

A 5005

General Description

A 5005 is a high strength, fast curing two-part structural adhesive system. On application, the grade's high viscosity is ideal for both gap filling and vertical surface applications. This unique Methacrylate chemistry can offer excellent tensile and impact strength, even without priming the surfaces. In addition, the advanced macro structure provides the bonded assembly with excellent environmental and chemical resistance in the most demanding applications.

Typical Applications

**Sign Fabrication and Installation Automotive Assembly GRP Fastening Systems
Turbine Manufacture Industrial Battery Manufacture Marine Stringer Assembly**

Typical Properties Cured Material

Hardness ASTM Shore D 75
Shrinkage (7 days) 5%
Tensile Strength at break * 20 N/mm²
Elongation at break 2.4%
Typical Handling Strength 1-2 Hours (Heavy Duty)

Chemical Resistance

Excellent Resistant to:

- × Hydrocarbons
- × Acids and Bases (3-10 ph)
- × Salt Solutions

Physical Appearance

Adhesive Part A

Chemical Type Methyl Methacrylate
Appearance Off White Gel
Specific Gravity 0.96 (approx)
Viscosity @20°C mPa·s
Brookfield Helipath 100,000 cps approx
Flash Point 11°C

Activator Part B

Chemical Type Methyl Methacrylate
Appearance Amber/Yellowish Gel
Specific Gravity 0.97 (approx)
Viscosity @20°C mPa·s
Brookfield Helipath 100,000 to 180,000
Flash Point 11°C

Mixture A&B

Appearance Opaque Gel
Specific Gravity 0.97 (approx)
Viscosity @20°C mPa·s Brookfield Helipath < 4Min 100,000 to 150,000
Mix Ratio By Weight 1:1
Mix Ratio By Volume 1:1
Working Time 10g Mass 3 Minutes
Working Time in Nozzle 3-4 Minutes
Fixture time Steel @ 20°C 6-8 Minutes

Note: Plastics may be faster

ASTM D1002 Lap Shears

On steel/steel - Up to 30 N/mm²
On aluminium/aluminium - Up to 27 N/mm²
On polycarbonates ** - Up to 8 N/mm²
On ABS/ABS ** - Up to 10 N/mm²

* Average Result

** Substrate failure

Suitable Substrates

**ABS – Acrylics – GRP – FRP – Styrenes – Urethanes – Vinyl - Carbon Fibre –
Steel – Aluminium - St.Steel – Gelcoats – Polyesters - PVC**

Terminology

(1) Working/Open Time: The time interval between application of adhesive to substrate, and the possible assembly/repositioning of the two mating parts @ 20°C

2) Fixture Time: The length of time after the substrate assembly that will allow a joint to support a 1kg dead weight. (Tested on a 12mm x 25mm overlapped joint @ 20°C)

TDS