

# Opti-tec 5013-1 Optically Clear, Fast Cure Epoxy Adhesive for Glass and Glass/Metal Bonding



## Description

Also available to buy online at [mouser.com](https://www.mouser.com)  SHOP 

**Opti-tec 5013-1** is a two-component, medium viscosity epoxy with high optical clarity. It has a fast room temperature cure, which can be accelerated by heat. Opti-tec 5013-1 is designed as an adhesive, or for small potting and encapsulation projects where high optical clarity, good wetting and medium viscosity are important.

Opti-tec 5013-1 can be used for bonding glass, quartz, metal and many plastics. It finds uses in the assembly and repair of glass items where a clear adhesive is required.

## Features & Benefits

- Optically clear
- Viscosity of 5,000-10,000 cps
- Sets within minutes and cures within hours at room temperature. It reaches handling strength in 30 minutes. Full cure can be achieved in 10 minutes at 65°C.
- High surface energy allows it to wet and wick between surfaces. It develops strong adhesion to most materials used in optics, including metals, ceramics, glass and most plastics.
- Good impact and thermal shock resistance
- Hard material after cure and can be polished

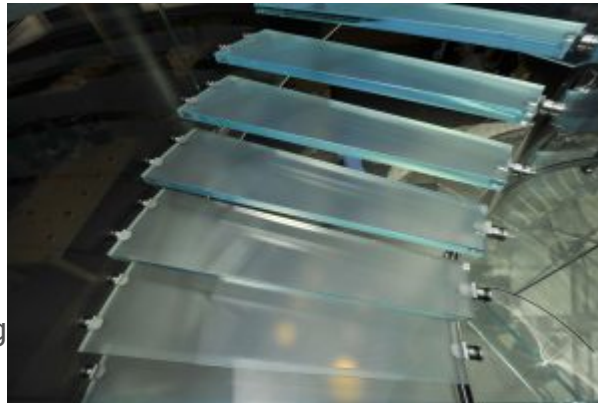
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- Good resistance to yellowing
- Supplied in convenient side-by-side double syringe cartridges, complete with static mixing nozzles.

## Applications

- Glass and metal bonding



- Repair of glass, wood, ceramic, metal
- Repair or restoration of minerals, gems and quartz crystals
- Optical assembly, optical filters, lenses, prisms
- Optical encapsulation & glob topping, small volume casting or potting
- Opto-electronics, photonics, LEDs

## Specifications

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**Part number change:** as of version 3.0, April 2021, the part number of this product changed from Opti-tec 5013 to Opti-tec 5013-1. This is due to an unavoidable change in a formulation component. This change does not affect the product data-sheet specifications. The new formulation has passed internal testing and is deemed to be equivalent.

Typical properties	Opti-tec 5013-1
Mix ratio	1:1 resin to hardener
Mixed viscosity	5-10 Pa.s (5,000-10,000 cps)
Colour	Clear, water white
Specific gravity	1.20
Pot life	5 minutes @ 23°C (2 gram mix) Recommended maximum application 2 grams Larger quantities may lead to exothermic reactions which may have undesired effects

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Typical properties		Opti-tec 5013-1
Cure schedule	Bondline temperature 23°C 65°C	Time 2 hours 10 mins
Cured properties (24 hours @ 23°C)		
Hardness	Shore D 70	
Temperature range	-60 to 125°C	
CTE	55 ppm/°C	
Lap shear strength (Al/Al)	8 MPa	
Refractive index	1.54	
Shrinkage on cure	3%	
Shelf life	12 months in original sealed containers	

