

Optical Adhesives & Encapsulants from Polytec PT



Description

Polytec PT offers a range of high performance optical adhesives for use in optical and medical applications. The materials are either optically clear or black opaque.

Features & Benefits

- Products with high clarity and excellent optical transmission
- Medically approved – ISO 10993
- Flexible epoxy systems
- Resistance to autoclaving and steam sterilisation
- Process convenient packaging, including twin-packs and premixed and frozen syringes
- Application specific formulations

Applications

- Medical device manufacture – USP Class VI
- Opto-electronics
- Hybrid microelectronics
- Optics
- Fibre optics
- Bonding
- Encapsulation

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- Impregnation
- Underfill

| Part number | Features | Applications |
|----------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Polytec EP 501 | <ul style="list-style-type: none">· Number of components: 1· Temperature range: -55 to +180°C· Consistency: creamy paste· Colour: transparent/white· Shore hardness: D85 | <p>Polytec EP 501 is a transparent, single component epoxy. It is suggested for applications as an adhesive with excellent adhesion to metals (silver, aluminium, copper, brass), ceramics, glass, FR4 and most plastics, as well as Glob Top material to prevent silver migration.</p> |

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| Part number | Features | Applications |
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| Polytec EP 601 | <ul style="list-style-type: none">· Number of components: 2· Mix ratio by weight: 100:35· Temperature range: -55 to +125°C· Consistency: flowable liquid· Colour: transparent clear· Shore hardness: D80 | <p>Polytec EP 601 is a transparent, two component, optically clear epoxy, designed for applications in optics, fibre optics, opto-electronics, medical and semiconductor technology. It has excellent adhesion to glass, PMMA, quartz, silicon, ceramic, metals, FR 4, wood and most plastics.</p> <p>EP 601 also exists in a low viscosity version, black-coloured, ultra low viscosity and in a thixotropic and non-flowing version. All are available pre-mixed, frozen and bubble-free.</p> <p>USP Class VI certified.</p> |

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| Part number | Features | Applications |
|----------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Polytec EP 610 | <ul style="list-style-type: none">· Number of components: 2· Mix ratio by weight: 100:50· Temperature range: -55 to +150°C· Consistency: flowable liquid· Colour: translucent· Shore hardness: A65 | <p>Polytec EP 610 is used for stress-free bonding of large optical components with different CTEs. This material is suggested for applications in the optics, fibre optics, opto-electronics, medical and semiconductor technology.</p> <p>EP 610 is also available in a thixotropic and non-flowing version. All are available pre-mixed, frozen and bubble-free.</p> |

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| Part number | Features | Applications |
|----------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Polytec EP 630 | <ul style="list-style-type: none">· Number of components: 2· Mix ratio by weight: 100:10· Temperature range: -55 to +230°C· Consistency: flowable liquid Colour: transparent <ul style="list-style-type: none">· Shore hardness: D85 | <p>Polytec EP 630 provides excellent high temperature, chemical, electrical and moisture resistance. Especially designed for applications in the semiconductor, medical, hybrid, piezo, fibre optics, HV and UHV application. It has an excellent adhesion to silicon, glass, metal, ceramic, ferrite and most plastics and can be used as low viscosity adhesive, epoxy impregnation, underfill and encapsulant. Polytec EP 630 passed > 1,000 autoclave steam cycles.</p> <p>Also available pre-mixed, frozen and bubble-free and low viscosity.</p> <p>USP Class VI certified.</p> |



| Part number | Features | Applications |
|----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Polytec EP 642 | <ul style="list-style-type: none">· Number of components: 2· Mix ratio by weight: 100:5· Temperature range: -55 to +250°C· Consistency: flowable paste· Colour: yellow/amber· Shore hardness: D85 | <p>Polytec EP 642 is a 100% solid, two component, medium viscosity, high Tg, high temperature resistant epoxy. It has an excellent chemical and moisture resistance and can withstand operating temperatures up to 350°C (intermittent). Suitable for fibre optic, medical, sensor and electronic assembly applications. Polytec EP 642 has excellent adhesion to glass, ceramic, ferrous and non-ferrous metals, most plastics and silicon.</p> <p>Also available as pre-mixed and frozen, single component version: Polytec EP 642-frozen.</p> |



| Part number | Features | Applications |
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| Polytec EP 653 | <ul style="list-style-type: none">· Number of components: 2· Mix ratio by weight: 100:10· Temperature range: -55 to +230°C· Consistency: flowable liquid· Colour: yellow/amber· Shore hardness: D85 | <p>Polytec EP 653 provides the ultimate in high temperature, chemical, electrical and moisture resistance. It was designed for semiconductor, medical, hybrid, piezo, fibre optics (such as medical endoscopes), HV and UHV applications. It has excellent adhesion to silicon, glass, metal, ceramic, ferrite and most plastics. Recommended as adhesive, impregnation, underfill and encapsulant. Polytec EP 653 passed > 500 autoclave steam cycles.</p> <p>Also available in black-coloured and opaque, thixotropic, and non-flowing versions. All are available pre-mixed, frozen and bubble-free.</p> <p>USP Class VI certified.</p> |

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| Polytec EP 655 | <ul style="list-style-type: none">· Number of components: 2· Mix ratio by weight: 100:10· Temperature range: -55 to +220°C· Consistency: flowable liquid· Colour: yellow/amber· Shore hardness: D80 | <p>Polytec EP 655 provides extreme temperature, chemical, electrical and moisture resistance. It was designed for medical, semiconductor, hybrid, piezo and fibre optic applications. It has excellent adhesion to glass, metal, ceramics, ferrite and most plastics. Recommended as an adhesive, impregnation and encapsulation. Its tough-elastic properties allow assemblies and potting of substrates with dissimilar coefficients of thermal expansion. Polytec EP 655 has passed more than 100 autoclave steam cycles.</p> |

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| Polytec EP 660 | <ul style="list-style-type: none">· Number of components: 2· Mix ratio by weight: 100:17· Temperature range: -55 to +240°C· Consistency: flowable liquid· Colour: light yellow· Shore hardness: D85 | <p>Polytec EP 660 is a 100% solid, two-component, low viscosity epoxy impregnation and coating material. It has an excellent chemical and moisture resistance and can withstand operating temperature up to 300°C. It is recommended as sealant and impregnation for all soaking surfaces like ceramic, wood, plastics, high temperature fabric and powder as well as fibre bundles. A typical application is the impregnation and sealing of the magnesium oxide filler in tubular heaters / heating elements.</p> |

Other Information

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|  | <p>Adhesive Problem? What's the Cure?</p> <p>A guide to adhesive bonding, considering structural bonding and the criteria involved for successful assembly.</p> |
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Ordering Information

Our technical team are on hand to discuss your application requirements. [Click here](#) to get in touch.

Find out more information on [how to purchase](#).

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