0             | 3.0             |                 |
| Thermal conductivity Z* | W/(m*K) | 0.7             | 1.5             | 1.5             | 0.7             |
| Density                 | g/cm³   | 2.0             | 1.4             | 1.4             | 2.01            |
| Tensile strength        | MPa     | 1.5             | 2.0             | 2.0             | 3.4             |
| Elongation at break     | %       | 500             | 100             | 100             | 110             |
| Tear resistance         | N/mm    | 12.0            | 16.0            | 14.0            | 14.2            |
| Adhesion to             |         | PP              | PP              | PA              | PA6             |

\* X- and Y-values are measured in-plane, Z-value is measured through-plane.

### TALK TO OUR EXPERTS!

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#### Verena Last

#### Projekt leader

"Due to the increasing power density of appliances, improved thermal management is becoming increasingly important. The future market of thermally conductive TPEs will grow strongly - we are very well positioned with our material."