

Macroplexx®

structural adhesives

TDS 5020

General Description

MACROPLEXX® 5020 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 Balustrade Manufacture
Industrial Battery Manufacture Composite Pipe Assembly

Chemical Resistance

Excellent Resistant to:

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

Packaging

- 25ml Syringe
- 50ml Cartridge
- 250ml Universal
- 400ml Cartridge
- Bulk Dispensing Systems

Physical Appearance

Adhesive Part A

Chemical Type	Methyl Methacrylate
Appearance	Off White Gel
Specific Gravity	0.97 (approx)
Viscosity @20°C mPa·s	
Brookfield Helipath	130,000 to 150,000
Flash Point	11°C

Activator Part B

Chemical Type	Methyl Methacrylate
Appearance	Amber/Yellowish Gel
Specific Gravity	0.95 (approx)
Viscosity @20°C mPa·s	
Brookfield Helipath	150,000 to 200,000
Flash Point	11°C

Mixture A&B

Appearance	Opaque Gel
Specific Gravity	0.97 (approx)
Viscosity @20°C mPa·s	
Brookfield Helipath < 4Min	150,000 to 200,000
Mix Ratio By Weight	1:1
Mix Ratio By Volume	1:1
Working Time 10g Mass	5-7 Minutes
Working Time in Nozzle	5-7 Minutes
Fixture time Steel @ 20°C	10-12 Minutes

Typical Properties Cured Material

Hardness ASTM Shore D	75
Shrinkage (7 days)	5%
Elongation at break	2.4%
Typical Handling Strength	2-4 Hours (Heavy Duty)

ASTM D1002 Lap Shears (Tensile Result)

Steel/steel	Up to 30 N/mm ²
Aluminium/aluminium	Up to 27 N/mm ²
Polycarbonate *	Up to 13 N/mm ²
On ABS/ABS *	Up to 8 N/mm ²

* Substrate failure

Suitable Substrates

ABS	Styrenes	Steel	Gelcoats
Acrylics	Urethanes	Aluminium	Polyesters
GRP	Vinyl	St. Steel	PVC
FRP			

Application Instruction

Please consult Macroplexx application manual.

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)



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