

EUROBOND Penloc HP

Product Description

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

<input type="checkbox"/> bonding materials such as metal, glass, ceramics, wood and many plastics (except PE and PP)	<input type="checkbox"/> high temperature resistance up to 180 °C
<input type="checkbox"/> High-performance structural adhesive for metals	<input type="checkbox"/> 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.

The final bond strength of the adhesive is achieved no sooner than 12 h.

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

Contact Details

TECHSiL Limited
Unit 34, Bidavon Industrial Estate, Waterloo Road, Bidford on Avon, Warwickshire, B50 4JN
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Uncured Material	
Viscosity [mPas] (Brookfield LVT, 25 °C) part A PE-Norm 001	8,000 – 10,000
Viscosity [mPas] (Brookfield LVT, 25 °C) part B PE-Norm 001	8,000 – 10,000
Viscosity [mPas] (Brookfield LVT, 25 °C, Sp. 4/30 rpm) mix PE-Norm 001 Density [g/cm ³]	8,000 – 10,000
PE-Norm 004	1.03
Flash point [° C] PE-Norm 050	> 90

Cured Material	
Hardness shore D PE-Norm 006	65 – 75
Temperature resistance [°C]	-40 – 180
Shrinkage [%] PE- Norm 031	< 2
Water absorption [%] PE- Norm 016	< 3
Glass transition temperature - DSC [° C] PE-Norm 009	146
Coefficient of thermal expansion [ppm/K] below Tg 69 PE-Norm 017	69
Coefficient of thermal expansion [ppm/K] above Tg 174 PE-Norm 017	174
Dielectric strength [kV/mm] DIN EN 60243	31 – 37
Young ´s modulus – Tensile test [MPa] PE-Norm 056	1,492
Tensile strength [MPa] PE-Norm 014	27
Elongation at break [%] PE-Norm 014	5
Lap shear strength steel/steel [MPa]	28
Lap shear strength stainless steel/stainless steel [MPa]7	27
Lap shear strength Al/Al [MPa]	23

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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!

Instructions for use

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 IPA®. Substrates with low surface energy (e.g. polyethylene, polypropylene) must be pre-treated 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 mixers provide the ability to efficiently mix the adhesive while dispensing. To obtain best results, the adhesive and substrates to be bonded must 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. Techsil Ltd 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!

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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