

Opti-tec 5020-1 Clear Epoxy Potting Compound



Description

Opti-tec 5020-1 is a clear, two component, low viscosity optical epoxy which will cure in thick sections at room temperature. In thin sections, it is clear and transparent. In thicker sections, it can take a yellow or straw tint. **Opti-tec 5020-1** is designed for potting and encapsulation of components where optical clarity, good wetting and low viscosity are important.

Opti-tec 5020-1-B is a **black** version with similar properties. See Specifications tab for details.

Features & Benefits

- Available in clear or black versions
- Degree of flexibility which reduces internal stresses
- Relatively low level of exotherm during cure making it safe to use with delicate components
- One hour pot life after mixing and cures within 24 hours at room temperature in thick sections
- Low viscosity allowing it to fill voids without air entrapment
- High gloss finish even when cured under high humidity
- Available in easy-to-use TwinPacks or bulk

Applications

- Potting or encapsulation
- Encapsulation of larger components

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- Optical assembly, optical filters, LEDs
- Optoelectronics
- Void filling in cables

Specifications

Part number change: as of version 7.0, November 2018, the part number of this product changed from Opti-tec 5020 to Opti-tec 5020-1 and Opti-tec 5020-B to Optic-tec 5020-1-B. This is due to an unavoidable change in a formulation component. This change does not affect the product data sheet specifications. Our tests have shown very similar performance to the previous version.

Typical Properties of OPT 5020-1	
Mix ratio	2:1 resin to hardener
Mixed viscosity	1 Pa.s (1000 cps) @ 25°C
Colour	Clear/straw
Density	1.15
Pot life	75 minutes @ 25°C

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Typical Properties of OPT 5020-1

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Cure schedule	Bondline temperature 25°C 60°C	Time 24 hours 4 hours
	Rate of cure will depend on temperature and volume. Thin films will take 2-3 days at 25°C.	
Cured properties		
Hardness, Shore D	60	
Temperature range	-55 to 115°C	
Tensile strength	50 MPa	
Dielectric strength	13 kV/mm	
Dielectric constant	4	
Volume resistivity	10^{14} ohm.m	
Shelf life	12 months in original sealed containers	

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Typical Properties of OPT 5020-1-B BLACK		
Mix ratio	2:1 resin to hardener	
Mixed viscosity	1 Pa.s (1000 cps) @ 25°C	
Colour	Black	
Density	1.15	
Pot life	75 minutes @ 25°C	
Cure schedule	Bondline temperature	Time
	25°C 60°C	24 hours 4 hours
	Rate of cure will depend on temperature and volume. Thin films will take 2-3 days at 25°C.	
Cured properties		
Hardness, Shore D	60	
Temperature range	-55 to 115°C	

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Typical Properties of OPT 5020-1-B BLACK

Tensile strength	50 MPa
Dielectric strength	13 kV/mm
Volume resistivity	10^{14} ohm.m
Relative permittivity	4
Shelf life	12 months in original sealed containers

Ordering Information

Opti-tec 5020-1 is available in twinpacks or in bulk.



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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 100g total weight.

Part number	Description
OPT5020-1-100G	Clear Epoxy Potting Compound – 100g twinpack sachet
OPT5020-1-750G	Clear Epoxy Potting Compound – 750g kit
OPT5020-1-B-100G	Black Epoxy Potting Compound – 100g twinpack sachet
OPT5020-1-B-750G	Black Epoxy Potting Compound – 750g kit

For optimal results, store away from strong alkalis, oxidising materials, acids, amines and oxidising agents. Prevent storage where formation of sparks or static electricity could be present. Keep only in the original container. Keep container tightly closed and upright, in a cool, well-ventilated place. Protect containers from damage. Bund storage facilities to prevent soil and water pollution in the event of spillage. The storage area floor should be leak-tight, jointless and not absorbent.

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