Macroplexx®
structural adhesives

TDS 5005

General Description

MACROPLEXX© 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

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

Typical Properties Cured Material

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

ASTM D1002 Lap Shears

On steel/steel	Up to 30 N/mm^2
On aluminium/aluminium	Up to 27 N/mm^2
On polycarbonates **	Up to 8 N/mm^2
On ABS/ABS **	Up to 10 N/mm^2

* Average Result
** Substrate failure

Suitable Substrates

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

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)

Holdtite® performance adhesives

TDS 5005-5/6/2007

Portobello Industrial Estate, Birtley, County Durham, United Kingdom, DH3 2RE **Tel:** +44 (0)191 411 3191 **Fax:** +44 (0)191 411 3192
E-mail: info@holdtite.com **Web:** www.holdtite.com

Last Revision 19-03-07