



TECHNICAL DATA SHEET

VM100 BLACK 10MIN METHACRYLATE ADHESIVE

DESCRIPTION VuduGlu™ VM100 Black is a high strength, toughened methyl methacrylate structural adhesive offering unbeatable bonding of composite materials and bonding of metal fasteners and substrates to composite materials.

USES VM100 Black is specially formulated to offer the very best performance for demanding structural bonding and is highly recommended for carbon-to-carbon and carbon-to-metal assembly. The adhesive is black in colour and therefore leaves a discreet bond-line when bonding carbon fibre or other dark materials.

As well as carbon fibre/epoxy laminates, VM100 Black is also ideal for bonding a range of glass fibre (GRP) laminates made using a range of resin systems including epoxy, polyester and vinylester and also demanding metal-to-metal bonding.

- Carbon fibre to carbon fibre assembly (automotive/motorsport panels)
- GRP assembly (boat hulls, jet-skis etc.)
- Bonding fasteners to carbon fibre or other FRP laminates
- Bonding dissimilar metals for heavy transport
- General bonding for more demanding applications (sign making, architectural use, art installations etc.)

UNCURED PROPERTIES

Resin	Methyl Methacrylate
Colour	Dark Grey/Black
Viscosity Brookfield T Bar	120,000 to 150,000cps
Appearance	Thixotropic Gel
Cure System	Exothermic
Open Time	7 Minutes @20°C 10g Mass
Handling Strength	12 Minutes@ 20°C 10g Mass
Specific Gravity of Part A	0.96
Specific Gravity of Part B	0.91

COMPATIBILITY**VM1000 BLACK IS SUITABLE FOR BONDING THE FOLLOWING SUBSTRATES**

Plastics & Composites	Metals
Epoxy CFRP / GRP / FRP	Aluminium
Polyester CFRP / GRP / FRP	Stainless Steel
Vinylester CFRP / GRP / FRP	Mild Steel
UPVC	Galvanised/Zinc Coated Metals
ABS	Other Materials
Acrylic	Wood
Polyurethane	Granite
	Marble

CURED PROPERTIES**BOND STRENGTH BY SUBSTRATE**

ASTM D1002 Lapshear	Average Result (Over 16 Tests)
Aluminium	20.4 Nmm ²
Stainless Steel	38.4 Nmm ²
Mild Steel	32.8 Nmm ²
GRP	Substrate Failure
ABS	Substrate Failure
Acrylic	Substrate Failure

OTHER CURED PROPERTIES

ASTM D638 Tensile Strength	Up to 30 Nmm ²
Gap Fill	4mm
Standard Temperature Range	-55°C to 120°C
Paint Bake Cycle Approval	20 Minutes @ 220°C
Aluminum lapshear following moist cataplastm 7 days @ 70°C	26.7 MPA
Peel Strength Aluminium	6 KN/m
Shore Hardness	75 Shore D

MIXING RATIO**1 p.b.w. VM100 PART A****1 p.b.w. VM100 PART B***(automatically delivered by twin tube dispenser pack)***USAGE INSTRUCTIONS**

- Ensure surfaces to be bonded clean and degreased.
- 'Key' surfaces to be bonded using an abrasive paper.
- Remove any dust from the keying process.
- If using a static mixer nozzle, dispense and dispose of a small amount of adhesive before applying the adhesive to the surfaces to bonded.
- Apply the adhesive to one surface and assemble components using clamps where necessary to hold parts in place during cure.
- Although VM100 Black will initially cure in around 10-12 mins, allow at least 24hrs before putting the bonded component into service.

CURING CYCLE

Once mixed at the 1:1 ratio the working time of the VM100 is the period when 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 VuduGlu™ VM100 Black 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.

In typical conditions (10g at 20°C ambient), peak exotherm occurs around 12mins after initial mixing.

PACKAGING

VuduGlu™ VM100 Black is available in 25ml syringe, 50ml twin tube and 400ml twin tube packaging. 1 static mixer nozzle is included with each adhesive cartridge.

A dispenser gun is not required for the 25ml syringe but is required for the 50ml and 400ml twin tube packs. Dispenser guns are available to buy separately from Easy Composites.

We recommend the use of static mixer nozzles with all VuduGlu™ adhesives. Please see the table below to ensure you purchase the correct nozzle fitting type.

	25ml Syringe	50ml Twin Tube	400ml Twin Tube
Dispenser Gun	<i>None</i>	 CG-50ML	 CG-400ML
Nozzle	  <i>TYPE 1 FITTING</i> SMN-50ML	  <i>TYPE 1 FITTING</i> SMN-50ML	  <i>TYPE 1 FITTING</i> SMN-400ML-T1

STORAGE

For maximum shelf-life, VM100 Black should be stored unopened in a cool, dry, dark location suitable for flammable, hazardous materials.

SHELF LIFE

Stored as described above, VM100 Black has a shelf life of 12 months from the date of manufacture.

Our technical advice, whether verbal, or in writing is given in good faith, but without warranty - this also applies where proprietary rights of third parties are involved. It does not release you from the obligation to test the products supplied by us as to their suitability for the intended processes and uses.

Easy Composites Ltd, Unit 39 Park Hall Business Village, Longton, Stoke on Trent. ST3 5XA. UK.
Tel. +44 (0)1782 454499 Web. www.easycomposites.co.uk Email. sales@easycomposites.co.uk