

# Opti-tec 5007-1 Clear Epoxy Adhesive for Optics



## Description

Also available to buy online at [!\[\]\(666e09182d4cd268646ea700ea60dcdf\_img.jpg\) SHOP !\[\]\(1ef1ef0bf9af6c6996401964cf280f2d\_img.jpg\)](#)

**Opti-tec 5007-1** is a two component, low viscosity clear epoxy adhesive with a two hour pot life, capable of curing within 20 minutes at 75°C. **Opti-tec 5007-1** has excellent sealing and bonding characteristics due to its viscosity and wetting properties. Cured material has high shock and impact resistance with outstanding chemical, moisture and thermal resistance.

The adhesive is designed for fibre optic terminating (*pot and polish* of fibre optic connectors), where its ability to cure at ambient or minimal raised temperatures gives process enhancements. It can be used for bonding and potting optical components such as prisms, lenses, LED displays and fibres, and for general precision bonding.

## Features & Benefits

- Clear adhesive with a viscosity of 1000 cps
- Also available in a blue version (Opti-tec 5007B-1) for ease of inspection in fibre terminating
- Two hour pot life after mixing and cures within 16-24 hours at room temperature. Cure can be achieved in 20 minutes at 75°C or 5 minutes at 100°C.
- High surface energy and low viscosity allows it to readily wet and wick between optical fibres. It develops strong adhesion to most materials used in fibre optics and optics, including metals,

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ceramics, glass and many plastics.

- Good impact and thermal shock resistance
- Low exotherm, low shrinkage, low stress cure
- Excellent chemical and moisture resistance with a very low exotherm, making it suitable for small potting and encapsulation applications
- Used for Telcordia GR-326-CORE compliant assemblies (*General Requirements for Singlemode Optical Connectors and Jumper Assemblies* – formerly Bellcore), where its high Tg and environmental robustness allow the termination to meet the specification. Note: optimal cure schedule required.
- Opti-tec 5007B-1, when cured, is considered non-cytotoxic and meets the requirements of the Elution Test, **ISO 10993-5**.

## Applications

- Fibre optic terminating, multimode fibres
- Endoscope manufacture and repair
- Optical potting & bonding
- Medical device assembly – ISO 10993-5
- Glass bonding

## Specifications

**Part number change:** as of version 4.0, April 2021, the part number of this product changed from Opti-tec 5007 to Opti-tec 5007-1 and Opti-tec 5007B to Opti-tec 5007B-1. This is due to an unavoidable change in a formulation component. This change does not affect the product data-sheet

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specifications. The new formulation has passed internal testing and is deemed to be equivalent.

Specification		
Colour	Opti-tec 5007-1 – clear Opti-tec 5007B-1 – blue	
Mix ratio	100:25 resin to hardener	
Mix viscosity	500-1500 cps	
Shelf life	12 months from date of manufacture	
Cure schedule	Bondline temperature 25°C 75°C 100°C	Time 16-24 hours 20 mins 5 mins
Pot life	2 hours @ 23°C (4g mix)	
Shrinkage on cure	2-3%	
Cured properties (5 minutes @ 100°C)		

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Specification	
Glass transition temperature (T <sub>g</sub> )	105°C
Specific gravity	1.1
Hardness	Shore D 85
Temperature resistance	-60 to 200°C
CTE	55 ppm/°C
Refractive index	1.55
Surface tension	42-44 mN/m

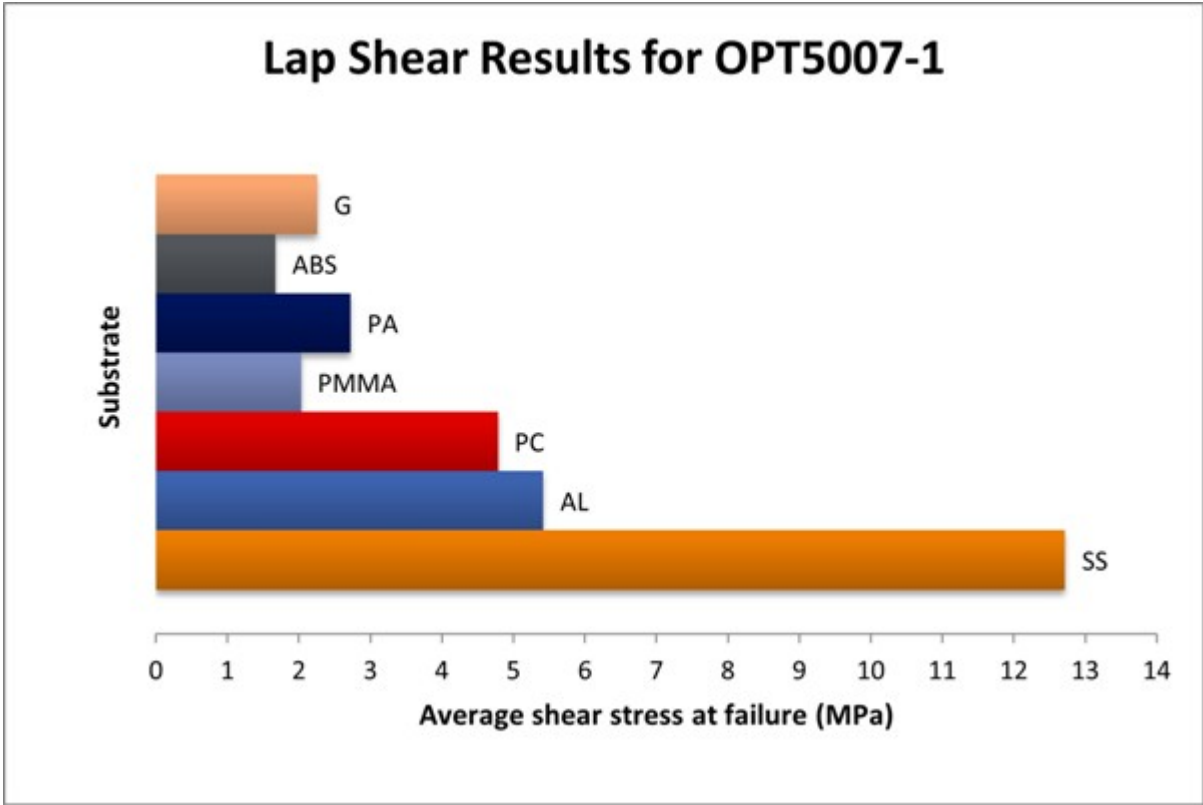
Lap shear adhesion	
Stainless steel	12.7 MPa
Aluminium 6082 T	5.4 MPa
Polycarbonate	4.8 MPa

