

### 1. Scope

Unigrip Aluminum Tank Repair Method.

This no-hot-work procedure defines the safe and durable repair of cracks, pitting, pinholes, and localized corrosion in aluminum fuel tanks. It is intended as a temporary or semi-permanent solution where welding is not immediately feasible.

### 2. Marine Class Compliance (ABS / DNV)

- Repairs are considered temporary unless approved otherwise by class.
- Surface preparation shall meet SA 2.5 (ISO 8501-1 or SSPC-SP 11).
- Documentation and inspection records must be maintained.
- Final acceptance subject to surveyor approval.

### 3. Safety

- Tank must be drained, gas-freed, and properly ventilated.
- Eliminate all ignition sources.
- Use PPE: gloves, goggles, respirator if required.

### 4. Surface Preparation

- Abrasive blast to SA 2.5. (Alternative: SSPC-SP 11 - Power Tool Cleaning to Bare Metal)
- Degrease and clean thoroughly. (Use UNIGRIP Bio cleaner (Cleaner/or any other effective cleaner which does not leave a residue e.g., methyl ethyl ketone)
- Ensure substrate is dry and above dew point.
- Mechanical prep acceptable for emergency repairs.

### 5. Application Procedure

- Mix and apply Unigrip Super Metal Filler per manufacturer ratio 2:1.
- Apply immediately after preparation.
- Force material into cracks, pits and defects ensuring full contact.
- Build thickness to 3–5 mm and extend beyond defect area.

### 6. Coating Integration

- Apply Unigrip Super Guard or Aqua Guard protective coating before full cure for optimal adhesion.
- Apply second coat while first is tacky.
- Compatible with most marine tank coatings.
- For overcoating after full cure of the Super Metal Filler: lightly sand the surface, then apply the protective UNIGRIP coating layer(s).

### 7. Curing

- Super Metal Filler Initial set: 15–30 minutes. (cures to metal-like strength in approx. 24 hrs.)
- Super Guard or Aqua Guard protective coating Initial set: 4-6 hours
- Full cure: up to 24 hours depending on conditions.
- Do not return to service until fully cured.

### 8. Inspection & Testing

- Visual inspection for defects.
- Perform leak test or controlled refill.
- Apply additional layer if necessary.

### 9. Limitations

- Not suitable for high-pressure systems.
- Permanent repair (welding/replacement) recommended when possible.

### 10. Documentation

- Record defect location, repair date, materials used, and inspection results.
- Maintain records for class verification.



Scan for Technical Doc  
Super Metal Filler



Scan for Technical Doc  
Super Guard



Scan for Technical Doc  
Aqua Guard