

Thermally Conductive Adhesives from Polytec PT



Description

Also available to buy online at [!\[\]\(666e09182d4cd268646ea700ea60dcdf_img.jpg\) SHOP !\[\]\(1ef1ef0bf9af6c6996401964cf280f2d_img.jpg\)](#)

Polytec PT offers a range of thermally conductive adhesives for technology applications. The products are two-part and single-part epoxy systems designed for all applications where heat transfer is essential, including heat-sinking and ceramic packaging.

“With Polytec we have about three times the pot life we had before, and the bubbles rise to the top so we can pretty much do what we want with it. Polytec TC 437 is now our preferred material” – Ben Moffat, Variohm

Processing	Cold-cured	Hot-cured	Hot-cured	Hot-cured
Components	2C	1C	2C	2C
Electrically insulating	Yes	No	Yes	No

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Processing	Cold-cured	Hot-cured	Hot-cured	Hot-cured
0-1 W/mK	TC 417-2 TC 437	-	TC 430	-
1-2 W/mK	TC 418	-	TC 420 TC 418	-
2-4 W/mK	-	-	TC 433	-
4 W/mK	-	EC 242 Frozen	-	VP 2026

Features & Benefits

- Excellent thermal conductivity – up to 4W/mK
- Both ambient and thermal cure options
- Process convenient packaging, including twin-packs, cartridges, and premixed and frozen syringes



Thermally Conductive Adhesives from Polytec PT



- Can bond difficult combinations of materials such as copper and aluminum
- Gap-filling
- Thermally conductive over large areas
- Resistant to most process media such as water, oil or gas

Applications



- Heat dissipation
- Chip bonding
- Heat sink bonding
- Power semiconductors
- Electronics

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- Opto-electronics
- Hybrid microelectronics
- Automotive
- Potting sensors and thermistors
- Heat exchangers
- Battery cells

Product name	Features	Application
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<p>Polytec TC 351</p>	<ul style="list-style-type: none">· Thermal conductivity ($\text{W}\cdot\text{m}^{-1}\cdot\text{K}^{-1}$): 0.8· Number of components: 1· Temperature range: -55 to +200°C (300°C short-term)· Consistency: creamy paste· Colour: black	<p>Polytec TC 351 is a single component, thermally conductive epoxy with good thermal conductivity. It was designed for all applications where electrically insulating and thermally conductive bonds are desirable.</p> <p>Polytec TC 351 has a conveniently long pot and shelf life which is ideal for high volume dispensing techniques. Typical applications are bonding of sensors in metal holders and fixation of single devices on PCBs.</p>
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[Polytec TC 406](#)



- Thermal conductivity ($\text{W}\cdot\text{m}^{-1}\cdot\text{K}^{-1}$): 2.2
- Number of components: 2
- Mix ratio by volume: 2:1
- Temperature range: -55 to +150°C (240°C short-term)
- Consistency: creamy paste
- Colour: white

Polytec TC 406 is a pasty, two component epoxy which cures at room temperature, used for thermal management in electronics, lighting, hybrid technology, sensor technology and power engineering. It is supplied in a process-convenient side-by-side cartridge, ready for dispensing.

[Polytec TC 411](#)



- Thermal conductivity ($\text{W}\cdot\text{m}^{-1}\cdot\text{K}^{-1}$): 1.4
- Number of components: 2
- Mix ratio by volume: 2:1
- Temperature range: -55 to +120°C (220°C short-term)
- Consistency: creamy paste
- Colour: white

Polytec TC 411 is a pasty, two component, medium-hard epoxy which cures at room temperature, used for thermal management in electronics, lighting, hybrid technology, sensor technology and power engineering. It is supplied in a process-convenient side-by-side cartridge, ready for dispensing.