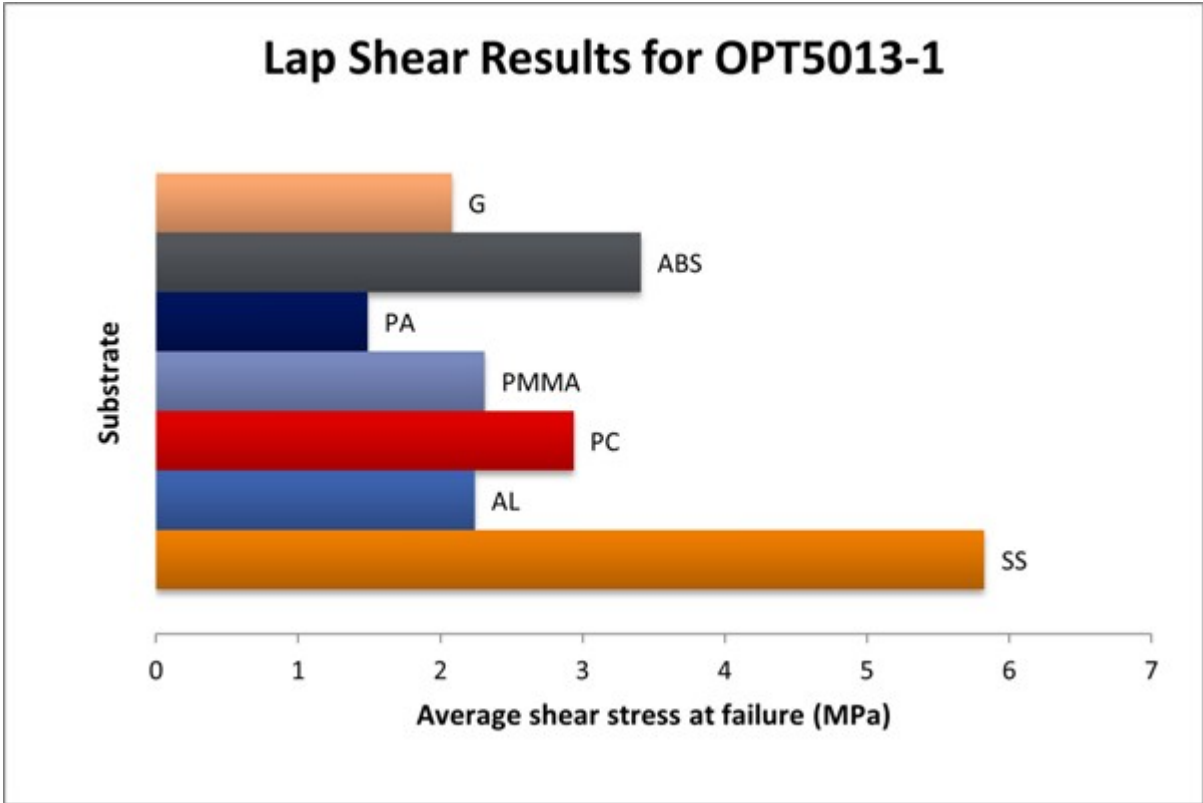
Adhesive bonded joints	Shear stress at failure (MPa)	Mode of failure
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Stainless steel	5.8	Adhesion
Aluminium 6082 T6 (AL)	2.2	Adhesion
Polycarbonate (PC)	2.9	Adhesion
PMMA	2.3	Adhesion
Nylon 6/6 (PA)	1.5	Adhesion
ABS	3.4	Adhesion
Glass (G)	2.1	Cohesive substrate

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Lap shear results for Opti-tec 5013

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## Safety Data Sheets

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.

Our [Technical Bulletins](#) page has links to:

- [Instructions: 50ml Side-by-Side Double Syringe Cartridges](#)
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See how **Opti-tec 5013-1** works as part of real application in this adhesive [Case Study](#):



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<div><div>CASE STUDY</div><div><div><div>Opti-tec 5013</div><div>Optically clear, fast-cure epoxy adhesive</div></div><div></div><div></div></div></div>	<div><div><u>Glass artist completes high-quality work in short timelines with Opti-tec 5013 epoxy</u></div><div>The award-winning glass artist, Anthony Scala, uses Opti-tec 5013 optically clear, fast-curing, glass epoxy to effectively repair sculptures without sacrificing process speed.</div></div>
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## Ordering Information

Opti-tec 5013-1 is available in a convenient side-by-side double syringe cartridge.

The OPT5013-1-50KIT contains a 50 gram cartridge of epoxy, a Syringe Gun and three static mixing nozzles. It is ideal for product evaluations or small quantity users.

Part number	Description
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<div>OPT5013-1-50G</div> <div><div>intertronics</div><div>SHOP </div></div>	Optically Clear Fast Cure Epoxy Adhesive, Double Syringe Cartridge, 50g
<div>IDM805001</div>	Syringe Gun – for 50g cartridges
<div>IDM2N10</div>	Static Mixing Nozzle (pkg 10) – for 50g cartridges
<div>OPT5013-1-50KIT</div> <div><div>intertronics</div><div>SHOP </div></div>	Contains 50g cartridge of epoxy, a Syringe Gun and three static mixing nozzles

**Storage:** Store in the original unopened containers under cool dry conditions between 15° and 25°C.

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Let's start by talking about your application



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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.

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Tell us about your application



Any information that you submit using this form will be processed according to our [privacy policy](#).

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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](mailto:info@intertronics.co.uk)

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