Technical Data Sheet

Effective: 18/08/2020 Supersedes: 01/02/2015

Automotive Aftermarket Division

3M™ 51002 DMS General Purpose Body Filler

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1) Part Numbers

51002

2) Description and end uses

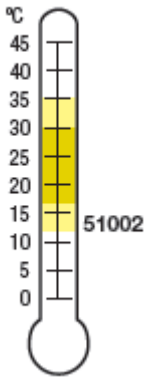
General Purpose Body Filler 51002: 276 ml two part cartridge system - 50:1 mixing ratio filler to hardener

3M™ 51002 is intended to be used as an automotive body repair material. This mid-weight polyester filler is capable of repairing imperfections such as dents in steel, galvanised and aluminium, as well as a finishing material over properly reinforced cracks in SMC and Fibreglass.
51002 General Purpose Body Filler is designed to be used with the 3M™ Dynamic Mixing System Applicator (PN 50600) and the 3M™ Dynamic Mixing System Nozzle (PN 50601).

3) Physical Properties

Container	Two Part Cartridge	
	Part A (Filler)	Part B (Hardener)
Base	Polyester resin with styrene monomer	Benzoyl Peroxide
Consistency	Viscous paste	Viscous paste
Density *(g/cm³)*	1.3	1.2
Colour	(off) White	Blue

The following times have been determined with ambient air temperature and a substrate temperature at 10° to 35° C and are considered typical values.



WORK TIME:	6 mins @ 10° C	3-4 mins @ 35° C
MIX NOZZLE DWELL TIME:	2-3 mins @ 10 ° C	2 mins @ 35° C
SAND TIME:	17-20 mins @ 10° C	14 mins @ 35° C

Usage temperature: 12° C – 35° C

Optimum temperature: 17 ° C – 30° C

4) Directions for Use

1 - Preparation

Surfaces should be thoroughly de-greased and free from dirt and dust. Sand the damaged are with a P80 abrasive disc. To remove any corrosion or broken paint, a suitable Bristle Disc or Fibre Disc should be used. Wipe dust away and clean the surface with Adhesive Cleaner.

Wear appropriate personal protective equipment when working with body filler. Refer to the relevant MSDS and 50600 DMS applicator user manual

2 - Application method

- Installing the nozzle
  - Remove sealing cap from cartridge
  - Align the 3M™ Dynamic Mixing Nozzle with the cartridge outlets, making sure to position the large outlet (cartridge) with the large inlet (nozzle) and the small outlet (cartridge) with the small inlet (nozzle).
  - Press in until locking retainers engage mixing nozzle

Note: If the cartridge is placed onto a hard surface with force, the driving rod can be dislodged and become loose. It can be pressed and clicked back into position by the simple use of a screw driver. Push the screwdriver through underneath the sealing cap and press the driving rod back in place

- Installing the cartridge
  - Position the cartridge with the larger diameter cylinder in the 11 o'clock position relative to the 3M™ Dynamic Mixing System Applicator.
  - Place the mounting flange end of the cartridge against the mounting plate of the applicator, making sure to align and insert the cartridge drive rod

with the applicator drive socket, located in the centre of the applicator mounting plate.
- Press the cartridge back against the mounting plate (this should occur without resistance if drive rod is aligned properly) and twist until the cartridge locks into place.

- Equalising the cartridge
  - Refer to the 3M™ Dynamic Mixing System Applicator manual for detailed instructions on applicator set up and safety information
  - Close down the regulator on the applicator into the fully off position
  - Attach an airline to the air inlet on the applicator
  - Open the regulator to obtain correct dispensing pressure (approximately 2 to 3 turns)
  - Using a disposable collection point, dispense a small amount of material by fully depressing the applicator trigger
  - Discard the very first 2-4 cm of filler bead from a new cartridge to allow initial equalisation, any further material is good to use.

Note: The initial extrusion contains both hardener and filler and due to the specific set-up of the cartridge, it will be a deep blue for the very first centimetre or two and become lighter thereafter.

