

Macroplexx®

structural adhesives

TDS 5545

General Description

MACROPLEXX® 5545 is a high strength, two-part structural adhesive system, designed to offer high impact strength and fatigue endurance, whilst allowing an extended open time. This grade's high viscosity makes it ideal for both high gap filling and vertical surface applications, whilst also providing a large amount of flexibility. Although primarily designed to bond Thermoplastics, this grade is capable of achieving excellent adhesion to composites, and most metals.

Typical Applications

Bus Panel Fabrication Thermoplastic Doors Architectural Fibreglass Automotive Part 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 Paste
Specific Gravity	0.92 (approx)
Viscosity @20°C mPa·s	
Brookfield T Spindle	100,000 to 150,000

Activator Part B

Chemical Type	Epoxy Peroxide
Appearance	Blue Gel
Specific Gravity	1.12 (approx)
Viscosity @20°C mPa·s	
Brookfield T Spindle	50,000 to 100,000

Mixture A&B

Appearance	Blue Thixotropic Gel
Viscosity @20°C mPa·s	
Brookfield Helipath < 4Min	60,000 to 150,000
Mix Ratio By Weight	9:1
Mix Ratio By Volume	10:1
Working Time in Nozzle	25-35 Minutes
Fixture time Steel @ 20°C	30-40 Minutes

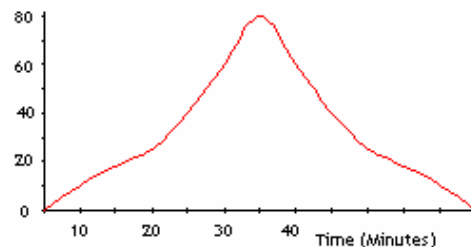
Note: Plastics may be faster

Typical Properties Cured Material

Tensile Strength	16 N/mm ² Average
Elastic Properties	Up to 125%
Cohesive Strength (D1002)	Up to 12 N/mm ²
Gap Filling Ability	Up to 20mm
Heat Resistance	-35 °C to 150°C

Exothermic Properties 10g Mass

Temperature Deg C



Suitable Substrates

ABS	Styrenes	Aluminium	Gelcoats
Acrylics	Urethanes	GRP	Polyesters
FRP	Vinyl	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)



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