



SOLE DISTRIBUTORS OF
REINHARDT-TECHNIK
 Machines for the application of adhesives & sealants
PANACOL ELOSOL
 Adhesive systems

Bonham Drive, Eurolink Industrial Estate
 Sittingbourne, Kent. ME10 3RY
 Tel 01795 427888 Fax 01795 479685
 Email sales@eurobond-adhesives.co.uk
 Web www.eurobond-adhesives.co.uk

PENLOC VT PLUS

Penloc VT Plus is a 1.1, methacrylate-based structural adhesive designed for general purpose use bonding a wide variety of materials in industrial applications. Penloc VT Plus forms tough, durable bonds to most plastics, composites, metals, ceramics and other durable substrates in all combinations without the use of special primers. Surface cleaning or preparation is not required in almost all cases. Penloc VT Plus is a fast curing product with a 5-10 minute open time and will cure to a handling strength in approx 8-14 minutes at room temperature. The cure time was designed for high speed manufacturing processes where fast fixture is required. Penloc VT Plus is easily dispensed from packaged cartridges or with commercial dispensing equipment as non-sag, creamy gel, with no stringing. The product was designed for use with a static mixer nozzle and the two components have a balanced viscosity for ease of mixing. DO NOT use methylated spirit or white spirit to clean substrates as these will react with the adhesive and may lead to bond failure. Isopropyl alcohol should be used to clean dirt from substrates and allowed to dry prior to bonding.

Uncured Properties

	Part A	Part B
Viscosity (cps TE, 2.5rpm)	250,000	250,000
Density (g/cc)	0.965	0.965
Colour	Off white	Off White
Flash Point (LCC)	10.6°C	10.6°C
Mix Ratio (wt & Volume)	1:1	

Curing Properties

Mixed Viscosity, cps (TE 2.5rpm)	250,000
Mixed Density	0.965 g/cc
Working Time	5-8 minutes
Handling Strength	10-15 Minutes
Full Cure	approx 1 hour depending on substrates and temp.

*Curing properties are highly dependent on the specific application and the materials being bonded. The ranges used here are based on representative examples of typical applications.

Cured Properties

Colour	Light Amber/beige
Hardness	75 D
Elongation	10% estimated
Operating Temp	-51 - 121°C

Bond Performance

(As received surfaces with no preparation)

Tensile Shear (ASTM D1002)

Fibreglass/Fibreglass	Substrate failure
ABS/ABS	Substrate failure
Steel/Steel	295.77 Kg/cm ²
Aluminium/Aluminium	242.95 Kg/cm ²
PVC/PVC	Substrate failure
SMC/SMC	Substrate failure
PMMA/PMMA	Substrate failure
Gelcoat/Gelcoat	Substrate failure

Peel Strength (ASTM D1876)

Steel/Steel	15 – 20 pli
-------------	-------------

Impact Strength (Auto side impact test)	>6.78 Joules/in ²
---	------------------------------

Chemical Resistance

Penloc VT Plus, exhibits excellent resistance to commonly encountered chemicals and service environments. Depending on the materials being bonded Penloc VT Plus will retain bond strength in boiling water, salt water, kerosene, petrol, diesel, antifreeze, hydraulic fluids and cutting oils. End users should carry out their own testing to determine the suitability of the adhesive to specific chemicals and environments. NOT RECOMMENDED to exposure to MEK, Acetone, 100% low molecular weight aromatics, aldehydes and ketones. The material can be used with conventional meter/mix/dispense equipment. Penloc VT Plus should be stored in a cool place, away from direct sunlight. Shelf life is 6 months. Penloc VT Plus is available in 50ml, 400ml cartridges and 20 litre bulk containers.

Temperature Resistance

Penloc VT Plus has been tested on bonded steel and aluminium at 190°C in a tunnel oven for 20 minutes during the powder coat process, without any deterioration to the bonded parts. End users should satisfy themselves through proper testing as to the suitability of the adhesive to their specific powder coating process.

No liability is accepted for any injury, loss or damage arising directly or indirectly from the use of the Company's products or from the use of information given in our publications, which is intended to serve as a guide only. Customers should satisfy themselves by appropriate and proper trials that the adhesive products are suitable for their intended use.

