



Dent Filling Compound - 50

05221

Technical Data Sheet

July, 2014

3M Part No.(s)	3M Part Descriptor(s)
05221	3M™ Dent Filling Compound - 50

Product Description 3M™ Dent Filling Compound - 50 (PN 05221) is a premium body filler that provides 3 to 4 minutes working time at 50°F to 55°F (10°C to 13°C), working time is shortened at higher temperatures. This filler is packaged in a unique two part cartridge and is designed to be used with the 3M™ Dynamic Mixing System applicator PN 05846. 3M™ Dent Filling Compound - 50 (PN 05221) offers excellent surface adhesion to properly prepared steel, galvanized steel, aluminum, E-coat, sheet molded compound (SMC), and fiberglass automotive panels and may also be used for industrial and architectural surfaces requiring minor surface repairs.

- Features**
- Dual Cartridge System
 - 50:1 mix ratio
 - Low Temperature Performance 50°F (10°C)

Typical Physical Properties **Note: The following technical information and data should be considered representative or typical only and should not be used for specification purposes.**

Container	Dual Cartridge Part A - Filler	Part B - Creme Hardener
Base	Polyester Resin with Styrene Monomer	Benzoyl Peroxide
Density	9.5 lbs/gal.	10 lbs/gal.
Color	White	Blue
Viscosity	192,000 - 216,000 cps	70,000 - 150,000 cps
Consistency	Viscous Paste	Viscous Paste
Service Temperature	Min -20°F (-29°C) Max 180°F (82°C)	
Application Temperature	Min 45°F (7°C) Max 90°F (30°C)	

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Product Uses

3M™ Dent Filling Compound - 50 (PN 05221) is designed to be used to repair damage such as dents in automotive panels made of steel, aluminum, and properly prepared SMC (sheet molded compound) and FRP (fiber glass reinforced plastic). 3M™ Dent Filling Compound - 50 (PN 05221) works well in low temperature applications and provides a 3 to 4 minute working time at 50°F (12°C) higher temperatures reduce the working time.

Use with the following applicator: PN 05846 (pneumatic).

3M™ Mix Nozzle PN 05847 (50/box).

Typical Performance Properties

The following times have been determined with ambient air temperature and substrate temperature @ 50°F (10°C) and are considered typical values.

WORK TIME:

3 to 4 minutes

SHAPE SAND TIME:

12 to 14 minutes

FINISH SAND TIME:

20 minutes

PAINT TIME:

45 minutes

Note: The following technical information and data should be considered representative or typical only and should not be used for specification purposes.

Lap Shear, Steel to Steel:	1250 PSI	ASTM D 1002
Lap Shear, Aluminum to Aluminum:	720 PSI	ASTM D 1002
Tensile Strength:	2310 PSI	ASTM D 638
Shore D hardness @ 24 hrs:	75	ASTM D 2240
Flexural Strength:	3310 PSI	ASTM D 790 Procedure A
Shrinkage:	0.69%	LTM 855.0084,

Directions for Use

SURFACE PREPARATION:

Wash with soap and water followed by an appropriate VOC compliant pre-cleaner for removal of tar/grease, or any remaining surface contaminants. Sand the damaged area and immediate surrounding area with grade P40 or grade P80 abrasive to remove damaged coatings on the area requiring filling compound. Grind low areas and weld nuggets with a grade 50 Roloc™ disc followed by a thorough cleaning with clean dry compressed air and clean again with pre-cleaner. Apply 3M™ Dent Filling Compound - Cold Weather (PN 05221) following general repair procedures below. For detailed information see: Large/Small/Express Damage Repair at 3mcollision.com

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Directions for Use (continued)

PRODUCT PREPARATION:

INSTALLING THE CARTRIDGE

- Position large diameter cylinder in the up (12 o'clock) position.
- Place the mounting flange end of the cartridge against the mounting plate of the dispenser, making sure to align and insert the cartridge drive rod with the dispenser drive socket, located in the center of the dispenser 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.

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 retainer engages mixing nozzle.

EQUALIZING THE CARTRIDGE

- Attach an air line to the dispenser inlet.
- Using 100 to 120 PSI (6.9 to 8.2 bar) air pressure settings and a disposable collection point, depress the trigger until both sides of the dual-component material are present and the product has achieved a consistent light blue color. This serves to “equalize” both sides of the cartridge.

GENERAL REPAIR PROCESS:

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.
- Immersing the nozzle in the puddle of material eliminates any air entrapment during dispensing.
- Proceed with application method (ie. spreading) as desired.
- You may continue to dispense material until the normal material curing process clogs the mixing nozzle – typically after 2-3 minutes without depressing the trigger. If more repair material is desired after curing has occurred, remove and install a new nozzle.
- Begin sanding with P80 to P120 followed by P180 to P220, (follow your paint company guidelines for final finishing prior to primer application).
- Maximum finished thickness should not exceed 1/4 inch.

CAUTION: Be sure to replace nozzles containing fully or semi cured material to prevent damage to cartridge or nozzle or personal injury. Dispose of uncured material in an approved receptacle.

Applications

Repair of cosmetic surface imperfections in properly prepared auto body, industrial, and architectural substrates.

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Storage and Handling

When stored at the recommended conditions in original, unopened containers, this product has a shelf life of 12 months from the date of manufacture. Store unopened cartridges in an approved area, prevent exposure to flame, sparks, or high temperatures. Store previously opened cartridges with the used nozzle in place in an approved area prevent exposure to flame, sparks, or high temperatures. Use caution not to damage outlets or drive shaft during storage or installation. Optimum storage temperatures 65-80°F (18-27°C), elevated storage temperatures reduce product shelf life.

After use, leave mix nozzle in place to seal the cartridge.

Precautionary Information

Refer to Product Label and Material Safety Data Sheet for Health and Safety Information before using this product. See link below:

http://solutions.3m.com/wps/portal/3M/en_US/MSDS/Search/?gsaAction=msdsSRA&msdsLocate=en_US

Technical Information

The technical information, recommendations and other statements contained in this document are based upon tests or experience that 3M believes are reliable, but the accuracy or completeness of such information is not guaranteed.

Product Use

Many factors beyond 3M's control and uniquely within user's knowledge and control can affect the use and performance of a 3M product in a particular application. Given the variety of factors that can affect the use and performance of a 3M product, user is solely responsible for evaluating the 3M product and determining whether it is fit for a particular purpose and suitable for user's method of application.

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For Additional Health and Safety Information



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