

# ANZ Aluminium Repair Procedures

## Aluminium Repair Matrix

	Corrosion Prevention and Protection	Surface Preparation	Metal Working
<b>Personal Protective Equipment</b>	Wear latex, nitrile or fabric gloves dedicated to aluminium repair to prevent surface contamination from skin contact. See #1 below. <b>Please note that you need to read and understand each product label and SDS for important health and safety information regarding PPE. This section relates only to not cross-contaminating surfaces, not to the full PPE gear required for each type of repair.</b>		
<b>Shop Environment</b>	Use segregated repair areas for aluminium repairs according to OEM recommendation and follow all Worksafe New Zealand and Safe Work Australia guidelines.		
<b>Hand Tools</b>	Use separate hand tools designed for aluminium repairs (e.g., hammers, dolleys, clamps, files, drill bits, saw blades, etc.).		
	<b>HEAT USAGE:</b> Heat is recommended when straightening aluminium to avoid over stretching and cracking of the panel. Aluminium has a much lower melting point than steel and care must be taken to avoid permanent damage. Generally, a propane torch is sufficient to reach the 205°C area. It's best to follow OEM recommendations for specific temperatures.		
<b>Pneumatic Tools</b>	Use air tools dedicated to aluminum repairs OR tools that have been thoroughly cleaned with compressed air to remove any steel particles. See Number 2 below		
<b>Abrasives</b>	Use separate pieces of abrasive on dissimilar substrates. See #2 below.	Do not use grinding or sanding abrasives coarser than grade 80.	
<b>Adhesives</b>	Apply and spread adhesives to cover all prepared metal surfaces. Use wipes dedicated to aluminium substrates. Ensure proper squeeze out and tooling of squeeze out to cover all metal surfaces.	Prepare bonding surfaces using grade 80 abrasive or equivalent Scotch-Brite™ abrasive grade. See #4 below.	Use caution when heating the panel near bonded joints. See #5 below.
	<b>HEAT USAGE: Replace:</b> Use heat to de-bond observing OEM temperature limits. <b>Repair:</b> Use caution when applying heat near bonded joints to avoid bond failures. See #3 below.		
<b>Sealers</b>	Follow standard surface preparation procedures. Use wipes dedicated to aluminium substrates. Apply tight coat into seam. Tool to match OEM appearance.	Follow product use recommendations for Direct to Metal (DTM) or non-DTM seam sealers.	—
<b>Coatings</b>	Follow standard surface preparation procedures. Use wipes dedicated to aluminium substrates. Apply 3M™ Cavity Wax Plus to panel interior prior to final assembly.	Remove loose debris, abrade and properly clean prior to coating application.	Apply 3M™ Caviyu Wax Plus to panel interior prior to final assembly.
<b>Filler &amp; Glaze</b>	Follow standard surface preparation procedures. Use wipes dedicated to aluminium substrates. Apply filler or glaze within 1 hour. See #4 below.	Prepare surface using grade 80 abrasive or equivalent Scotch-Brite graded abrasives. See #4 below.	

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**Note: Statements and recommendations within this matrix should be considered general practices. Follow specific OEM recommendations, when they exist.**

<b>1</b> Skin contact with open substrates can leave contamination that leads to corrosion.	<b>2</b> Cleaning tools thoroughly and using separate abrasive will help prevent the possibility of galvanic corrosion caused by incidental contact of dissimilar metals.	<b>3</b> To de-bond 3M™ Panel Bonding Adhesive, panel must be heated to above 205°C.	<b>4</b> Oxidation forms immediately on exposed aluminum. Accumulated oxidation is detrimental to bond strength. After 1 hour of exposure, re-abrade aluminium surface to maximise bond strength.	<b>5</b> Panel bond adhesive degradation begins at 149°C or higher. Use caution and heat indicators to monitor panel temperature when applying heat near bonded joints.
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For ordering information, contact your 3M Sales Representative