

# Bulletproof: C4 – 2H FC

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## Product Overview

Bulletproof C4 – FC 2H is a rapid-setting, two-part structural epoxy designed for filling, bonding, and repairing cracks in horizontal or vertical substrates. The formula combines high mechanical strength with excellent adhesion to concrete, masonry, wood, metal, and many plastics. C4 – FC 2H is low-odor, 100 % solids, and free of solvents, producing a dense, waterproof repair that resists impact and moisture exposure. It can be applied in single or multiple lifts and is suitable for both industrial and commercial repairs.

## Key Benefits

- ✓ Fast-curing formulation allows rapid return-to-service and efficient repairs
- ✓ Strong adhesion to concrete, metal, wood, masonry, and most rigid plastics
- ✓ 100 % solids and VOC-compliant for safe indoor use
- ✓ Sag-resistant ideal for both vertical and horizontal applications
- ✓ Exceptional compressive and tensile strength for structural repairs
- ✓ Can be applied in multiple layers without delamination
- ✓ Waterproof once cured.
- ✓ Simple 2-to-1 mix ratio by volume for easy on-site blending
- ✓ Low odor and solvent-free
- ✓ Long working time at moderate temperatures, cures quickly at warmth



### Application Areas

- Warehouse and plant floors
- Loading docks and drive lanes
- Concrete slabs, cracks, and joints
- Vertical walls and columns
- Manufacturing Facilities
- Food-processing or clean areas
- Commercial Spaces
- Residential Spaces
- Chemical-resistant patching and anchoring repairs



### Mixing & Installation

- Maintain material temperature at or above 59 °F (15 °C) before use
- Combine 2 parts A to 1 part B by volume (2A:1B ratio)
- Mix for at least 3 minutes with a low-speed drill (300–450 RPM) until uniform; scrape sides and bottom to ensure even blend
- Apply immediately after mixing using a trowel or putty knife
- Do not mix more material than can be applied within 15–25 minutes (at 77 °F / 25 °C)
- Clean tools with xylene or approved epoxy thinner before product hardens



### Performance Specs

- Mix Ratio: 2:1 by volume (2A:1B ratio)
- Solids: 100% (by volume)
- Gel Time: 15–20 minutes @ 77°F (25°C)
- Application Temperature: 55°F – 90°F (13°C – 32°C)
- Compressive Strength: 13,000–15,000 psi
- Tensile Strength: 6,500–7,500 psi
- Elongation: 3–4%
- VOC Content: ≤16 g/L
- Recoat Window: 3–4 hours minimum / 24 hours maximum
- Foot Traffic: 24 hours
- Full Cure: 5–7 days (temperature dependent)
- Shelf Life: 12 months (unopened containers)
- Food Contact Compliance: Meets CFIA equivalency standards



# Technical Overview

Bulletproof C4 – 2H FC is a high-performance, fast-curing, two-part epoxy repair compound designed to restore cracks and surface defects in concrete, masonry, and metal substrates. It forms a strong, structural bond while resisting sag, moisture, and impact. The formulation allows easy application on horizontal or vertical surfaces, providing excellent adhesion and long-term durability. This versatile system delivers high strength and chemical resistance, ensuring reliable repairs across demanding industrial and commercial environments.

## Advantages



### Fast-Cure Performance

Sets rapidly, allowing early return to service and minimizing downtime.



### Time and Cost Saver

Saves hours of prep time and eliminates the need for heavy grinders.



### Excellent Adhesion

Bonds securely to concrete, masonry, metal, and various rigid substrates.



### Sag-Resistant

Ideal for overhead, vertical, and horizontal crack filling.



### Low Odor, Solvent-Free Formula

Safe for confined or occupied areas with minimal odor and VOCs.



### Durable and Waterproof

Forms a dense, moisture-resistant repair surface that prevents delamination.



### Easy to Mix and Apply

Simple 2:1 ratio; can be trowel-applied directly without specialized tools.



### Temperature Versatility

Performs reliably between 55°F and 90°F (13°C – 32°C).

## Application Tools

### Spray & Mop Style Application



### Trowel or Putty Knife

For direct filling, smoothing, and leveling of cracks and surface voids.



### Low-Speed Mixer

Used to blend components thoroughly before application (300–450 RPM).



### Disposable Mixing Pails

For small-batch preparation to reduce waste.

### System Type & Mixing

- Two-component epoxy system, mixed at 2 parts A to 1 part B by volume
- Mix thoroughly for 3 minutes at low speed (300–450 RPM) until uniform
- Scrape sides and bottom of container during mixing
- Use immediately after mixing; pot life is 15–25 minutes @ 77°F (25°C)

### Surface Prep

- Substrate must be structurally sound, dry, and free of dust, grease, and contaminants
- For best adhesion, mechanically prepare the surface to expose clean concrete or metal
- Remove any standing water before applying
- Patch large cracks or voids before overcoating
- Substrate temperature must be at least 55°F (13°C) during application

### Coverage Rates

- Typical coverage: approximately 231 cubic inches per mixed gallon (1/8" thick layer = 12.8 sq. ft. per gallon)
- Actual coverage will vary depending on surface texture, porosity, and application method

### Full Cure & Return to Service

- Tack-free time: 3–4 hours @ 77°F (25°C)
- Light foot traffic: 24 hours
- Full cure: 5–7 days depending on ambient temperature and humidity
- Can be recoated within 3–4 hours minimum / up to 24 hours maximum

### Performance Testing

- Compressive Strength: 13,000–15,000 psi (ASTM D695)
- Tensile Strength: 6,500–7,500 psi (ASTM D638)
- Elongation: 3–4% (ASTM D638)
- Adhesion to Concrete: Excellent – substrate failure before bond failure
- Flammability: Self-extinguishing
- VOC Content: ≤16 g/L

### Storage & Shelf Life

- Store indoors between 60°F and 85°F (15°C – 30°C)
- Keep containers tightly sealed and upright
- Unopened shelf life: 12 months
- Mixed product will begin to harden after 45–60 minutes

### Warnings & Limitations

- For professional use only
- Flammable in uncured state — keep away from sparks and open flame
- Maintain adequate ventilation during use
- Wear protective gloves, safety glasses, and respirator if needed
- Do not apply below 55°F or above 90°F
- Avoid moisture contact during initial cure period

### Disclaimer

Information provided is based on data believed to be accurate and reliable. Performance may vary depending on surface condition, preparation, mixing accuracy, and environmental factors. The user is responsible for verifying suitability before application.

