

# Technical Datasheet

## Penloc® GTH-T



### Product Description

Modified acrylate | 2 part | solvent-free | room temperature

- ▶ bonding materials such as metal, glass, ceramics, wood and many plastics (except PE and PP)
- ▶ High-performance structural adhesive for metals
- ▶ high temperature resistance up to 180 ° C
- ▶ good impact resistance and high tensile shear and peel strength

### Curing Properties

This product is a two-component adhesive. The adhesive can be applied after mixing the two components in their appropriate ratios. All two-component adhesives have a determined pot life. Consideration should be given to the amount of adhesive that is mixed, as it must be applied within the noted pot life for optimal dispensing and assembly.

Mixing ratio	Pot life
1:1	2 min

This adhesive can be cured at room temperature. Typical curing parameters are listed in the table below.

Curing	Time
Handling strength	5 – 10 min
Final strength	4 – 6 h

The curing times are only provided as a guideline. They are derived from curing a 2g adhesive sample without affixed substrates in a laboratory environment. Actual cure times can vary based on part size, configuration, adhesive volume, temperature control.

### Technical Data

Resin	Methacrylate
Appearance part A	light brown
Appearance part B	green
Appearance mix	transparent

# Technical Datasheet

## Penloc® GTH-T



Uncured Material	
Viscosity [mPas] (Brookfield LVT, 25 °C) part A <i>PE-Norm 001</i>	8,000 – 10,000
Viscosity [mPas] (Brookfield LVT, 25 °C) part B <i>PE-Norm 001</i>	8,000 – 10,000
Viscosity [mPas] (Brookfield LVT, 25 °C, Sp. 4/30 rpm) mix <i>PE-Norm 001</i>	8,000 – 10,000
Density [g/cm <sup>3</sup> ] <i>PE-Norm 004</i>	1.03
Flash point [°C] <i>PE-Norm 050</i>	> 90
Cured Material	
Hardness shore D <i>PE-Norm 006</i>	65 – 75
Temperature resistance [°C]	-40 – 180
Shrinkage [%] <i>PE-Norm 031</i>	< 2
Water absorption [%] <i>PE-Norm 016</i>	< 3
Glass transition temperature - DSC [°C] <i>PE-Norm 009</i>	146
Coefficient of thermal expansion [ppm/K] below Tg <i>PE-Norm 017</i>	69
Coefficient of thermal expansion [ppm/K] above Tg <i>PE-Norm 017</i>	174
Dielectric strength [kV/mm] <i>DIN EN 60243</i>	31 – 37
Young's modulus – Tensile test [MPa] <i>PE-Norm 056</i>	1,492
Tensile strength [MPa] <i>PE-Norm 014</i>	27
Elongation at break [%] <i>PE-Norm 014</i>	5
Lap shear strength steel/steel [MPa]	28
Lap shear strength stainless steel/stainless steel [MPa]	27
Lap shear strength Al/Al [MPa]	23

# Technical Datasheet

## Penloc® GTH-T



### Transport/Storage/Shelf Life

Package type	Transport	Storage	Shelf life*
Syringe/Cartridge	At room temperature max. 25 °C	At room temperature max. 25 °C	Delivery min. 4.5 months max. 9 months
Other packages			

**\*Store in original, unopened containers!**

### Surface preparation

The surfaces to be bonded should be free of dust, oil, grease, mold release, or other contaminants in order to obtain an optimal and reproducible bond. For cleaning we recommend the cleaner IP® from Panacol, or a solution of Isopropyl Alcohol at 90% or higher concentration. Substrates with low surface energy (e.g. polyethylene, polypropylene) must be pretreated in order to achieve sufficient adhesion.

### Application

Our products are supplied ready to use. Depending on packaging they can be applied by hand directly from the container or by using compatible dispensing systems and automation.

Static mix tips provide the ability to efficiently mix the adhesive while dispensing. Many commercially available valve and controller options are available for two-part adhesives to ensure accurate and consistent adhesive dispensing. For assistance with dispensing and curing questions, please contact our Applications Engineering department. To obtain best results, the adhesive and substrates to be bonded may not be cold and should be allowed to warm to room temperature prior to processing.

### Storage

Store uncured product in its original, closed container in a dry location. Any material removed from the original container must not be returned to the container as it could be contaminated. Panacol cannot assume responsibility for products that were improperly stored, contaminated, or repackaged into other containers.

### Handling and Clean-up

For safe handling information, consult this product's Material Safety Data Sheet (MSDS) prior to use. Uncured material may be wiped away from surfaces with organic solvents. Do not use solvents to remove material from eyes or skin!

# Technical Datasheet

## Penloc® GTH-T



### Disclaimer

The product is free of heavy metals, PFOS and Phthalates and is conform to the current EU-Directive RoHS.

**THE VALUES NOTED IN THIS TECHNICAL DATA SHEET ARE TYPICAL PROPERTIES AND ARE NOT MEANT TO BE USED AS PRODUCT SPECIFICATIONS.**

The information contained in this data sheet is believed to be accurate and is provided for information only. Panacol makes no representation or warranties of any kind concerning this information. It is the user's responsibility to determine the suitability of this product for any intended use. Panacol does not assume responsibility for test or performance results obtained by the user. The user assumes all risk and liability connected with the use of this product.

The user should adopt such precautions and use guidelines as may be advisable for the protection of property and persons against any hazards that may be involved in this product's handling or use. Panacol specifically disclaims any liability for consequential or incidental damages of any kind arising from the handling or use of this product. The information contained in this Technical Data Sheet offers no assurance that the product use, application, or process will not infringe on existing patents or licenses of others. Nothing in this Technical Data Sheet transfers or grants license for the use of any patents, trade secrets, intellectual property, or confidential information that is the property of Panacol.

Except as otherwise noted, all trademarks in this document (identified as ®) are the property of Panacol.

### Contact

Panacol-Elosol GmbH  
Stierstädter Straße 4  
61449 Steinbach  
Germany  
Phone: +49 6171 6202-0  
Mail: [info@panacol.de](mailto:info@panacol.de)  
[www.panacol.com](http://www.panacol.com)

Panacol-USA, Inc.  
142 Industrial Lane  
Torrington CT 06790  
USA  
Phone: +1 860-738-7449  
Mail: [info@panacol-usa.com](mailto:info@panacol-usa.com)  
[www.panacol-usa.com](http://www.panacol-usa.com)

Panacol-Korea Co., Ltd.  
#707, Kranz Techno,  
388 Dunchon-daero  
Junwon-gu, Seongnam  
Gyeonggi-do, 13403 KOREA  
Phone: +82 31 749 1701  
Mail: [info@panacol-korea.com](mailto:info@panacol-korea.com)  
[www.panacol-korea.com](http://www.panacol-korea.com)

Eleco Panacol – EFD  
125, av Louis Roche  
Z.A. des Basses Noëls  
92238 Gennevilliers Cdx FRANCE  
Tél.: +33 (0)1 47 92 41 80  
Mail: [eleco@eleco-panacol.fr](mailto:eleco@eleco-panacol.fr)  
[www.eleco-panacol.fr](http://www.eleco-panacol.fr)