Technical Datasheet

VM100 BLACK

VuduGlu™ Structural Adhesive

Key Features

- Easy to use
- Quick Cure Time
- Bonds Multiple Substrates
- High Bond Strength
- Methyl Methacrylate Chemistry
- 1:1 Mix Ratio (automatically delivered by twin tube dispenser pack)

Description

High performance, fast curing, black MMA acrylic adhesive recommended for the bonding of carbon fibre and other composite materials to each other and to a wide range of other substrates, including metals* and some plastics. The adhesive is black in colour therefore leaves a discreet bond-line when bonding carbon fibre or other dark materials.

Typical Uses

- 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.)

Compatibility

VM100 Black is suitable for bonding the following substrates:

- Epoxy CFRP/GRP/FRP
- Polyester CFRP/GRP/FRP
- Vinylester CFRP/GRP/ FRP
- UPVC
- ABS
- Acrylic
- Polyurethane
- Aluminium
- Stainless Steel
- Mild Steel
- Galvanised/Zinc Coated Metals
- Wood
- Granite
- Marble

*Copper and Copper alloys, including Brass can inhibit the cure of methacrylate adhesives

How to Use

To ensure a good bond and a strong joint, it is essential to prepare the surface properly and follow the usage guidelines below:

- Ensure surfaces to be bonded are clean and degreased.
- 'Key' surfaces to be bonded using an abrasive paper of 120 grit or coarser.
- Remove any dust from the keying process and clean surface using Acetone or similar strong solvent.
- Particular care is needed on surfaces that may have release agent traces to ensure their removal.
- If using a static mixer nozzle, dispense and dispose of a small amount or 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 to a handleable state in around 10-12 mins, allow at least 24hrs before putting the bonded component into service.

Curing Cycle

Once mixed, VM100 has a working time of 10 minutes, this is the period where the adhesive can be transferred between two or more mating surfaces.

Temperature and volume are big contributing factors to cure time with cool conditions and smaller quantities having both greater working time and taking longer to cure. In typical conditions (10g at 20°C ambient), the open time is around 7 minutes and peak exotherm occurs around 12mins after initial mixing.

Uncured Properties

Property	Value
Chemistry	Methyl Methacrylate
Colour	Dark Grey/Black
Viscosity Brookfield T Bar	12000 - 150000Cps
Appearance	Thixotropic Gel
Cure System	Exothermic
Open Time	7 Minutes @ 20°C 10g Mass
Handling Strength Time	12 minutes @ 20°C 10g Mass
Specific Gravity Part A	0.96
Specific Gravity Part B	0.91

Cured Properties

Bond Strength

Substrate	Result
Aluminium	20.4Nmm²
Stainless Steel	38.4Nmm²
Mild Steel	32.8Nmm²
GPR	Substrate Failure
ABS	Substrate Failure
Acrylic	Substrate Failure

All figures tested to ASTM D1002 lapshear and based on average over 16 test samples.

Other Cured Properties

Property	Value
Tensile Strength ASTM D638	up to 30 Nmm²
Gap Fill	4mm
Standard Temperature Range	-55°C - 120°C
Paint Bake Cycle Approval	20 minutes at 220°C
Aluminium lapshear following moist cataplasm 7 days @70°C	26.7MPa
Pell Strength Aluminium	6 KN/m
Shore Hardness	75 Shore D

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 and dispenser gun.

	25ml syringe	50ml cartridge	400ml cartridge
Pack			
Dispenser			
Nozzle Type	TYPE 1 (50ml)	TYPE 1 (50ml)	TYPE 3 (400ml)

Shelf Life and Storage

VM100 Black should be stored unopened in a dry, dark location. MMA type adhesives are very temperature sensitive and will degrade in higher temperatures. To maximise shelf life of the VM100 refrigerated storage* between 6°C and 12°C is recommended. Stored in this way, the adhesive has a shelf life of 12 months from the date of manufacture. If continuously cool conditions are not available, then the shelf life will reduce according to the table below:

Storage Temperature °C	Shelf Life
6-12	12 Months
20	9 Months
28	45 Days
35	20 Days

***If stored cold, allow the product to return to room temperature before using.**

Disclaimer

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