



## 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

<b>Resin</b>	Methyl Methacrylate
<b>Colour</b>	Dark Grey/Black
<b>Viscosity Brookfield T Bar</b>	120,000 to 150,000cps
<b>Appearance</b>	Thixotropic Gel
<b>Cure System</b>	Exothermic
<b>Open Time</b>	7 Minutes @20°C 10g Mass
<b>Handling Strength</b>	12 Minutes@ 20°C 10g Mass
<b>Specific Gravity of Part A</b>	0.96
<b>Specific Gravity of Part B</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 <sup>2</sup>
Stainless Steel	38.4 Nmm <sup>2</sup>
Mild Steel	32.8 Nmm <sup>2</sup>
GRP	Substrate Failure
ABS	Substrate Failure
Acrylic	Substrate Failure

**OTHER CURED PROPERTIES**

ASTM D638 Tensile Strength	Up to 30 Nmm <sup>2</sup>
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 be 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	None	 CG-50ML	 CG-400ML
Nozzle	   TYPE 1 FITTING SMN-50ML	   TYPE 1 FITTING SMN-50ML	   TYPE 1 FITTING 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.

This data is not to be used for specifications. Values listed are for typical properties and should not be considered minimum or maximum.

Our technical advice, whether verbal or in writing, is given in good faith but Easy Composites Ltd gives no warranty; express or implied, and all products are sold upon condition that purchasers will make their own tests to determine the quality and suitability of the product for their particular application and circumstances.

Easy Composites Ltd shall be in no way responsible for the proper use and service of the product, nor for the safeguarding of personnel or property, all of which is the duty of the user. Any information or suggestions are without warranty of any kind and purchasers are solely responsible for any loss arising from the use of such information or suggestions. No information or suggestions given by us shall be deemed to be a recommendation to use any product in conflict with any existing patent rights.

Before using any of our products, users should familiarise themselves with the relevant Technical and MSDS provided by Easy Composites Ltd.

**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](http://www.easycomposites.co.uk) Email. [sales@easycomposites.co.uk](mailto:sales@easycomposites.co.uk)