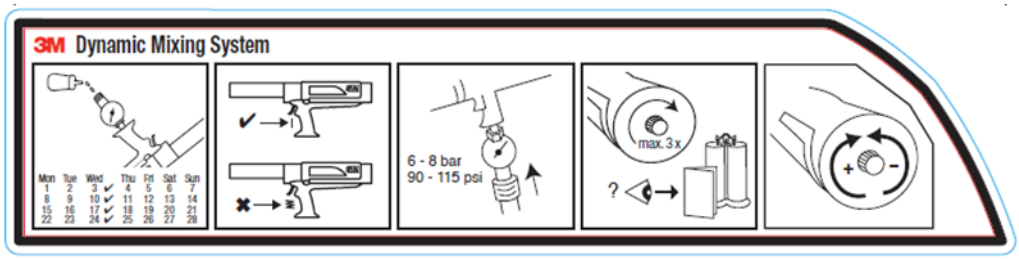
- Dispensing techniques
  - Material may be dispensed directly onto the damaged area, or onto a non-porous surface, such as a spreader or a mixing board.
  - Proceed with application method (i.e. spreading) as desired.
  - You may continue to dispense material until the normal material curing process clogs the mixing nozzle – typically after approximately 2 minutes without depressing the trigger. If more repair material is desired after curing has occurred, remove and install a new nozzle.
  - Maximum finished thickness should not exceed 6 mm, maximum layer thickness should not exceed 2-3 mm.

- Best practice application techniques to ensure minimal risk of pinholes

Keep nozzle tip always in the material, place beads directly next to each other.


To prevent air entrapment, avoid applying material as shown (no spaghetti balls / spaced bead)

- Best applicator handling (see sticker on applicator)
  - Oil weekly
  - Do not feather trigger
  - Inlet flow pressure should be between 6 – 8 bars
  - Max. 3 turns working speed



A small amount of equalisation waste with a new nozzle is possible if previous material was expressed with high pressure or if a large amount was expressed before.

Always check that the colour of the material coming out has a shade blue in it, if in doubt, discard the first couple of cm.

CAUTION: Be sure to replace nozzles containing fully or semi cured material to prevent damage to cartridge or nozzle or personal injury. If material is dispensed against a cured nozzle, re-equalisation of material might be needed. Dispose of uncured material in an approved receptacle.

<u>3 - Infra Red Curing</u>

- Do not start using an infra-red dryer prior to the filler starting to set!
- Refer to and follow the manufacturer's instructions when using IR equipment to cure 3M™ 51002
- The following are typical figures provided for guidance:
  - Short wave: 4 min at full power
  - 4:20:70 (4 minutes total time : Temperature increase 200C per minute : Maximum Temperature is 70°C)
  - Medium wave: 5-10 min at full power
- Distance from panel: Consult IR equipment manufacturers instructions

Best practice although is it to let the material cure at ambient temperature.

4 - Next steps – following layers

We recommend to use 2K primers as following layers as per paint system recommendations.

5) Storage

12 months from original date of manufacture in the original sealed packaging between 5° and 25 °C. Refer to label for expiry date.
Any opened cartridge can be stored with the used nozzle on for a few days; be sure to put a fresh nozzle on before using the cartridge.

6) Safety

Read full instructions and material safety data sheet before use.

IMPORTANT: This product contains hazardous materials and therefore appropriate personal protective equipment should always be used. Please refer to the label and consult the material safety data sheet for full handling instructions and personal protection information. These are available via your stockist. The supplier disclaims any liability where the user does not wear recommended personal protective equipment.

3M™ DMS General Purpose Body Filler is designed FOR PROFESSIONAL INDUSTRIAL USE ONLY.

7) Disclaimer

All statements, technical information and recommendations are based on tests we believe to be reliable as at the date of hereof, but the accuracy or completeness thereof is not guaranteed. Please ensure before using the product that it is suitable for your intended use. Since the conditions and methods of use of the product and of the information referred to herein are beyond our control, other than for fraudulent misrepresentation, 3M expressly disclaims any and all liability as to any results obtained or arising from any use of the product or reliance on such information.

For Additional Health and Safety Information

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