Polytec TC 417-2	<ul style="list-style-type: none">· Thermal conductivity ($\text{W}\cdot\text{m}^{-1}\cdot\text{K}^{-1}$): 0.80· Number of components: 2· Mix ratio by weight: 100:13· Temperature range: -55 to +180°C (250°C short-term)· Consistency: flowable paste· Colour: black	<p>Polytec TC 417-2 is a two component, thermally conductive, electrically insulating epoxy. It is used in various thermal management applications, like potting of large volumes. It has an excellent chemical and moisture resistance. It has an excellent adhesion to glass, metal, ceramic, FR4 and most plastics. The room temperature cure allows bonding of temperature sensitive substrates very conveniently.</p>
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<div>Polytec TC 422</div> <div>The logo for intertronics, with the word "intertronics" in a bold, black, sans-serif font and "SHOP" in a white, bold, sans-serif font inside an orange rectangle, followed by a shopping cart icon.</div>	<ul style="list-style-type: none">· Thermal conductivity ($\text{W}\cdot\text{m}^{-1}\cdot\text{K}^{-1}$): 0.8· Number of components: 2· Mix ratio by volume: 2:1· Temperature range: -55 to +160°C (260°C short-term)· Consistency: pasty· Colour: blue	<p>Polytec TC 422 is a pasty, two component epoxy with excellent adhesion, particularly to metals such aluminium and stainless steel. It is used for thermal management in electronics, lighting, hybrid technology, sensor technology and power engineering. It is supplied in a process-convenient side-by-side cartridge, ready for dispensing.</p>
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<p>Polytec TC 430</p>	<ul style="list-style-type: none">· Thermal conductivity ($\text{W}\cdot\text{m}^{-1}\cdot\text{K}^{-1}$): 0.7· Number of components: 2· Mix ratio by weight: 100:4· Temperature range: -55 to +250°C (350°C short-term)· Consistency: thixotropic paste· Colour: yellow	<p>Polytec TC 430 is a two-component, thermally conductive, electrically insulating epoxy. It is suggested for applications where heat dissipation and insulating properties are required. Typical applications include attaching heat sinks, die attach, die bonding power devices and thermally conductive underfill.</p> <p>Polytec TC 430 has an excellent adhesion to ceramic, glass, semiconductor materials, ferrous and non-ferrous metals and most plastics.</p> <p>Also available pre-mixed, frozen, bubble-free and thixotropic and non-flowing version.</p>
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Polytec TC 433	<ul style="list-style-type: none">· Thermal conductivity ($\text{W}\cdot\text{m}^{-1}\cdot\text{K}^{-1}$): 2.0· Number of components: 2· Mix ratio by weight: 100:5· Temperature range: -55 to +220°C (320°C short-term)· Consistency: thixotropic paste· Colour: white/brown	<p>Polytec TC 433 is a thixotropic, two component, highly thermally conductive, electrically insulating epoxy for thermal management in micro and power electronics, energy engineering etc. It has an excellent adhesion to ceramic, glass, semiconductor materials, ferrous and non-ferrous metals and most plastics.</p>
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Polytec TC 437	<ul style="list-style-type: none">· Thermal conductivity ($\text{W}\cdot\text{m}^{-1}\cdot\text{K}^{-1}$): 0.6· Number of components: 2· Temperature range: -55 to +180°C (230°C short-term)· Mix ratio by weight: 10:1· Consistency: thixotropic paste· Colour: white/yellow	<p>Polytec TC 437 is a two-component, thermally conductive electrically insulating epoxy which can be cured at room temperature within 16 hours. Typically applications include attaching heat sinks, thermally conductive underfill, thermistor potting, die attach and heat management for power semiconductor devices. Excellent adhesion to ceramic, glass, semiconductor materials, metals and most plastics.</p>
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For the latest SDS for this product, please e-mail msds@intertronics.co.uk

Other Information

See how **Polytec TC 437** works as part of a real application in this Potting Compound [Case Study](#):

<p>CASE STUDY</p> <p>intertronics adhesives, coatings, sealants & equipment for your manufacturing and technology applications</p> <p>Polytec TC 437 Thermally conductive epoxy</p>  	<p><u>We pot the green for Variohm with custom thermal potting compound</u></p> <p>Potting compound requiring good thermal conductivity and an extended pot life in a custom made colour.</p>
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Ordering Information

Thermally Conductive Adhesives from Polytec PT



01865

842842



orders@intertronics.co.uk

- Name*
- Company*
- Phone*
- Email*
- Post code*

If you're in the UK, knowing your postcode would help us get in touch even more quickly. If you're outside the UK, please indicate your country.

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- Tell us about your application

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Supplied by:



INTERTRONICS
12a Station Field Industrial Estate, Banbury Road, Kidlington
Oxfordshire England OX5 1JD
t 01865 842842 e info@intertronics.co.uk

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