

Polytec PT Thermally Conductive Adhesives in Cartridges



Description

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

Polytec PT Thermally Conductive Adhesives are packed in **50ml side-by-side cartridges** for convenient manual processing. **Polytec TC 406**, **Polytec TC 411** and **Polytec TC 422** are two-component epoxies that cure at room temperature and are used for thermal management in electronics assembly, hybrid circuits, sensor manufacture and power engineering.

- **Polytec TC 406** offers some of highest thermal conductivity available in cartridge-packaged epoxies (2.2 W/mK)
- **Polytec TC 411** has very good thermal conductivity (1.4 W/mK) alongside a Shore D 38 hardness for extra flexibility and resilience
- **Polytec TC 422** offers an easy-to-process 50,000 cP viscosity for good flow characteristics

We also offer several other [thermally conductive adhesives from Polytec](#), supplied in bulk containers, twin-packs, or premixed and frozen syringes.

Polytec TC 406	Polytec TC 411	Polytec TC 422
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Polytec PT Thermally Conductive Adhesives in Cartridges



Mechanical properties	rigid	flexible	rigid
Thermal conductivity	2.2 W/mK	1.4 W/mK	0.8 W/mK
Temperature stability	good	good	good
Adhesion to Al	very good	very good	very good
Adhesion to cataphoretic paint	very good	very good	very good
Adhesion to PA		very good	

Features & Benefits

- Cartridge packaging allows for simple processing
- Application direct from the cartridge with a static mixing nozzle, using a [dispensing gun](#)
- Adhesives are supplied in the correct mixing ratio
- High thermal conductivity, particularly with Polytec TC 406
- Electrically insulating
- Flexible version available (Polytec TC 411)
- Cures at room temperature; curing can be accelerated with heat

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- Room temperature storage

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These cartridge-packaged adhesives can be easily dispensed with a simple dispensing gun or with a [Fisnar DTD50 50ml cartridge dispenser](#)

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Applications

Polytec PT thermally conductive adhesives are designed for thermal management in:

- electronics
- lighting
- hybrid technology
- sensor technology
- power engineering
- other high-performance technology applications

Specifications

Specification	Method	Polytec TC 406	Polytec TC 411	Polytec TC 422
Colour when mixed	TM 101	white	white	blue

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Specification	Method	Polytec TC 406	Polytec TC 411	Polytec TC 422
Mix ratio by volume	–	2:1	2:1	2:1
Pot life at 23°C (h)	TM 702	0.5	2	1
Shelf life at 23°C (months)	TM 701	12	12	12
Consistency	TM 101	pasty	pasty	pasty
Specific gravity when mixed (g/cm³)	TM 201.2	1.9	1.5	1.9
Viscosity when mixed at 23°C (cP)	TM 202.1	180,000	140,000	50,000
Hardness (Shore D)	DIN EN ISO 868	85	38	85
Max. service temperature (continuous) (°C)	TM 302	-55 / +150	-55 / +120	-55 / +160

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Specification	Method	Polytec TC 406	Polytec TC 411	Polytec TC 422
Max. service temperature (short-term) (°C)	TM 302	240	220	260
Degradation temperature (°C)	TM 302	300	280	310
Glass transition temperature (T _g) (°C)	TM 501	65	<20	65
Thermal conductivity (W/mK)	TM 502	2.2	1.4	0.8
Young's Modulus (N/mm ²)	TM 605	5000	n.d.	7500
Tensile strength (N/mm ²)	TM 605	27	3	44
Lap sheer strength (Al/Al) (N/mm ²)	TM 604	14	7	19

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Specification	Method	Polytec TC 406	Polytec TC 411	Polytec TC 422
Elongation at break (%)	TM 605	3.5	11	1.2
Dielectric strength (V/mm)	-	10	-	-
Min. curing temperature (°C)	–	15	15	15
Curing time at 23°C (h)	–	24	48	24
Curing time at 80°C (min)	–	60	90	60
Flammability	–	UL94 V-0	–	–

Ordering Information

Polytec PT Thermally Conductive Adhesives in Cartridges



Part number	Description
<div>POLTC406-50ML</div> <div><div>SHOP </div></div>	<div>Polytec PT TC 406 epoxy adhesive, 50 ml cartridge</div>
<div>POLTC411-50ML</div> <div><div>SHOP </div></div>	<div>Polytec PT TC 411 epoxy adhesive, 50 ml cartridge</div>

Polytec PT Thermally Conductive Adhesives in Cartridges



Part number	Description
<div>POLTC422-50ML</div> <div>The intertronics logo, consisting of the word "intertronics" in a bold, lowercase, sans-serif font, with an orange horizontal bar underneath. Below the bar is an orange button with the word "SHOP" in white, uppercase letters, followed by a white shopping cart icon.</div>	Polytec PT TC 422 epoxy adhesive, 50 ml cartridge
IDM2N24	Static mixing nozzle
IDM805001	Manual dispensing gun 50ml 1:1/2:1 ratios

Let’s start by talking about your application

Polytec PT Thermally Conductive Adhesives in Cartridges



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.

-
- Tell us about your application

Polytec PT Thermally Conductive Adhesives in Cartridges



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