



# Technical Data Sheet

Effective: 16/05/2019 Supersedes: 10/08/2018

## Automotive Aftermarket Division

### 3M™ 37455 FC Epoxy Metal Filler

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#### 1) Part Numbers

3M™ 37455 FC Epoxy Metal Filler

#### 2) Description and end uses

FC Epoxy Metal Filler 37455: 180 ml two-component u-TAH® Universal Cartridge uses a 2:1 mixing ratio (base to hardener).

3M™ 37455 is intended to be used as an automotive body repair material. This fast curing epoxy filler is capable of repairing imperfections such as dents in steel, galvanized steel and aluminum, for the final shaping on difficult-to-reach/rebuild areas or welded joints. It is designed to substitute traditional tin soldering and it is free of isocyanate, silicones and lead.

FC Epoxy Metal Filler is designed to be used with commercially available cartridge applicators that are equipped with a piston rod (manual, pneumatic with inlet pressure 5 – 5.5 bar, battery) and the 3M™ Static Mixing Nozzle (PN 51875).

#### 3) Physical Properties

Container	Two-component u-TAH® Universal Cartridge	
	Part A (Hardener)	Part B (Base)
Base	Fatty acid unsaturated, Dimere, Polymer	Bisphenol A/ Diglycidylether-Polymer
Consistency	Viscous paste	Viscous paste
Density	1,02 g/cm <sup>3</sup>	1, 01 g/cm <sup>3</sup>
Colour	black	cream-white

The following times have been determined with ambient air temperature and a substrate temperature at 20 – 25°C and are considered typical values.

Work Time: ~ 15- 20 min. @ 22 °C  
Mix Nozzle dwell time: ~ 15- 20 min. @ 22 °C  
Sand time: ~ 4 h @ 22 °C or  
~ 10 - 20min. @ 70 °C Object temperature (IR Curing)

Usage temperature: 10 – 40 °C  
Optimum temperature: 15 – 35 °C

Tipp for use: warming up the surface to ~30°C before material application will help to accelerate curing, particularly at cold ambient temperatures

## 4) Directions for Use

### Preparation

Surfaces should be thoroughly de-greased and free from dirt and dust. Sand the damaged area with a P80-P120 abrasive disc. To remove any corrosion or broken paint, a suitable Fibre Disc or 3M™ Bristle Disc should be used. Wipe dust away and clean the surface with 3M™ 08984 General Purpose Adhesive Cleaner.

Wear appropriate personal protective equipment when working with FC Epoxy Metal Filler. Refer to the relevant MSDS and applicator user manual.

### Application method

#### Installing the cartridge:

- Screw off coupling ring and remove cap
- Insert the cartridge into a suitable application gun
- Before attaching the mixer to the cartridge, squeeze out a small amount of material until both components run equally
- Attach static mixer
- Do not use the first 2-4 cm of extruded material, this might not be perfectly mixed. This instruction is directed to a new cartridge to allow initial equalisation, any further material is good to use.



### Dispensing techniques:

- Material may be dispensed directly onto the damaged area, or a spreader or a mixing board.
- Proceed with application method (e.g. spreading) as desired.
- You may continue to dispense material until the normal material curing process clogs the mixing nozzle – typically after approximately 15 to 20 minutes. If more repair material is desired after curing has occurred, remove and install a new nozzle.
- Maximum finished thickness should not exceed 4-6 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



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 is a shade of grey, 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 through nozzle containing cured material, re-equalisation of material might be needed. Dispose of uncured material in an approved waste stream.

### **Infra Red Curing**

- Start the accelerate drying after gelling of 3M™ 37455 / ~ 15min after application
- The exothermic reaction of the fresh material could otherwise be triggered too quickly, which could generate blistering.
- Refer to and follow the manufacturer's instructions when using IR equipment for the accelerate curing of 3M™ FC Epoxy Metal Filler



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- The following are typical figures provided for guidance
  - Short wave - 4 min at full power
  - 4:20:70 - 4 minutes total time - Temperature increase 20°C per minute  
Maximum Object Temperature is 70°C
  - Medium wave - 5-10 min at full power

Distance from panel : Consult IR equipment manufacturers instructions

## Next steps – following layers

If there is a need for an additional application / layer of 3M™ 37455, please repeat the following process steps:

- Application of 3M™ FC Epoxy Metal Filler
  - Material can be applied over itself without any difficulty
- Drying
- Surface grinding
  - Also workable with a body file

Next steps:

- Application of 2K Polyester Filler or Glaze
- Further processing at the repaired area can be overpainted according to the paint manufacturers guidelines.

## 5) Storage

18 months from original date of manufacture in the original sealed packaging between 10 °C – 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 again.

## 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 stockiest. The supplier disclaims any liability where the user does not wear recommended personal protective equipment.

**3M™ 37455 FC Epoxy Metal Filler is designed FOR PROFESSIONAL INDUSTRIAL USE ONLY.**



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## 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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