

# ALCOM® TC – THERMALLY CONDUCTIVE

Improving thermal management



**ALCOM® TC combines high thermal conductivity with the simplicity and design freedom of plastics. Especially in complex component assemblies, ALCOM® TC opens new possibilities for optimal heat management.**

One of the main reasons for the failure of electronic components is high temperature load. In order to prevent hot spots and failure, thermally conductive materials are necessary.

When compared to standard plastics, ALCOM® TC offers a significantly improved thermal conductivity which consequently results in a longer service life and improved performance of components in the E+E industry.

ALCOM® TC also offers design freedom for injection molding, enabling complex molded parts and versatile tooling possibilities. Furthermore, when comparing to conventional materials like metal, ALCOM® TC offers a significant weight reduction and is not prone to corrosion. To minimize wear on tools and machinery ALCOM® TC only uses fillers that possess low abrasion characteristics.

In the ALCOM® TC range interesting products are available for Electrical & Electronics, Automotive and Engineering industries. Depending on the requirements and application area, ALCOM® TCE (thermally and electrically conductive) or ALCOM® TCD (thermally conductive and electrically insulating) are available.

We would be pleased in helping you to find a solution to meet your specific needs and develop customer specific products that will reach your requirements.

## ALCOM® – THERMALLY CONDUCTIVE

### The advantages at a glance:

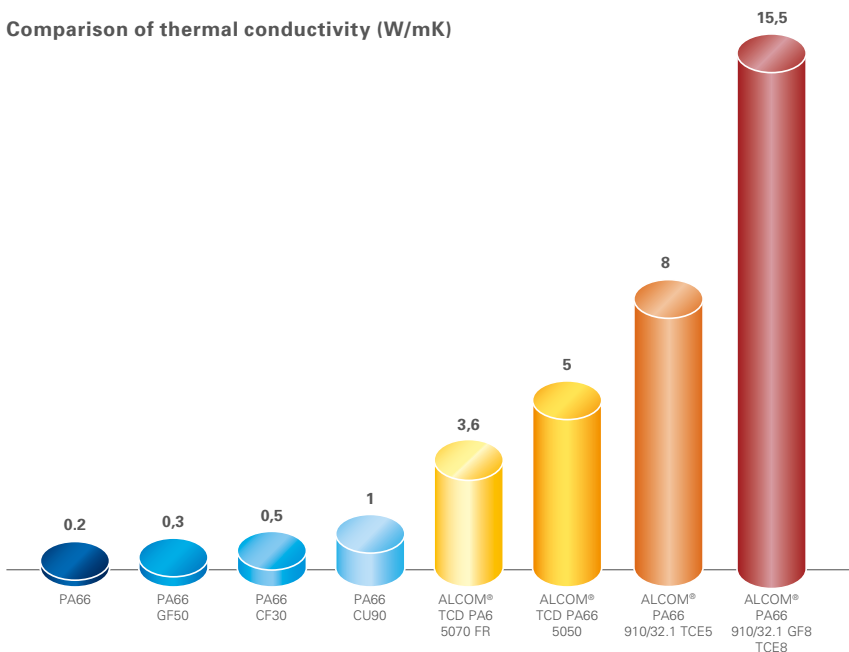
- Efficient heat dissipation
- Prevention of thermal hot spots
- Design freedom
- Protection of sensitive components
- Longer service life
- No corrosion
- Increased efficiency
- Low wear processing

Function	Polymer	Material Name	Benefits	Thermal Conductivity Integral Hot Disk (ISO 22007-2) [W/mK]	Thermal Conductivity In-plane / Through-plane Laser Flash (ASTM E 1461) [W/mK]	Flammability acc. to UL94 0.75 / 1.5 / 3.0 mm	Glow Wire GWFI (DIN EN 60695)
TCE	PA66	ALCOM PA66 910/32.1 TCE2	Low surface resistance allows for electrical discharge and conductivity	2.0	5.1 / 2.0	- / - / HB	850°C (2mm)
		ALCOM PA66 910/32.1 TCE5		5.0	8.0 / 2.0	- / - / V-0	960°C (1mm)
		ALCOM PA66 910/30.1 GF15 TCE5		5.0	10.7 / 2.6	- / - / V-0	960°C (1mm)
		ALCOM PA66 910/32.1 GF8 TCE8		8.0	15.5 / 3.5	- / - / V-0	960°C (1mm)
	PC	ALCOM TCE PC 5020 15011	For profile extrusion	0.7	1.1 / 0.5	-	-
TCD	PA6	ALCOM TCD PA6 5070 18058	Improved toughness and elongation at break	1.2	1.8 / 1.2	-	-
		ALCOM TCD PA6 5075 18057		2.0	3.2 / 1.5	-	-
	PA66	ALCOM TCD PA66 5050 14016	High thermal conductivity	2.3	5.0 / 1.5	- / HB / -	850°C (2mm)
TCD FR	PA6	ALCOM TCD PA6 5060 FR 16089	UL listed (Yellow Card)	1.2	1.8 / 1.1	V-2 / V-0 / V-0	960°C (1mm)
		ALCOM TCD PA6 5070 FR 15021		2.1	3.6 / 1.5	V-0 / V-0 / V-0	960°C (1mm)
	PPS	TEDUR TCD PPS 2570 17207	For highest temperature requirements	1.4	- / -	- / V-0 / V-0	960°C (2mm)
		TEDUR TCD PPS 2570 17065					
TCD CFX	PA6	ALCOM TCD PA6 5060 17179	Silver metallic effect for "Cool Touch" applications	1.0	1.3 / 1.0	-	960°C (1mm)
		ALCOM TCD PA6 5060 18067					

Additional products and information available on request.

ALCOM®TCD: thermally conductive and dielectrical  
ALCOM®TCE: thermally and electrically conductive

Comparison of thermal conductivity (W/mK)



## HEAD OFFICE

ALBIS PLASTIC GmbH  
Mühlenhagen 35 · 20539 Hamburg  
Tel.: +49 40 7 81 05-0 · Fax: +49 40 7 81 05-361  
info@albis.com · www.albis.com

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