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Lap shear adhesion	
PMMA	2.0 MPa
Nylon 6/6	2.7 MPa
ABS	1.7 MPa
Glass	2.3 MPa

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For the latest SDS for this product, please e-mail [msds@intertronics.co.uk](mailto:msds@intertronics.co.uk)

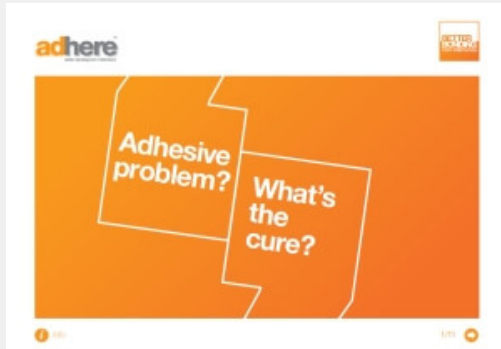
## Other Information



### [Structural Adhesives Selector Guide](#)

Start your adhesive selection process by reading our Structural Adhesives Selector Guide, detailing different chemistries and material specifications.

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## Adhesive Problem? What's the Cure?

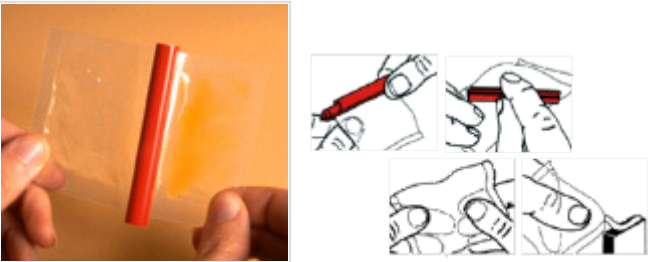
A guide to adhesive bonding, considering structural bonding and the criteria involved for successful assembly.

## Ordering Information

Optic-tec 5007-1 is available in twinpacks or bulk kits.



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The twinpack sachet is a clear film sachet, with the resin and hardener separated by a removable clip and rail divider. [Click here for twinpack mixing instructions.](#)

Standard twinpack size is 4g total weight. Optic-tec 5007-1 twinpack sachets are packaged in quantities of 5, sealed into a protective aluminium foil pouch. After opening pouch, use adhesive twinpacks within a few days, or tightly reseal the pouch with the enclosed desiccant to preserve shelf-life.

Part number	Description
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for Optics



<div>OPT5007-1-4G</div> <div><div>SHOP </div></div>	<div>Opti-tec 5007-1 epoxy – 5 x 4g twinpack sachets</div>
<div>OPT5007-1-500G</div> <div><div>SHOP </div></div>	<div>Opti-tec 5007-1 epoxy – 500g kit (approx 1.1lbs)</div>
<div>OPT5007B-1-4G</div> <div><div>SHOP </div></div>	<div>Opti-tec 5007B-1 blue epoxy – 5 x 4g twinpack sachets</div>

# Opti-tec 5007-1 Clear Epoxy Adhesive for Optics



<p>OPT5007B-1-500G</p>  The Intertronics logo, consisting of the word 'intertronics' in a bold, black, lowercase sans-serif font. Below it is an orange rectangular button with the word 'SHOP' in white uppercase letters and a white shopping cart icon to its right.	<p>Opti-tec 5007B-1 blue epoxy – 500g kit (approx 1.1lbs)</p>
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**Storage:** Store in the original unopened containers under cool dry conditions between 15° and 25°C.

**Medical devices:** It is the user’s responsibility to determine and validate the suitability of this adhesive in the intended medical device. This adhesive has not been tested for prolonged or permanent implantation, and is only intended for use in short term (28 days) or single-use disposable device applications. Intertronics does not authorise its use in long-term implant applications.

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Let’s start by talking about your application

# Opti-tec 5007-1 Clear Epoxy Adhesive for Optics



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[orders@intertronics.co.uk](mailto: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

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