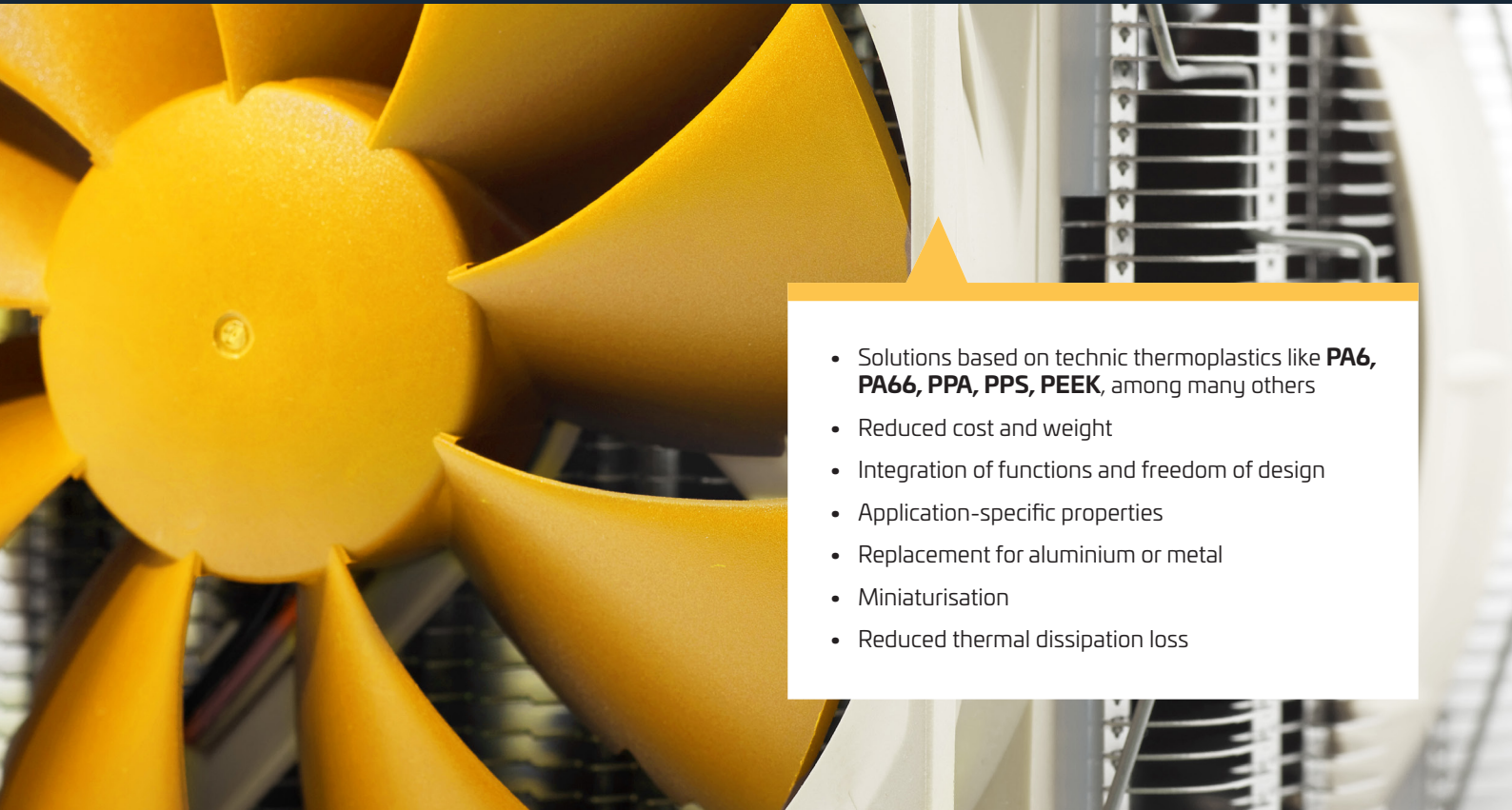


## THERMALLY CONDUCTIVE SOLUTIONS BY BADA



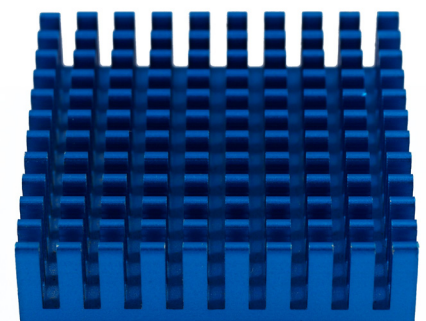
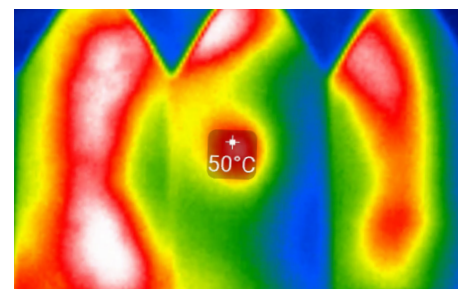
- Solutions based on technic thermoplastics like **PA6, PA66, PPA, PPS, PEEK**, among many others
- Reduced cost and weight
- Integration of functions and freedom of design
- Application-specific properties
- Replacement for aluminium or metal
- Miniaturisation
- Reduced thermal dissipation loss

### THERMAL CONDUCTIVITY WITH PLASTIC COMPOUNDS – JUST CONTACT US!

Up to a few years ago, plastics were classified as insulators. The conductivity of standard plastics ranged between 0.1 and 0.4 W/m K. Thermal conductivity can be increased up to around 25 - 50 W/m K by using suitable additives.

The application of thermal conductive thermoplastics is indispensable in fields like electrical engineering, electronics and e-mobility where overheating should be prevented. Thermally conductive compounds can prove their superiority like freedom of design or the mounting of cooling fins especially with housings, coil bobbins, lamps, LEDs, etc. Thermally conductive plastics used for applications where heat dissipation is only reached by natural convection, achieve a similar or, due to cooling fins, an even higher heat dissipation capacity as metals.

A significant advantage of thermoplastics is the fact that they can be provided as both thermally conductive and electrically insulating material at the same time.



► **PUT US TO THE CHALLENGE AND DISCOVER THE VARIOUS OPPORTUNITIES THERMAL CONDUCTIVITY CAN OFFER!**

# THERMALLY CONDUCTIVE SOLUTIONS BY BADA

## ALL ADVANTAGES AT A GLANCE

- Variety of different base polymers
- Broad range of fillers with thermal conductive properties
- **High thermal conductivities:**
  - ▶ Up to 10 W/(m K) with electrically insulating materials
