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Metering, Mixing & Dispensing Systems

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Technical Data Sheet

Penloc GTi Clear

Penloc GTi Clear is a high strength, **Transparent**, toughened acrylic adhesive, which will bond glass, clear and coloured acrylic, polycarbonate, metals, plastics, wood, glass and composites to themselves or in any combination.

Penloc GTi Clear is a unique two part adhesive. It is applied via a minimixer nozzle fitted to the cartridge. It produces clean perfectly clear bond lines every time.

TYPICAL PROPERTIES

Colour (mixed) **Transparent**
Viscosity 3,000
Specific gravity 1.01
Temperature Range -55°C to 125°C

Handling strength 3-5 minutes
Working strength 30-60 minutes
Full strength 24 hours

TEST RESULTS

The test results, shown on table 1 on page 2, were achieved after the following surface preparation:

STEEL: Polished with emery paper, washed with acetone and dried in desiccators for 24 hours.

OTHER METALS: Washed with Trichloroethylene, washed with acetone, then dried in a desiccator for 24 hours.

PLASTICS: Washed with methanol, dried in desiccator for 24 hours.

TABLE ONE

MATERIAL	TENSILE SHEAR
	kg/cm²
Steel/Steel	276
Zinc Chromate/Zinc Chromate	180
Nickel/Nickel	193
Chrome/Chrome	162
Brass/Brass	228
Stainless Steel/Stainless Steel	204
Copper/Copper	244
Aluminium/Aluminium	224
Zinc/Zinc	214
Epoxy FRP/Epoxy FRP	84*
Phenol FRP/Phenol FRP	65*
PVC/PVC	35*
Polyester/Polyester	31
Styrol/Styrol	24
ABS/ABS	47
PA-6 (Nylon 6)	20
Glass	50

TABLE TWO

Aluminium / Aluminium (Mill finish)	>5.00	>500
Aluminium / Aluminium (Chromated finish)	>5.00	>500
Stainless Steel / Aluminium (Mill finish)	>5.00	>500
Stainless Steel / Stainless Steel	>5.00	>500
Aluminium / Acrylic* (Chromated)	3.18	318
Aluminium / Polycarbonate* (Chromated)	3.00	300
Acrylic / Acrylic*	2.12	212
Acrylic* / Polycarbonate	2.27	227
Polycarbonate / Polycarbonate*	3.07	307

TABLE TWO Continued

Komacel / Komacel* 0.65 65.6

Zintec / Zintec 5.00 >500

N.B. Tensometer had testing facility up to 5.00KN

*Denotes substrate failure of particular material.

ADDITIONAL DATA

Penloc GTi Clear should not be used on stressed acrylic ie flame polished edges or laser cut edges as the stress caused by the adhesive curing/shrinking process may cause tiny stress fractures in the acrylic. It is advisable to carry out bonding tests and leave for a period of 48 hours to determine its suitability for your specific application.

Surface Preparation

All surfaces should be abraded with medium grit emery paper, cleaned with Isopropyl alcohol and wiped dry with a clean cloth. **DO NOT** use petroleum based products such as Methylated Spirits or White Spirits to clean surfaces as these will degrade the adhesive over time and lead to bond failure. This degree of preparation is designed to represent typical working practices as opposed to 'laboratory conditions' where solvent cleaning and chemical etching of surfaces might be employed.

All metal to metal samples produced tensile shear strengths of >500 kg/inch², the limit of the tensometer used being 5Kn, and the samples remaining intact.

N.B.

Bonded area was one square inch in each case.

Chemical Resistance

Steel to steel dipped for 7 days.		
Blank not dipped	283kg/cm ²	0% loss.
Petrol	246kg/cm ²	13
Water	225kg/cm ²	20
Caustic Soda 10%	223kg/cm ²	21
Cylene	195kg/cm ²	31
Ethyl Acetate	91kg/cm ²	68