

# ALCOM<sup>®</sup> TC – THERMALLY CONDUCTIVE

Improving thermal management



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

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

When compared to standard plastics, ALCOM<sup>®</sup> TC offers a significantly improved thermal conductivity which consequently results in a longer life-span as well as improved performance in the E+E industry.

ALCOM<sup>®</sup> TC also offers design freedom for injection molding, enabling complex molded parts and versatile tooling possibilities. Furthermore, when comparing to conventional materials e.g. metal, ALCOM<sup>®</sup> TC offers a significant reduction in abrasion and is not corrosive.

In our ALCOM<sup>®</sup> TC range, interesting products for the Electrical & Electronics, Automotive and Engineering industries are available. Depending on the requirements and application area, ALCOM<sup>®</sup> TCE (thermally and electrically conductive) or ALCOM<sup>®</sup> TCD (thermally conductive and electrically insulating) are available. To reduce the wear, which can occur in processing, to a minimum, low abrasive fillers are used in ALCOM<sup>®</sup> TCD.

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.

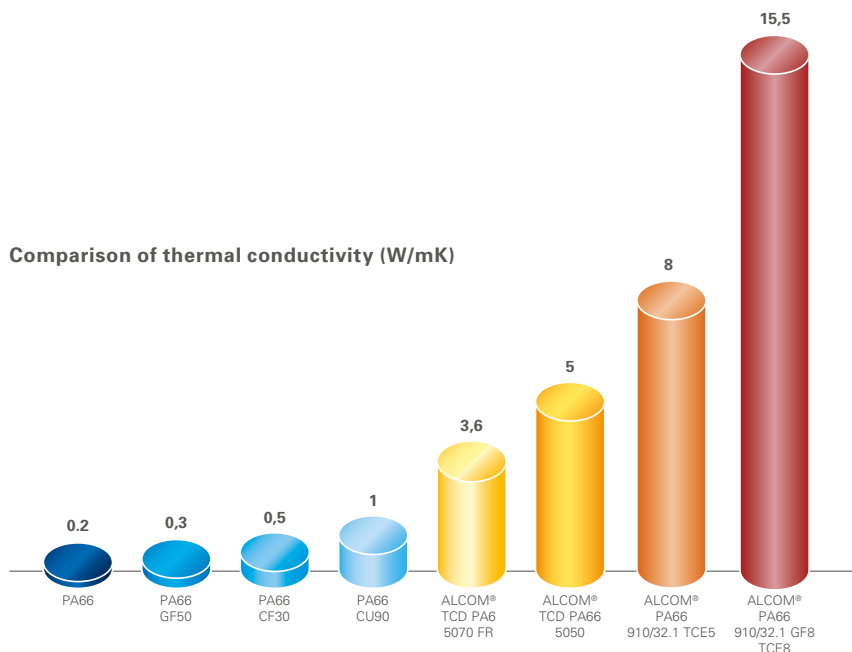
## **ALCOM<sup>®</sup> – THERMALLY CONDUCTIVE: advantages at a glance**

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

Polymer	Material name	Benefits	Thermal Conductivity Hot Disk/integral (ISO 22007-2) [W/mK]	Thermal Conductivity Laserflash in-plane/through-plane (ASTM E 1461)	Surface Resistance IEC 60093 (Ohm)	Comparative Tracking Index CTI IEC 60112	Flammability according UL94 0,75 / 1,5 / 3,0 mm	Example applications
PA6	ALCOM® TCD PA6 5060 FR 16089	<ul style="list-style-type: none"> <li>flame retardant, UL listed</li> <li>different colors</li> <li>good flow behavior</li> </ul>	1.2	1.3/1.0	> 10 <sup>12</sup>	600	V2/V0/V0	LED reflector, lamp housing, electronic housing
	ALCOM® TCD PA6 5070 FR 15021	<ul style="list-style-type: none"> <li>flame retardant, UL listed</li> <li>(f2) according to UL746C (water immersion)</li> </ul>	2.1	3.6/1.5	> 10 <sup>12</sup>	600	V0/V0/V0	LED reflector, electronic housing
PA66	ALCOM® TCD PA66 5050 14016	<ul style="list-style-type: none"> <li>high thermal conductivity</li> <li>different colors</li> </ul>	2.3	5.0/1.5	> 10 <sup>12</sup>	600	-/HB/-	LED reflector, electronic housing
	ALCOM® PA66 910/32.1 TCE5	<ul style="list-style-type: none"> <li>high thermal conductivity</li> <li>electrostatically dissipative (ESD)</li> </ul>	5.0	8.0/2.0	< 5.000	-	- / - / V0	lamp housing, motor housing, sensor housing
	ALCOM® PA66 910/32.1 GF8 TCE8	<ul style="list-style-type: none"> <li>good mechanical performance</li> <li>electrostatically dissipative (ESD)</li> </ul>	8.0	15.5/3.5	< 150	-	- / - / V2	heat exchanger
PC	ALCOM® TCE PC 5020 15011	<ul style="list-style-type: none"> <li>adhesion-modified</li> <li>extrusion &amp; coextrusion</li> <li>impact modified</li> <li>antistatic</li> </ul>	0.7	1.1/0.5	< 10 <sup>9</sup>	-	-/-/-	profiles, lamps, pipes, 3D print filament
PPS	TEDUR® TCD PPS 2565 16082	<ul style="list-style-type: none"> <li>good mechanical performance</li> <li>high temperature resistance</li> <li>very good chemical resistance</li> <li>high comparative tracking index (CTI 500)</li> </ul>	1.0	1.1/0.9	> 10 <sup>12</sup>	500	-/V0/V0	electronic housings, connectors, fuse box housings

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

Additional products and information available on request.



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