

Product Description

Bondchem M103 is a two component reduced odour structural methacrylate adhesive, designed for the high strength bonding of metal, wood and composite applications. M103 has been formulated from innovative technology, including our revolutionary adhesion and reduced linear shrinkage system. This unique system enables the M103 to achieve the ultimate balance of mechanical strength and high impact resistance whilst still remaining both simple and quick to use

Typical Applications

Bondchem M103 is very versatile, and can bond a wide variety of substrates without the need for surface primers or conditioners. Typical examples shown below:

- Bonding metal fasteners to moulded composite parts.
- Bonding wooden supports to GRP sheets.
- Bonding and sealing two part GRP tanks

Properties of Uncured Material

Resin	Methyl Methacrylate
Colour	Yellow/White
Appearance	Thixotropic Gel
Viscosity Brookfield T Bar	400,000 to 600,000cps
Cure System	Exothermic
Open Time	4-6 Minutes @ 20°C 10g Mass
Handling Strength	6-9 Minutes @ 20°C 10g Mass
SG Part A	0.98
SG Part B	0.91

Performance of Cured Material

ASTM D1002 Lapshear	(Average over 16 tests)
Aluminum	17.6 Nmm ²
Stainless Steel	18.9 Nmm ²
Mild Steel	25.9 Nmm ²
GRP	Substrate Failure
ABS	Substrate Failure
PET G	Substrate Failure
Gap Fill	0.7mm to 4mm
Standard Temperature Range	-55°C to 120°C
Shore Hardness	77 Shore D
Tensile Strength at break (ISO 527 1A)	19.75 Nmm ²
% Elongation at break (ISO 527 1A)	14%

Compatible Substrates

Aluminum	Wood
Stainless Steel	GRP
Mild Steel	Marble
UPVC	Urethanes
Polyesters	Vinyl Esters
ABS	FRP
Gelcoat	Thermoset Plastics

Instructions For Use

1. Always consult MSDS before using M103 for the first time.
2. Carry out surface preparation where required. *
3. Remove cap, and attach mixer nozzle.
4. Dispense sufficient adhesive to ensure equal mix.
5. Apply adhesive to one surface and assemble components carefully, clamping if required.
6. It is always easier to remove any excess adhesive prior to cure using a suitable cleaner *
7. Allow the adhesive sufficient time to achieve handling strength before moving or unclamping components.

Curing Cycle

Once mixed at the 1:1 ratio the working time of the M103 is the period whereby the adhesive remains fluid and is easily transferrable between two or more mating surfaces. Temperature, volume and substrate have a direct effect on the length of this period as the Bondchem M103 cures by an exothermic reaction. Higher temperatures and larger volumes speed the reaction causing a reduction in open and cure time. Lower temperatures and smaller volumes slow the reaction time extending both the open time and ultimate full cure time.

Clean Up

Following dispense any excess adhesive should be removed prior to cure with the appropriate Bondchem cleaner

Packaging

Bondchem M103 is available in 25ml syringes and 50ml, 250ml Universal and 400ml Nylon cartridges for use with a dispensing gun. M103 is also available in 20 litre pails and 200 litre drums, for use with our BC1 dispensing system.

Storage & Shelflife

Bondchem M103 should be stored unopened in suitable hazardous storage conditions for flammable adhesives that are cool, dry location and out of direct sunlight. Stored correctly, this grade can offer a 12 month shelf life from it's manufacture in the UK.

Health and Safety in Use

Bondchem M103 is a methyl methacrylate and should not be used without consulting the MSDS, which contains full information regarding the use of this product, including Transport, Disposal, Toxicological, Exposure Controls, Accidental Release and First Aid measures essential to the safe use of this product.