  - ▶ More than 25 W/(m K) with electrically conductive materials
- Excellent processing properties
- Applications for LEDs, E & E, automotive, mechanical engineering, etc.
- Cost and weight advantages over metals

With most applications, there is no active cooling, e.g. by a fan, or the heat on the surface cannot be dissipated by adjacent components with high thermal conductivity. Thus, the only possibility for heat dissipation is convection. Thermal conductivities of 1-2 W/m K are sufficient for this type of applications and the materials are equipped with sufficient toughness and flowability.

### Badamid B70 TC natural S2

Typical applications are e.g. bases for LEDs, E & E, hot spots in electric tools and tribosystems, automotive, and others.

BADAMID	Polymer	Tensile strength	Impact resistance	Relative density	Thermal conductivity	Insulation resistance
		ISO 527 (MPa)	ISO 179 1EU (kJ/m <sup>2</sup> )	ISO 1183 (g/cm <sup>3</sup> )	Hot Disk (W/m K)	DIN/IEC 6017 (Ω)
B70 TC S2 natural	PA 6	63	85	2.33	110	≥ 10 <sup>15</sup>

We recommend Badamid B70 TC S2 natural as technical and economical solution that fulfils all necessary requirements. We will be pleased to develop a tailor-made thermally conductive compound based on your specification.

**CUSTOMIZED MODIFICATIONS ARE AVAILABLE ON REQUEST.  
PLEASE CONTACT OUR APPLICATION TECHNOLOGY DEPARTMENT!**

### BADAMID®

PA6 PA66 PA66/6 PA6/6T PPA  
PA46 PA9T PA12 PA612 PA610

### BADATECH HT® HIGH-PERFORMANCE COMPOUNDS

### BADAGREEN® SUSTAINABLE COMPOUNDS

### BADADUR® PBT BLENDS

### BADALAC® ABS-SPECIALITIES BLENDS

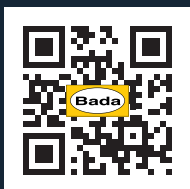
### BADALON® PC-SPECIALITIES BLENDS

### BADAFLEX® TPE-S TPU TPE-E

### BADAPRENE® TPV EPDM PP

### BADATRON® PPS

### BADAPROP® PP-SPECIALITIES



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