

## Techsil® TIM11123 GB Grey

Techsil® TIM11123 GB Grey is a 200 micron, self-gapping, non-corrosive, 1-part, room temperature vulcanising (RTV) silicone rubber. It is one of a new family of products called acetone cure sealants..

These products are cured rapidly in contact with atmospheric moisture to a tough rubber that exhibits an excellent thermal conductive property of **~2.3 W/m K**.

Techsil® TIM11123 GB Grey does not corrode copper or its alloys and exhibits excellent primerless adhesion to many substrates when fully cured.

### Key Features

- Non-corrosive
- Excellent adhesion
- Good spreading and tooling properties
- Low linear shrinkage
- Fast skinning
- Cure through 2 to 3mm in < 24hours
- Adhesion to most substrates improves with age until most are cohesive
- 200 micron self-gapping

### Use and Cure Information

#### How to Use

Techsil® TIM11123 GB is ready for use. If supplied in cartridges it can be applied using either manual or pneumatic dispensers.

It can also be applied from bulk containers using conventional drum dispensing equipment.

#### Application and Cure

All surfaces to which Techsil® TIM11123 GB is to be applied should be clean, dry and free from grease, dirt, and loose material.

Priming of surfaces is not normally required.

If Techsil® TIM11123 GB is being employed as an adhesive, it should be applied to one clean surface and the other clean surface brought into contact with it within 15 to 20 seconds.

For optimum bond strength the thickness of the sealant joint is 1 to 2mm.

Joints should be left undisturbed for at least 24 hours, but preferably longer to effect sufficient depth of cure.

Full cure requires 7 days.

#### Uncured Properties

Test	Test Method	Value
Colour		Grey
Appearance		Soft Paste
Viscosity	Brookfield	350000 mPa.s
Tack Free Time		4 minutes *
3mm Cure Through		<8 hours *

### Contact Details

Techsil Ltd

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**Cured Elastomer (after 7 days cure at 23+/-2°C and relative humidity)**

Test	Test Method	Value
Tensile Strength	BS903 Part A2	3.90 MPa
Elongation at Break	BS903 Part A2	103 %
Hardness	ASTM D 2240-95	67° Shore A
Specific Gravity	BS 903 Part A1	2.11
Linear Shrinkage		0.5 %
Thermal Conductivity		2.30 W/mK
Coefficient of Thermal Expansion		
Volumetric		493 ppm / °C
Linear		164 ppm / °C
Min. Service Temperature		-50 °C
Max. Service Temperature	AFS 1540B	220 °C

**Electrical Properties**

Test	Test Method	Value
Volume Resistivity	ASTM D-257	$>1 \times 10^{14} \Omega \cdot \text{cm}$
Dielectric Strength	ASTM D-149	$>20 \text{ kV/mm}$
Dielectric Constant at 1MHz	ASTM D-150	4.90
Dissipation Factor at 1MHz	ASTM D-150	$0.9 \times 10^{-3}$

**Adhesion Testing**

Test	Test Method	Value
Overlap Shear Strength	ASTM D 1002	$\text{kg/cm}^2$
Copper		3.60
Aluminium		7.15
Stainless Steel 304		2.98

Customers are advised to carry out their own tests on clean, degreased substrates to ensure satisfactory adhesion is achieved. Stress cracking can appear on some grades of polycarbonate. Customers are advised to carry out initial testing to ensure product compatibility.

All values are typical and should not be accepted as a specification

**Health and Safety** – Material Safety Data Sheets available on request.

**Packages** - 310 ml cartridges and 25 kg pails. Please discuss alternative packages with your Sales Manager

**Storage and Shelf Life** – Expected to be 12 months in original, unopened containers.

**DISCLAIMER**

This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any other process. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy themselves as to the suitability of such information for their particular use.

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